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Global Specialists in the Environment

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September 28, 2012

Jeffrey Fowlow, On-Scene Coordinator
United States Environmental Protection Agency, Region 10
1200 Sixth Avenue, ECL-116
Seattle, Washington 98102

Re: Removal Site Evaluation Report, Stubblefield Salvage Yard Site, Walla Walla, WA
Contract Number EP-S7-06-02, TDD #11-06-0008

Dear Mr. Fowlow:

Enclosed please find the final Removal Site Evaluation Report for the Stubblefield Salvage Yard Site. If you have any question regarding this submittal, please call Jake Moersen at (206) 624-9537 or me at (206) 920-1739.

Sincerely,

ECOLOGY AND ENVIRONMENT, INC.

Steven G. Hall
START-3 Project Leader

cc: Jake Moersen, START-3 Project Manager, Seattle, Washington

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# REMOVAL SITE EVALUATION REPORT

**Stubblefield Salvage Yard Site**
**Walla Walla, Washington**
**TDD: 11-06-0008**

Prepared for:

U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, ECL-116
Seattle, Washington 98102

Prepared by:

Ecology and Environment, Inc.
720 Third Avenue, Suite 1700
Seattle, Washington 98104

September 2012

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# List of Abbreviations

| Abbreviation | Definition |
|---|---|
| % | Percent |
| %R | percent recovery |
| bgs | below ground surface` |
| BS | blank spike |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| DQOs | data quality objectives |
| DRO | diesel range organics |
| E & E | Ecology and Environment, Inc. |
| Ecology | Washington State Department of Ecology |
| EPA | United States Environmental Protection Agency |
| ESA | environmental site assessment |
| HDR | HDR Engineering, Inc. |
| J | estimated concentration |
| µg/kg | micrograms per kilogram |
| µg/L | micrograms per liter |
| MCL | Maximum Contaminant Level |
| mg/kg | milligrams per kilogram |
| mg/L | milligrams per liter |
| MS | matrix spike |
| MSD | matrix spike duplicate |
| MTCA | Model Toxics Control Act |
| ORO | oil range organics |
| OSC | On-Scene Coordinator |
| OSHA | Occupational Safety and Health Administration |
| PAHs | polycyclic aromatic hydrocarbons |
| PCBs | polychlorinated biphenyls |
| process area | metal salvage process area |
| PVC | polyvinyl chloride |
| QA | quality assurance |
| QC | quality control |
| RCRA | Resource Conservation and Recovery Act |
| RPD | relative percent difference |

## List of Abbreviations and Acronyms (cont.)

| | |
|---|---|
| RSE | removal site evaluation |
| RSL | Regional Screening Levels |
| SARA | Superfund Amendments and Reauthorization Act |
| SPAF | sample plan alteration form |
| SPLP | Synthetic Precipitation Leaching Procedure |
| SSSP | site-specific sampling plan |
| START | Superfund Technical Assessment and Response Team |
| SVOCs | semivolatile organic compounds |
| TCLP | Toxicity Characteristic Leaching Procedure |
| TDD | Technical Direction Document |
| TPH | total petroleum hydrocarbons |
| VOCs | volatile organic compounds |

# Executive Summary

The United States Environmental Protection Agency (EPA) performed a removal site evaluation (RSE) at the Stubblefield Salvage Yard Site in Walla Walla, Washington, from 2009 to 2012. EPA conducted multiple sampling events during this period to address the presence of hazardous substances in soil and groundwater, including metals, polychlorinated biphenyls (PCBs), pesticides, total petroleum hydrocarbons (TPH), semivolatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs).

The Stubblefield Salvage Yard was originally a 40-acre facility owned by Emory Stubblefield, and the facility operated from approximately 1950 until 2010. In 1995, the western 20 acres of the lot was sold to the County of Walla Walla for construction of a waste water treatment plant, and in 2005 and 2006 the Walla Walla County Department of Public Works conducted Phase I and Phase II environmental site assessments in advance of their purchase in 2008 of approximately nine acres of the remaining lot for the construction of Myra Road. After each of these parcel subdivisions and sales, the salvage yard operations were consolidated on the remaining piece of the parcel.

The Washington State Department of Ecology (Ecology) conducted inspections at the site in 1999, 2002, 2006, and 2007. During the inspections Ecology documented ongoing hydraulic fluid leaks from equipment used at the site in addition to other suspected environmental conditions such as improper handling of used oil, spent batteries, incinerator ash, and automotive fluids. Upon Mr. Stubblefield's death in 2008 his children entered the property into Ecology's Voluntary Cleanup Program to address these environmental issues. In April 2009, Ecology referred the site to EPA and requested that "immediate intervention and action" be taken, as Ecology did not have the capacity to intervene at the time (EPA 2009).

In May 2009, an EPA On-Scene Coordinator visited the site and documented conditions that indicated a release and threat of a release of hazardous substances to the environment. EPA determined the need to characterize soil and groundwater at the site, especially in the metal salvage process area (process area), and this characterization was conducted through seven separate sampling events from 2009–2012. The first three field events (May, September, and October 2009) focused on general site characterization and identifying potential source areas. The following two field events (March and October 2010) focused on delineating the major source area (i.e., the process area) and included the installation of monitoring wells to evaluate potential impacts to shallow groundwater. The final two field events (June 2011 and April 2012) focused on characterization of the horizontal extent of subsurface soil contamination and additional groundwater monitoring.

The RSE characterized soil and groundwater in the process area for contamination of metals, PCBs, pesticides, TPH, SVOCs, and VOCs. The contaminated area of the process area is approximately 30,000 square feet, and with average depth to groundwater at 8 feet below ground surface, the estimated volume of contaminated soil above the water table in the process area is approximately 9,000 cubic yards. Analytical data from soil samples was compared to EPA Regional Screening Levels (RSLs) for residential and industrial properties for all compounds except TPH, which was compared to Washington State Model Toxics Control Act (MTCA) cleanup levels for unrestricted and restricted properties. Analytical data from water samples was compared to EPA RSLs for tapwater and federal maximum concentration levels (MCLs) for all

compounds except TPH, which was compared to MTCA cleanup standards for unrestricted and restricted properties.

Metals were detected in soil in and around the process area, including the low-lying swale to the northwest of the process area, at seven locations with concentrations that exceeded EPA RSLs for industrial properties. Elevated metal concentrations include lead as high as 4,400 milligrams per kilogram (mg/kg), which exceeds the industrial RSL of 800 mg/kg, and arsenic as high as 5.4 mg/kg, which exceeds the industrial RSL of 1.5 mg/kg. Additionally, two samples in the swale were above screening criteria for arsenic. PCBs were detected in soil in and around the process area at 12 locations with concentrations that exceed EPA RSLs for industrial properties, including Aroclor-1254 as high as 41,000 micrograms per kilogram (µg/kg) and Aroclor-1242 as high as 38,000 µg/kg, which both exceed their industrial RSL of 740 µg/kg. The PCB-contaminated soil generally appears to be located near the previous location of the hydraulic equipment in the process area with the exception of a few outlying samples. TPH in soil was detected at nine locations above the MTCA cleanup levels of 2,000 mg/kg, and eight of these locations are co-located at locations with PCB concentrations greater than industrial RSLs. All instances of TPH above the MTCA cleanup levels are located within the process area.

SVOCs were detected in soil at multiple locations in and around the process area at concentrations greater than the industrial RSLs, including one location with 84 mg/kg of benzo[a]pyrene (industrial RSL of 0.21 mg/kg), 90 mg/kg of benzo(b)fluoranthene (industrial RSL of 2.1 mg/kg) and 18 mg/kg of dibenzo(a,h)anthracene (industrial RSL of 0.21 mg/kg). Additionally, four sample locations outside the process area contained SVOCs at concentrations greater than RSLs for industrial properties, including one sample in the swale, which may imply that SVOC contamination in the swale is contiguous with contamination found in the process area.

EPA characterized site groundwater through the installation and sampling of four monitoring wells and through the collection of groundwater from investigative boreholes. The results indicate that groundwater within the process area contains elevated concentrations of arsenic as high as 6.1 micrograms per liter (µg/L), which exceeds the tapwater RSL of 0.045 µg/L; PCBs (Aroclor-1242) as high as 1,500 µg/L, which exceeds the tapwater RSL of 0.034 µg/L; and the PAH benzo[a]pyrene as high as 14 µg/L, which exceeds the tapwater RSL of 0.0029 µg/L and the MCL of 0.2 µg/L. Because these compounds are also found above screening criteria in subsurface soil in the process area, the groundwater appears to be directly impacted by subsurface soil contamination.

The RSE confirmed the presence of surface and subsurface contamination in soil in the process area and established the likelihood of impacted groundwater beneath and possibly downgradient of the process area. SVOC and metals contamination in the swale may be contiguous with contamination in the process area. Characterization of soil beneath the shop building indicates relatively minimal impacts, with only slightly elevated concentrations of iron that exceed the RSLs for residential properties.

Once the process area was identified as a major source area of contamination, the RSE focused on more thoroughly characterizing the vertical and horizontal extent of contamination. Other areas of concern, including the areas of drum storage to the south of the process area, where identified but not fully characterized.

# 1 Introduction

The United States Environmental Protection Agency (EPA) performed a removal site evaluation (RSE) at the Stubblefield Salvage Yard Site in Walla Walla, Washington, from May 2009 to April 2012. The salvage yard operated for approximately 60 years to process metal wastes for recycling or disposal until 2010. The facility is currently inactive. In May 2009, an EPA On-Scene Coordinator (OSC) visited the site and observed oil-stained soil, unlabeled drums, and several large open-top tanks, the largest of which was approximately 800 gallons and contained a heavy oily substance. EPA then initiated the RSE to perform general site characterization and identify potential source areas. The metal salvage process area (process area), of approximately 30,000 square feet, was quickly identified as a probable source area of contamination.

EPA performed the RSE under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA). EPA tasked Ecology and Environment, Inc. (E & E), under Superfund Technical Assessment and Response Team (START)-3 contract number EP-S7-06-02, Technical Direction Document (TDD) number 11-06-0008[1], to provide technical assistance, sampling support, and to document the RSE.

EPA conducted seven separate field events during the RSE. The first three field events (May, September, and October 2009) primarily established surface and subsurface soil contamination conditions in the process area. The following two field events (March and October 2010) characterized groundwater and subsurface soil near the boundaries of the process area. The final two field events (June 2011 and April 2012) collected additional soil and groundwater samples to characterize the horizontal extent of subsurface soil contamination and assess variation in groundwater depth and direction over time.

In addition to the RSE activities, EPA performed two limited removal actions to address uncontrolled containers of waste materials, isolated areas of surface contamination, and asbestos-containing materials. These removal actions were performed in October 2009 and April 2012 at the same time as RSE field activities, and they will be described in more detail in a separate removal action report.

The RSE report is organized in the following sections: Site Description and Background (Section 2), Media Sampling Activities (including a discussion of each field event; Section 3), Quality Assurance (QA) / Quality Control (QC) (Section 4), and Summary and Conclusions (Section 5). Photographs taken throughout the RSE are presented in Appendix A.

[1] Additional RSE work was performed by E & E/START under TDDs 09-05-0006 and 10-09-0009.

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# 2 Site Description and Background

## 2.1 Site Location

| | |
|---|---|
| Site Name: | Stubblefield Salvage Yard |
| CERCLIS ID Number: | WAN001002813 |
| Site Address: | 980 NE Myra Road<br>Walla Walla, Washington 98362 |
| Latitude: | 46.065 North |
| Longitude: | -118.369 West |
| Elevation: | Approximately 870 feet above mean sea level |
| Legal Description: | Section 24, Township 7 North, Range 35 East |
| County: | Walla Walla |
| Site Owner/Operator: | Adena Hodgins, Executor of the Estate of Emory Stubblefield |

## 2.2 Site Layout

The Stubblefield Salvage Yard Site is part of an irregularly shaped property covering approximately 11 acres denoted as "Parcel 350724440024" in Walla Walla County Assessor's records (2012; Figure 2-1). The process area is located in the north-central section of the lot, and includes a two-story shop building of unknown dimension and build date. The lot includes an unoccupied residence of 2,034 square feet built in 1950 located southeast of the process area (Figure 2-2). The topography is generally flat with a gentle slope to the north toward Mill Creek, with the exception of a low-lying swale in the northwest corner of the property that appeared to be filled with debris from historical site operations.

The salvage yard formerly occupied a parcel that was approximately 40 acres in size. In 1995, the western half of the 40 acres was purchased by the County of Walla Walla for construction of a waste water treatment plant. The scrap metal and other materials that were located on that purchased parcel were apparently consolidated onto the remaining 20 acre property using heavy machinery. A second property sale occurred in the fall of 2008, in which the western half (approximately nine acres) of the remaining 20 acres was subdivided for the Myra Road right-of-way and an undeveloped lot. It was reported that the debris was again consolidated onto the remaining 11-acre property. Currently the site is inactive and the majority of salvageable metal and heavy machinery has been moved off site (EPA 2009).

There are two domestic groundwater wells on the property, and it was believed that one was used for salvage yard process water and one was used as a domestic well for site workers and residents.

## 2.3 Surrounding Land Uses

The site is bounded to the north by Mill Creek, to the west by Myra Road, to the south by private residences, and to the east by agricultural land (EPA 2009).

## 2.4 Site History, Operations, and Ownership

### 2.4.1 Previous Owners

The original 40-acre property was purchased in 1945 by Emory Stubblefield (WA v Stubblefield 1949). Previous land use and property ownership is unknown.

### 2.4.2 Current Owners

Mr. Stubblefield operated a fat-rending plant on the property from 1945 until approximately 1950 when he transitioned the business operation to a salvage yard facility. When it was operating, the facility received metal wastes such as vehicles, drums, appliances, transformers, structural metal, agricultural machines, batteries, spent ammunition casings, and household waste including metal cans. Once received, the waste products were processed in a variety of ways and were either disposed of or recycled (i.e., sold as scrap). Many of the metal materials were cut into smaller pieces using either hand-held acetylene torches or a large hydraulic shear. The resulting smaller pieces of metals were then compacted by a hydraulic baler and sold as scrap metal.

In 1995, the western 20 acres of the property was sold to the County of Walla Walla for construction of a waste water treatment plant, and, in 2008, the County acquired approximately nine additional acres for the construction of Myra Road. After each of these parcel subdivisions and sales, the salvage yard facility consolidated on the remaining property to the east (EPA 2009). The salvage yard was owned by Mr. Stubblefield until his death in 2008, and then operated until mid-2010 by his children. Currently, three of Emory Stubblefield's children are involved in a legal dispute with an adopted son concerning Emory Stubblefield's last will and testament.

## 2.5 Previous Investigations

The following sections describe previous environmental investigations and other related investigations that have been conducted at the site.

### 2.5.1 Washington State Department of Ecology Inspections

In 1999 and 2002, the Washington State Department of Ecology (Ecology) conducted Dangerous Waste Compliance Inspections at the facility which documented improper handling of used oil, spent batteries, incinerator ash, and automotive fluids. Information on actions taken by the state or the property owner regarding these inspections is not available (EPA 2009).

In 2006, a Dangerous Waste Compliance Inspection documented batteries scattered on the ground, a large spill of hydraulic fluid to the ground, and a minimum of twenty-five 55-gallon drums of used oil. Some the drums were bulging and there was dark staining on the surrounding soils near many of them. Follow-up information regarding this inspection is not available (EPA 2009).

In April 2007, an Ecology inspection observed the presence of used oil and other heavy oils, hydraulic fluids, and damaged batteries lying uncovered on the ground. As a result, there was a concern that polycyclic aromatic hydrocarbons (PAHs), a particularly persistent and toxic group of semivolatile organic compounds (SVOCs), may have been released from spills of used oil and

from the incineration of various automobile components on the ground. No samples were collected as part of this inspection (EPA 2009).

Upon Mr. Stubblefield's death in 2008 his children entered the site into Ecology's Voluntary Cleanup Program to address environmental issues at the site; during this time the facility was still operating as an active salvage yard. The site was referred to EPA by Ecology in April 2009, and Ecology requested that "immediate intervention and action" be taken, as Ecology did not have the capacity to intervene at the time (EPA 2009).

### 2.5.2 Phase I and II Environmental Site Assessment of Myra Road Extension Project Salvage Yard

In August 2005, HDR Engineering, Inc. (HDR) conducted a Phase I Environmental Site Assessment (ESA) for the Walla Walla County Department of Public Works. The objective of the ESA was to provide "an independent, professional opinion regarding recognized environmental conditions" at the salvage yard. The ESA consisted of a walk-through of the property, a review of pertinent records for evidence of historical and present use of the subject and adjoining properties, an interview with the current owner as well as local government officials, and an evaluation of gathered information (HDR 2005).

The assessment revealed the following recognized environmental conditions at the property: used oil releases to the ground, improper storage of automobile batteries and containers that previously held hazardous materials, illegal disposal of ash, and unpermitted burning of waste. The Phase 1 ESA documented site condition and history, and reported that some drums and tanks located on the site appeared to be full. Based on the recognized environmental conditions, a Phase II ESA was recommended to include selective soil and groundwater sampling prior to purchasing any portion of the property (HDR 2005).

In February 2006, HDR conducted the Phase II ESA for the Walla Walla County Department of Public Works. The purpose of the Phase II ESA was to determine if contamination existed on the right-of-way property that the county was considering for purchase, which at the time was the western half of the remaining 20-acre property. As part of the Phase II ESA, eight borehole locations (BH-1 through BH-8) were installed. At least three soil samples were collected from each borehole. The sample intervals ranged in depth from 0 to 1 foot below ground surface (bgs) to 14.5 to 15.5 feet bgs. A total of 28 soil samples were collected. Following soil sample collection, groundwater samples were collected from six of the eight boreholes (BH-5 and BH-8 were not sampled; HDR 2006).

Samples were submitted to an off-site fixed laboratory, and the analytical data was compared to Ecology Model Toxics Control Act (MTCA) cleanup levels, and groundwater sample results were also compared to federal maximum contaminant levels (MCLs) for drinking water. One soil sample indicated concentrations of methylene chloride at concentrations that exceeded cleanup criteria, but this contaminant is a known laboratory solvent; no other analytes were detected in soil samples at concentrations that exceeded cleanup criteria. Barium and lead were detected at concentrations that exceeded the federal MCLs for each in two groundwater samples, and no other analytes were detected at concentrations above the federal MCLs in groundwater samples (HDR 2006).

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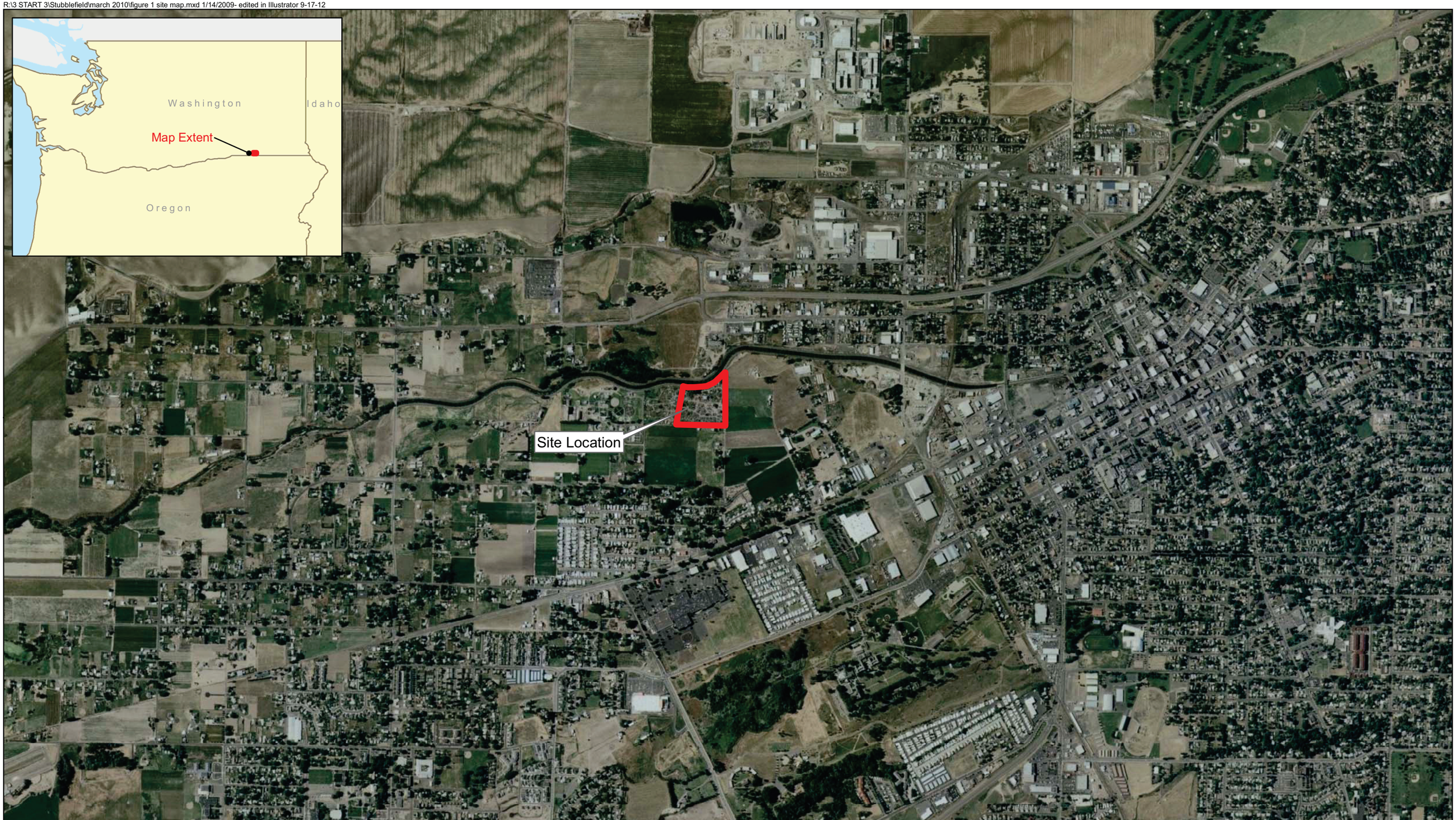
R:\3 START 3\Stubblefield\march 2010\figure 1 site map.mxd 1/14/2009- edited in Illustrator 9-17-12




**Legend**

Site Boundary

0 0.125 0.25 0.5 0.75 1 Miles

**Figure 2-1: Site Location**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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0 200 400
Approximate Scale in Feet

**Figure 2-2: Site Layout Map**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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# 3 Media Sampling Activities

On May 6, 2009, an EPA OSC conducted a non-sampling site visit to the facility. During this visit, the OSC noted several conditions that indicated possible environmental impacts, including:

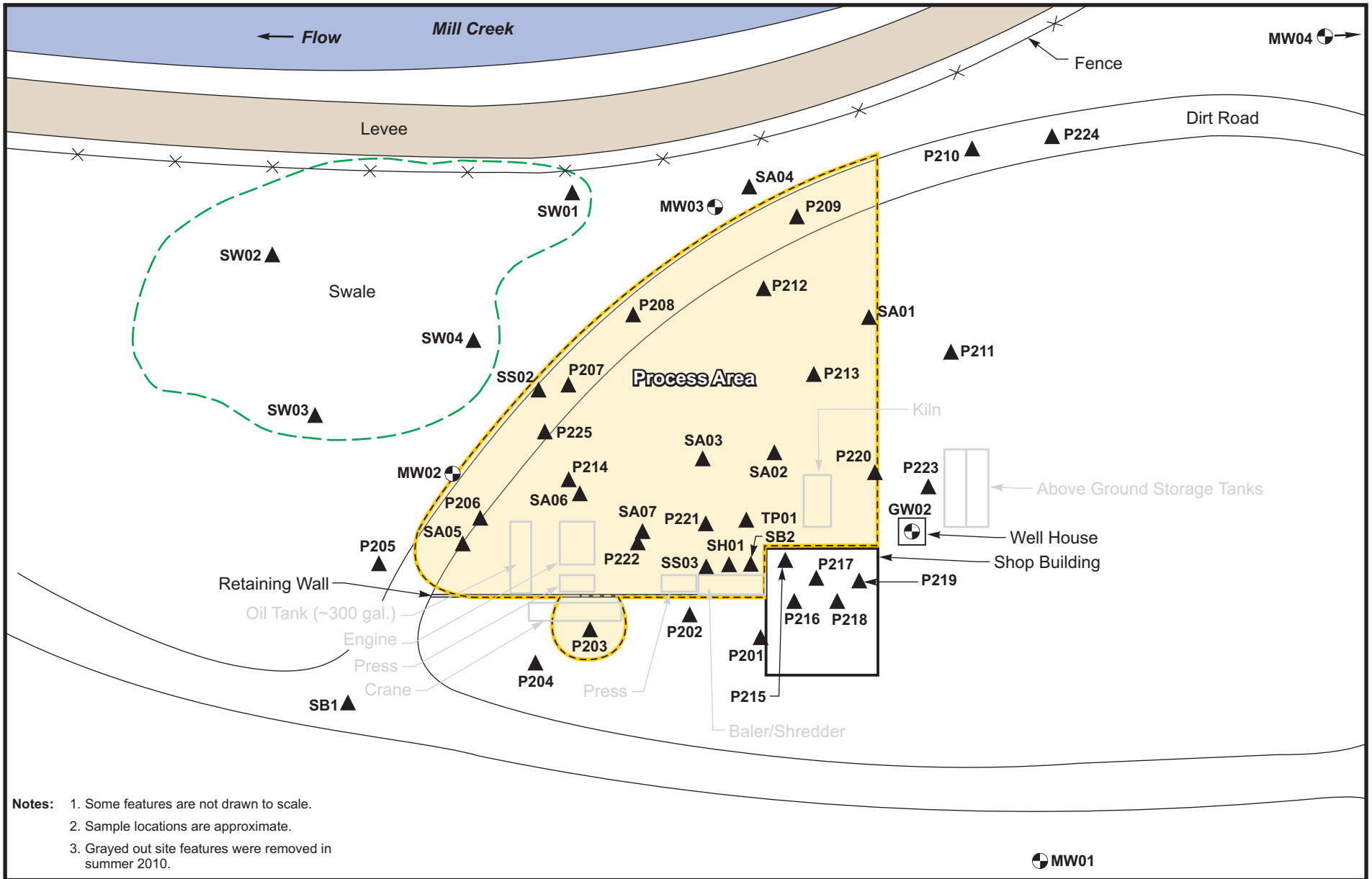
- Approximately six large electrical transformers, several of which did not have markings identifying them as containing non-polychlorinated biphenyl (PCB) oil, and some of which were leaking oil onto the ground;
- The appearance of heavy oil-stained soils in a low area near the hydraulic shear, and other smaller areas of oil-stained soil;
- Over 20 drums with unmarked and unknown contents, including some that were open and/or in rusted or damaged condition, and some that produced a distinct solvent odor; and
- Several large open-top tanks, the largest of which was approximately 800 gallons and contained a heavy oily substance.

EPA proceeded to initiate an RSE at the Stubblefield Salvage Yard Site to better understand the nature and extent of the contamination present at the site and to identify major source areas. Later in 2009, EPA also began to perform a series of limited removal actions to stabilize the site and to address the contents of unlabeled containers and other uncontrolled hazardous substances. The RSE included multiple sampling events to collect soil and groundwater samples for analysis at an off-site fixed laboratory. EPA quickly identified the metal salvage process area as a major source area for contamination, so subsequent RSE sampling events focused on more thoroughly characterizing the vertical and horizontal extent of contamination in this area.

Each sampling event is described below in chronological order, including the purpose for mobilization, a discussion of site activity and sample collection, and a summary of the analytical results. Figure 3-1 presents all sample locations collected throughout the RSE in and near the process area. Site figures depicting sampling locations and data summary tables including all concentrations at or above site screening criteria, along with additional significant detections, are presented for each sampling event in Sections 3.1 through 3.7. Additionally, site figures depicting a summary of soil contamination are presented in Section 3.8, and groundwater contour maps from the three monitoring well sampling events (March 2010, October 2010, and June 2011) are presented in Section 3.9. Comprehensive data tables for all analytical results from soil samples and groundwater samples associated with the RSE are presented in Appendices B and C, respectively.

Samples were submitted for off-site fixed laboratory analyses of varying combinations of the following analytical parameters: dioxins (EPA SW-846 Method 8280), metals (EPA SW-846 Methods 7060A, 6010B, 7421, 7470A, and 7740), PCBs (EPA SW-846 Method 8082), pesticides (EPA SW-846 Method 8081A), total petroleum hydrocarbons (TPH; NWTPH-Dx, -Gx), SVOCs (EPA SW-846 Method 8270C), and volatile organic compounds (VOCs; EPA SW-846 Method 8260B) unless otherwise noted. For additional discussion of analytical methods and results see Section 4.

The analytical data from soil samples were compared to EPA Regional Screening Levels (RSLs) for residential and industrial properties, and water sample data were compared to EPA RSLs for tapwater and federal MCLs for drinking water. Because there are no RSLs for TPH, this data (both soil and water) was compared to Ecology MTCA cleanup levels.




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. Grayed out site features were removed in summer 2010.

**Legend**

- Monitoring Well or Domestic Well
- Process Area
- Soil Sample

0 36 72
Approximate Scale in Feet

**Figure 3-1: RSE Sample Locations in and Around the Process Area Stubblefield Salvage Yard Site**
Walla Walla, Washington

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Seattle, Washington

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## 3.1 May 2009

### 3.1.1 Purpose

In May 2009, EPA initiated the RSE for the Stubblefield Salvage Yard, which was an active facility at that time. The purpose of the mobilization was to stabilize uncontrolled wastes and to conduct a general survey of the site to identify potential areas of contamination, including the collection of surface soil samples and groundwater samples from the two domestic wells on site (E & E 2009d).

### 3.1.2 Site Activity and Sample Collection

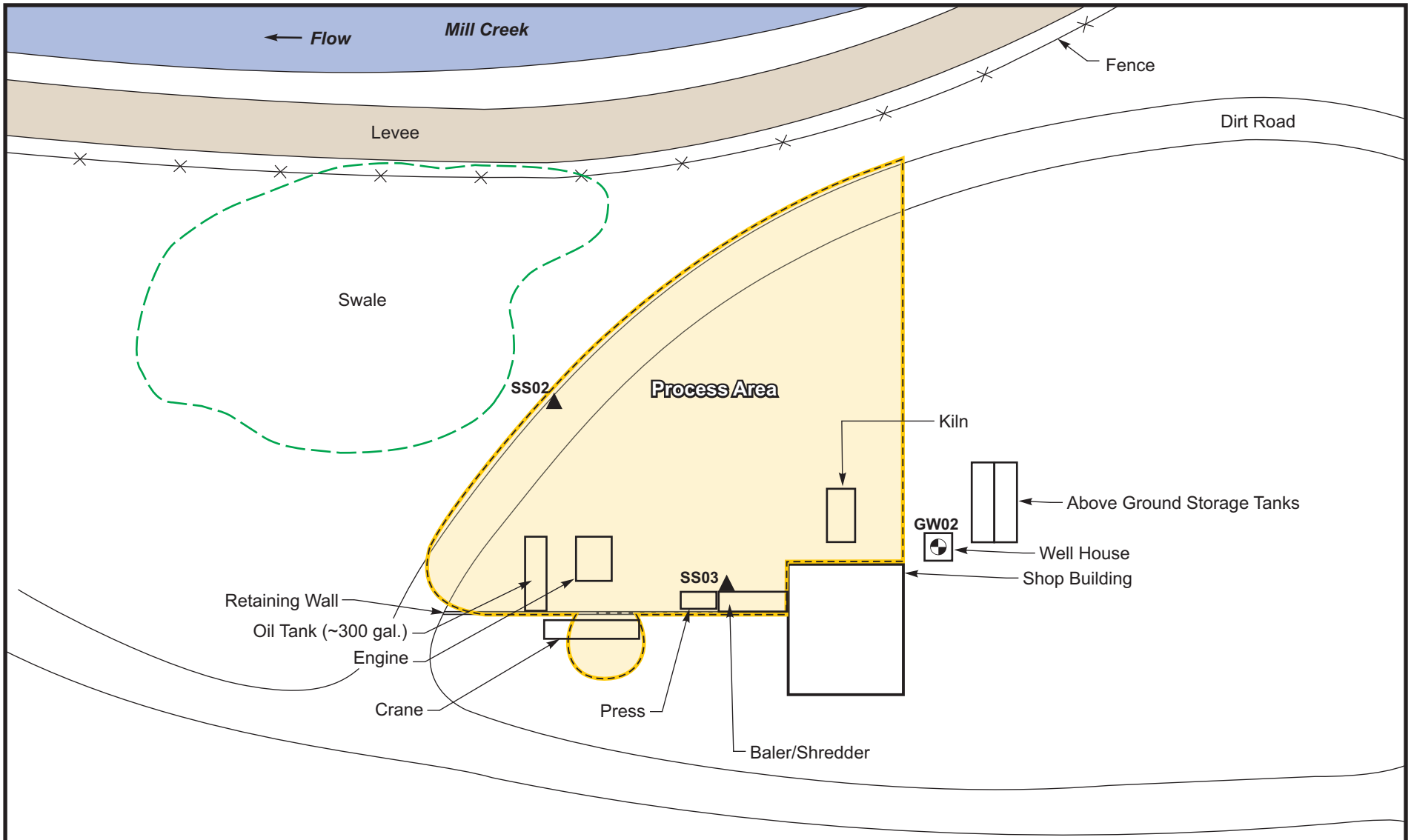
As part of the May 2009 field event, two surface soil samples (SS02 and SS03) were collected from the process area. Following soil sample collection, groundwater samples were collected from the two domestic groundwater wells on site. A deep well of approximately 150 feet near the residence was sampled from a holding tank (GW01), and a shallow well, exact depth unknown, was sampled near the shop building (GW02). Figure 3-2, which focuses on the process area of the site, indicates the locations of the soil samples and GW02.

### 3.1.3 Summary of Analytical Results

Soil sample results for SS02 and SS03 are summarized in Table 3-1A and indicate the presence of metals (arsenic and lead), PCBs (Aroclor-1248, -1254, and -1260), and SVOCs (benzo[a]pyrene, benzo[a]anthracene, and other PAHs) at concentrations that exceeded their screening criteria. For example, at sample location SS03 arsenic was detected at 5.4 milligrams per kilogram (mg/kg; industrial RSL of 1.6 mg/kg), lead was detected at 1,250 mg/kg (industrial RSL of 800 mg/kg), and Aroclor-1248 was detected at an estimated (J) concentration of 19,000 J micrograms per kilogram (µg/kg; industrial RSL of 740 µg/kg). Both soil samples exceeded MTCA for TPH (diesel range organics [DRO] and oil range organics [ORO]) by an order of magnitude. Dioxins, pesticides, and VOCs were not detected at concentrations which exceeded their screening criteria.

Groundwater sample results are summarized in Table 3-1B and indicate the presence of VOCs (chloroform at GW01 and GW02) at concentrations which exceeded the RSL tapwater criteria, although at concentrations below the MCLs. No metals, PCBs, pesticides, TPH, or SVOCs were detected above their screening levels.

Results from the surface soil and groundwater samples collected in May 2009 revealed contamination near the process area that warranted further investigation. START prepared a Technical Memorandum dated August 28, 2009, for this mobilization (E & E 2009c). Copies of the analytical data memoranda from the May 2009 sampling event can be found in Appendix D.




**Notes:** 1. Some features are not drawn to scale.
2. Sample locations are approximate.

**Legend**

- Monitoring Well or Domestic Well
- Soil Sample
- Process Area

0 36 72
Approximate Scale in Feet

**Figure 3-2: May 2009 RSE Sample Locations**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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**Table 3-1A Summary of Soil Sample Results from May 2009**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-05-0702 | 09-05-0703 |
|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 |
| Sample Depth | | | Surface | Surface |
| Sample Collection Event | | | May-09 | May-09 |
| **Metals (mg/kg)** | | | | |
| Antimony (Metallic) | 31 | 410 | **4.7 J** | 4.7 UJ |
| Arsenic (Inorganic) | 0.39 | 1.6 | 5.5 UJ | **5.4** |
| Cobalt | 23 | 300 | **10.9 J** | **15.7 J** |
| Iron | 55,000 | 720,000 | **36,800 J** | **49,500 J** |
| Lead & Compounds | 400 | 800 | **1,140** | **1,250** |
| **PCBs (µg/kg)** | | | | |
| Aroclor-1242 | 220 | 740 | 200 UJ | 210 U |
| Aroclor-1248 | 220 | 740 | **16,000 J** | **19,000 J** |
| Aroclor-1254 | 220 | 740 | **5,700 J** | **6,100 J** |
| Aroclor-1260 | 220 | 740 | **2,300 J** | 210 U |
| **Pesticides (µg/kg)** | | | | |
| beta-BHC | 270 | 960 | 16 U | 16 U |
| Dieldrin | 30 | 110 | **29 J** | 33 U |
| **TPH (mg/kg)** | | | | |
| Diesel Range Organics | 2,000 [1] | 2,000 [1] | **20,000 J** | **43,000 J** |
| Oil Range Organics | 2,000 [1] | 2,000 [1] | **110,000 J** | **99,000 J** |
| **SVOCs (mg/kg)** | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | **7.1 J** | **10.0** |
| Benzo(a)pyrene | 0.015 | 0.21 | **3.9 J** | **8.1** |
| Benzo(b)fluoranthene | 0.15 | 2.1 | **4.7 J** | **10.0** |
| Benzo(k)fluoranthene | 1.5 | 21 | **4.7 J** | **9.4** |
| Chrysene | 15 | 210 | **8.4 J** | **14.0** |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 2.1 UJ | **1.3 J** |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | **2.4 J** | **7.1** |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 3.1 UJ | 3.0 U |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

BGS = Below ground surface.

EPA = Environmental Protection Agency.

J = The analyte was positively identified; the associated numerical value is the approximate concentration.

JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.

JL = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias.

JQ = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit.

MTCA = Model Toxics Control Act.

mg/kg = Milligrams per kilogram (parts per million).

µg/kg = Micrograms per kilogram (parts per billion).

PCBs = Polychlorinated biphenyls.

RSL = Regional screening levels for chemical contaminants at Superfund sites.

SVOCs = Semivolatile organic hydrocarbons.

TPH = Total petroleum hydrocarbons.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

**Table 3-1B Summary of Water Sample Results from May 2009**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 09-05-0705 | 09-05-0706 |
|---|---|---|---|---|
| Sample Location | | | GW01 | GW02 |
| Sample Details | | | Domestic Well | Domestic Well |
| Sample Collection Event | | | May-09 | May-09 |
| **Metals (µg/L)** | | | | |
| Arsenic (Inorganic) | 0.045 | 10 | 1.3 U | 1.3 U |
| Cobalt | 4.7 | NA | 0.36 UJ | 0.36 UJ |
| Iron | 11,000 | NA | **845** | **210** |
| Lead & Compounds | NA | 15 | **6.1 J** | 1.8 U |
| Manganese (Non-Diet) | 320 | NA | **8.8 J** | **7.3 J** |
| Vanadium & Compounds | 78 | NA | **6.4 J** | **7.6 J** |
| **PCBs (µg/L)** | | | | |
| Aroclor-1242 | 0.034 | NA | 0.48 U | 0.48 U |
| Aroclor-1254 | 0.034 | NA | 0.48 U | 0.48 U |
| Aroclor-1260 | 0.034 | NA | 0.48 U | 0.48 UJ |
| **Pesticides (µg/L)** | | | | |
| Aldrin | 0.00021 | NA | 0.038 UJ | 0.038 UJ |
| Dieldrin | 0.0015 | NA | 0.077 U | 0.077 U |
| **TPH (mg/L)** | | | | |
| Diesel Range Organics | 0.5 [1] | NA | 0.077 U | 0.078 U |
| Oil Range Organics | 0.5 [1] | NA | 0.38 U | 0.39 U |
| **SVOCs (µg/L)** | | | | |
| 1-Methylnaphthalene | 0.97 | NA | | |
| 2-Methylnaphthalene | 27 | NA | 5 U | 4.8 U |
| Benzo[a]anthracene | 0.029 | NA | 5 U | 4.8 U |
| Benzo[a]pyrene | 0.0029 | 0.2 | 5 U | 4.8 U |
| Benzo[b]fluoranthene | 0.029 | NA | 5 U | 4.8 U |
| Benzo[k]fluoranthene | 0.29 | NA | 5 U | 4.8 U |
| bis(2-Ethylhexyl)phthalate | 0.071 | 6 | 5 U | 4.8 U |
| Butylbenzylphthalate | 14 | NA | 5 U | 4.8 U |
| Dibenz[a,h]anthracene | 0.0029 | NA | 5 U | 4.8 U |
| Indeno[1,2,3-cd]pyrene | 0.029 | NA | 5 U | 4.8 U |
| Naphthalene | 0.14 | NA | 5 U | 4.8 U |
| **VOCs (µg/L)** | | | | |
| Chloroform | 0.19 | 80 | **0.31 J** | **0.19 J** |
| Tetrachloroethene | 9.7 | 5 | **0.6 J** | 1 U |

Note:

= Greater than or equal to EPA RSL and/or Federal MCL.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in groundwater.

Key:

EPA = Environmental Protection Agency.
IDW = Investigation derived waste.
J = The analyte was identified; the associated numerical result is an estimate.
JH = The analyte was positively identified; the assoicated numerical value is the approximate concentration with a high bias.
JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.
MCL = Federal Maximum Contaminant Level drinking water standards.
MTCA = Model Toxics Control Act.
mg/L = Milligrams per liter (parts per million).
µg/L . = Micrograms per liter (parts per billion).
NA = Not applicable.
R = The sample results are rejected due to serious deficiencies; the presence or absence of the analyte cannot be verified.
RSL = Regional Screening Levels for Chemical Contaminants at Superfund Sites.
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

## 3.2 September 2009

### 3.2.1 Purpose

In September 2009, EPA returned to the Stubblefield Salvage Yard, which was still an active facility at that time. The purpose of the sampling event was to conduct surface and subsurface soil sampling for the RSE to assess the vertical and horizontal extent of soil contamination in the process area (E & E 2009b).

### 3.2.2 Site Activity and Sample Collection

As part of the September 2009 field event, soil samples were collected from ten locations at depths from 0 to 8 feet bgs, which was the approximate depth to groundwater. Samples were collected from the spill area near the hydraulic equipment (SA01 through SA07) and the shop area (SH01). Two samples (SW01 and SW02) were located to the northwest of the process area in the swale. At least two soil samples were collected from each borehole with a total of 23 soil samples collected. The borehole locations are presented on Figure 3-3.

### 3.2.3 Summary of Analytical Results

Soil sample results are summarized in Table 3-2A and indicate the presence of metals, PCBs, pesticides, TPH, and SVOCs at concentrations that exceeded site screening levels.

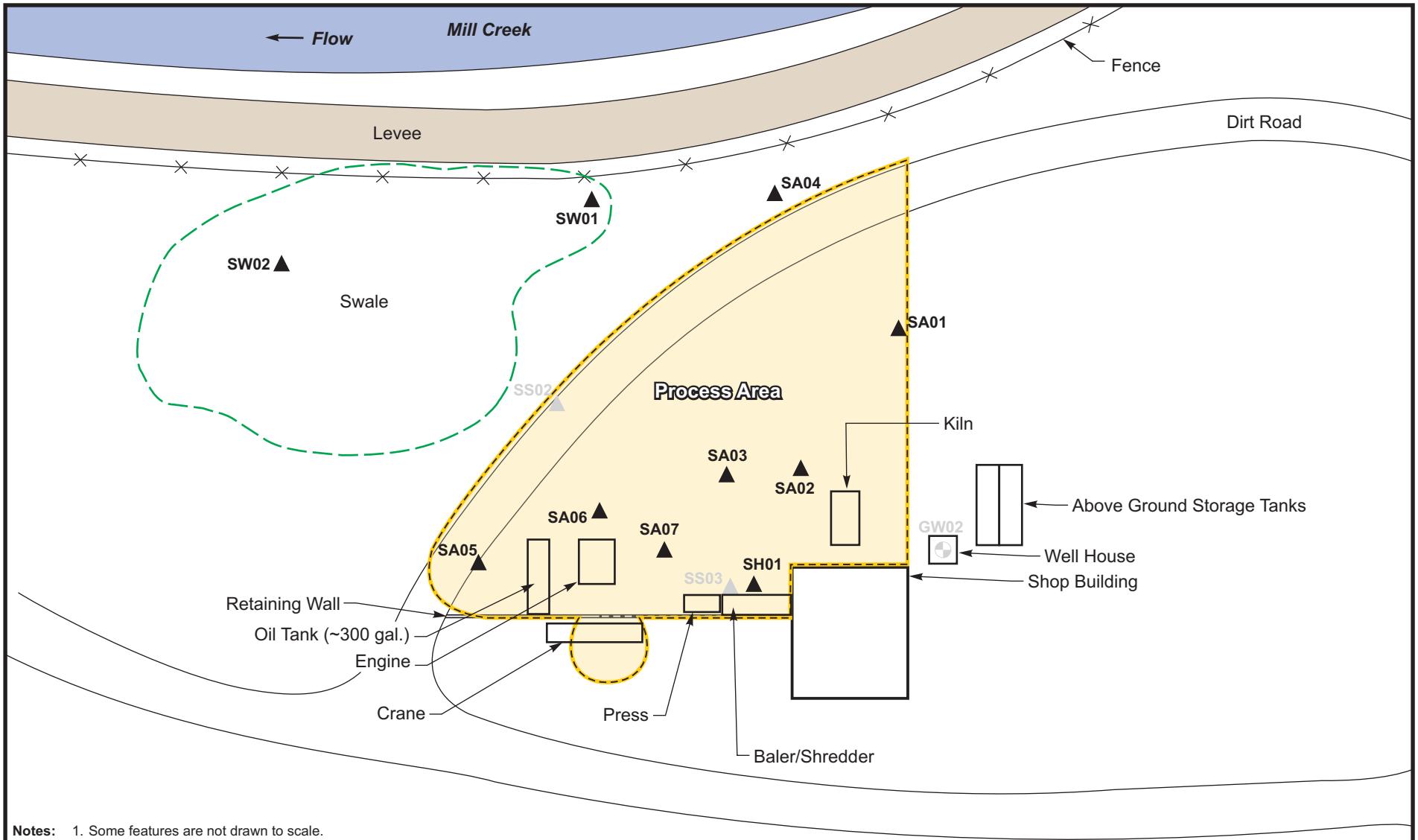
Lead was detected at two locations with concentrations greater than the RSL industrial criteria of 800 mg/kg, with the maximum concentration of 1,400 J mg/kg detected at SA06. PCBs were detected in eight samples from six locations from 0 to 8 feet bgs with concentrations greater than RSL industrial criteria; Aroclor-1242 was detected as high as 35,000 µg/kg at SA07, which exceeds the RSL industrial criteria of 740 µg/kg. Pesticides were detected at two locations at concentrations greater than the RSL residential criteria; the maximum concentration (280 J µg/kg of beta-BHC) was detected at SA07. TPH was detected in six samples at three locations greater than MTCA cleanup levels, with the maximum concentration (100,000 mg/kg, or 10 percent [%], for ORO) at SA06. SVOCs were detected in 13 samples at seven locations from 0 to 8 feet bgs with concentrations greater than RSL industrial criteria; the maximum concentrations were detected at SA06 with 130 mg/kg benzo[a]anthracene compared to an RSL industrial criteria of 2.1 mg/kg, and 84 mg/kg benzo[a]pyrene compared to RSL industrial criteria of 0.21 mg/kg.

Analytical results for the two sample locations in the swale detected SVOCs at concentrations greater than site screening criteria, with a maximum concentration of 2.8 mg/kg of benzo[a]pyrene at SW01 which exceeds the RSL industrial criteria of 0.21 mg/kg. No metals, PCBs, pesticides, or TPH was detected above site screening criteria in the swale samples. The two swale samples, which attempted to establish the extent of contamination to the north and northwest of the process area, indicated SVOCs greater than screening levels; it was undetermined after this sampling event if SVOC contamination between the swale and process area was contiguous or separate.

One soil sample (SA01) was analyzed for SVOCs using the toxic characteristic leaching procedure (TCLP) and synthetic precipitation leaching procedure (SPLP) methods, and a second soil sample (SH01) was analyzed for TCLP metals and TCLP pesticides. TCLP is an extraction method used to simulate material disposed in landfills and exposed to acidic leachate, and SPLP is an extraction method used to simulate material left in-situ and exposed to acidic rainfall. All

TCLP analytical results were less than Resource Conservation and Recovery Act (RCRA) TCLP limits, and all SPLP SVOC analytical results were non-detect. Soil sample results for TCLP and SPLP are found in Tables 3-2B and 3-2C, respectively.

Results from the soil samples collected in September 2009 indicated that contamination in subsurface soil in the process area extended to the water table. Additionally, the results from this sampling event document the presence of SVOCs above screening criteria in the swale. Following this sampling event, EPA identified the following data gaps for future sampling events: horizontal extent of contamination, depth and direction of groundwater in the process area, potential contamination of groundwater and surface water in Mill Creek, potential contamination beneath the shop building, and assessment for potential SVOC contamination between the swale and the process area. Copies of the data memoranda from the September 2009 sampling event can be found in Appendix E.




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. A light-gray sample location indicates a sample collected during a previous sampling event.

**Legend**
- Monitoring Well or Domestic Well
- Soil Sample
- Process Area

0 36 72
Approximate Scale in Feet

**Figure 3-3: September 2009 RSE Sample Locations**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

ecology and environment, inc.
Global Specialists in the Environment
Seattle, Washington

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**Table 3-2A Summary of Soil Sample Results from September 2009 (Page 1 of 2)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-09-0903 | 09-09-0904 | 09-09-0908 | 09-09-0909 | 09-09-0912 | 09-09-0915 | 09-09-0916 | 09-09-0917 | 09-09-0919 | 09-09-0920 | 09-09-0921 | 09-09-0924 | 09-09-0925 | 09-09-0927 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | BG01SB04 | BG01SS | SA07SB04 | SA07SB08 | SA04SB04 | SA04SS | SA01SB04 | SA01SB08 | SA01SS | SA03SB04 | SA03SB08 | SA06SB04 | SA06SB08 | SA06SS |
| Sample Depth | | | 4' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | Surface | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | Surface |
| Sample Collection Event | | | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Antimony (Metallic) | 31 | 410 | 6.5 U | 5.2 UJ | | | 6.6 | 21 | 6.1 U | 5.6 U | 16 | | | 6.4 U | 7.2 U | 54 |
| Arsenic (Inorganic) | 0.39 | 1.6 | 13 U | 10 UJ | | | 11 U | 10 U | 12 U | 11 U | 10 U | | | 13 U | 14 U | 10 U |
| Cobalt | 23 | 300 | 7.1 | 10 J | | | 16 | 16 | 16 | 14 | 18 | | | 12 | 16 | 21 |
| Iron | 55,000 | 720,000 | 21,000 | 34,000 J | | | 45,000 | 76,000 | 43,000 | 43,000 | 63,000 | | | 39,000 | 43,000 | 76,000 |
| Lead & Compounds | 400 | 800 | 18 | 19 J | | | 52 J | 830 J | 140 J | 63 J | 660 J | | | 600 | 180 | 1,400 J |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1242 | 220 | 740 | 65 U | 52 UJ | 35,000 | 18,000 | 55 U | 710 | 61 U | 56 U | 300 | 280 | 420 | 270 | 360 U | 10,000 |
| Aroclor-1248 | 220 | 740 | 65 U | 52 UJ | 6,700 U | 1,400 U | 55 U | 510 U | 61 U | 56 U | 52 U | 63 U | 59 U | 64 U | 360 U | 5,200 U |
| Aroclor-1254 | 220 | 740 | 65 U | 52 UJ | 6,700 U | 1,400 U | 55 U | 4,100 | 61 U | 56 U | 840 | 780 | 490 | 700 | 2,300 | 41,000 |
| Aroclor-1260 | 220 | 740 | 65 U | 52 UJ | 6,700 U | 1,400 U | 55 U | 510 U | 110 | 56 U | 450 | 740 | 180 | 200 J | 710 | 5,200 U |
| **Pesticides (µg/kg)** | | | | | | | | | | | | | | | | |
| beta-BHC | 270 | 960 | 6.5 U | 5.2 UJ | 280 J | 6.8 UJ | 5.5 UJ | 9.6 | 6.1 U | 5.6 U | 5.2 U | 6.3 U | 5.9 U | 6.4 UJ | | |
| Dieldrin | 30 | 110 | 13 U | 10 UJ | 100 J | 14 UJ | 11 UJ | 51 | 12 UJ | 11 U | 22 J | 13 UJ | 12 UJ | 13 UJ | | |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 [1] | 2,000 [1] | 33 U | 26 UJ | | | 28 U | 93 U | 31 U | 28 U | | | | 130 U | 570 U | 11,000 U |
| Oil Range Organics | 2,000 [1] | 2,000 [1] | 65 U | 52 UJ | | | 55 U | 700 | 91 | 62 | | | | 1,400 | 3,400 | 100,000 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | 0.016 | 0.39 J | 17 | 8 | 0.12 | 0.64 | 0.13 | 0.048 | | 0.55 | 1.9 | 5.3 | 33 | 130 |
| Benzo(a)pyrene | 0.015 | 0.21 | 0.032 | 0.39 J | 12 | 5.3 | 0.13 | 0.74 | 0.14 | 0.05 | | 0.43 | 1.3 | 3.5 | 22 | 84 |
| Benzo(b)fluoranthene | 0.15 | 2.1 | 0.039 | 0.46 J | 13 | 6.5 | 0.089 | 0.85 | 0.11 | 0.044 | | 0.64 | 1.4 | 3.7 | 20 | 90 |
| Benzo(k)fluoranthene | 1.5 | 21 | 0.015 | 0.31 J | 9.1 | 3.6 | 0.12 | 0.77 | 0.13 | 0.045 | | 0.19 | 1 | 2.9 | 21 | 66 |
| Chrysene | 15 | 210 | 0.027 | 0.44 J | 18 | 8.3 | 0.13 | 0.9 | 0.13 | 0.054 | | 0.62 | 2 | 5.2 | 34 | 130 |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 0.0087 U | 0.071 J | 1.8 | 0.78 | 0.018 | 0.19 | 0.021 | 0.0075 U | | 0.091 | 0.15 | 0.7 | 2.9 | 18 |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | 0.023 | 0.21 J | 5 | 2.2 | 0.058 | 0.54 | 0.086 | 0.02 | | 0.22 | 0.47 | 1.9 | 11 | 52 |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.043 U | 0.13 J | 0.44 U | 0.22 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

| | |
|---|---|
| BGS | = Below ground surface. |
| EPA | = Environmental Protection Agency. |
| J | = The analyte was positively identified; the associated numerical value is the approximate concentration. |
| JK | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias. |
| JL | = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias. |
| JQ | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit. |
| MTCA | = Model Toxics Control Act. |
| mg/kg | = Milligrams per kilogram (parts per million). |
| µg/kg | = Micrograms per kilogram (parts per billion). |
| PCBs | = Polychlorinated biphenyls. |
| RSL | = Regional screening levels for chemical contaminants at Superfund sites. |
| SVOCs | = Semivolatile organic hydrocarbons. |
| TPH | = Total petroleum hydrocarbons. |
| U | = The analyte was analyzed for, but not detected above the reported sample quantitation limit. |
| UJ | = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |

**Table 3-2A Summary of Soil Sample Results from September 2009 (Page 2 of 2)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-09-0928 | 09-09-0929 | 09-09-0932 | 09-09-0933 | 09-09-0936 | 09-09-0937 | 09-09-0953 | 09-09-0954 | 09-09-0956 | 09-09-0957 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SA02SB04 | SA02SB08 | SA05SB04 | SA05SB08 | SH01SB04 | SH01SB08 | SW01SB08 | SW01SB04 | SW02SS | SW02SB02 |
| Sample Depth | | | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 8' BGS | 4' BGS | Surface | 2' BGS |
| Sample Collection Event | | | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **Metals (mg/kg)** | | | | | | | | | | | | |
| Antimony (Metallic) | 31 | 410 | | | **8.8** | 6.8 U | **8.8** | 7.8 U | 5.8 U | **11** | 7.8 U | 8.1 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | | | 13 U | 14 U | 14 U | 16 U | 12 U | 11 U | 16 U | 16 U |
| Cobalt | 23 | 300 | | | **13** | **19** | **7.2** | **3.4** | **12** | **13** | **8** | **14** |
| Iron | 55,000 | 720,000 | | | **40,000** | **57,000** | **23,000** | **9,200** | **35,000** | **42,000** | **29,000 J** | **41,000 J** |
| Lead & Compounds | 400 | 800 | | | **120** | **40** | **21** | 7.8 U | **32 J** | **51 J** | **100** | **18** |
| **PCBs (µg/kg)** | | | | | | | | | | | | |
| Aroclor-1242 | 220 | 740 | **62** | 65 U | **75 J** | **160** | **4,500** | **540** | 58 U | 560 U | 78 U | 81 U |
| Aroclor-1248 | 220 | 740 | 61 U | 65 U | 66 U | 68 U | 710 U | 78 U | 58 U | 560 U | 78 U | 81 U |
| Aroclor-1254 | 220 | 740 | **180** | 65 U | **160** | 68 U | 710 U | 78 U | 58 U | 560 U | 78 U | 81 U |
| Aroclor-1260 | 220 | 740 | **200** | 65 U | **85** | **150** | 710 U | 78 U | 58 U | 560 U | **120 J** | 81 U |
| **Pesticides (µg/kg)** | | | | | | | | | | | | |
| beta-BHC | 270 | 960 | 6.1 UJ | 6.5 UJ | 6.6 UJ | 6.8 UJ | 7.1 UJ | 7.8 UJ | 5.8 U | 5.6 U | 7.8 UJ | 8.1 UJ |
| Dieldrin | 30 | 110 | 12 UJ | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 UJ | 11 UJ | 16 UJ | 16 UJ |
| **TPH (mg/kg)** | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 [1] | 2,000 [1] | | | 2,200 U | 2,200 U | **27,000** | **2,600** | 29 U | **33** | 39 U | 40 U |
| Oil Range Organics | 2,000 [1] | 2,000 [1] | | | **35,000** | **29,000** | **46,000** | **4,400** | 58 U | **140** | **210** | **110** |
| **SVOCs (mg/kg)** | | | | | | | | | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | **0.37** | **0.37** | **0.0144** | **0.071** | 0.19 U | 0.01 U | **0.24** | **2.5** | **0.077** | **0.13** |
| Benzo(a)pyrene | 0.015 | 0.21 | **0.41** | **0.35** | **0.12** | **0.2** | 0.19 U | 0.01 U | **0.26** | **2.8** | **0.088** | **0.17** |
| Benzo(b)fluoranthene | 0.15 | 2.1 | **0.32** | **0.22** | **0.11** | **0.14** | **0.19** | 0.01 U | **0.15** | **1.7** | **0.067** | **0.12** |
| Benzo(k)fluoranthene | 1.5 | 21 | **0.32** | **0.3** | **0.032** | **0.2** | 0.19 U | 0.01 U | **0.23** | **2.4** | **0.072** | **0.11** |
| Chrysene | 15 | 210 | **0.4** | **0.36** | **0.0432** | **0.26** | 0.19 U | **0.011** | **0.25** | **2.6** | **0.082** | **0.14** |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | **0.058** | **0.05** | 0.0088 U | 0.018 U | 0.19 U | 0.01 U | **0.037** | **0.29** | **0.013** | **0.022** |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | **0.26** | **0.13** | 0.0088 U | 0.018 U | 0.19 U | 0.01 U | **0.11** | **1.1** | **0.054** | **0.1** |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U | 0.039 U | 0.19 U | 0.052 U | 0.054 U |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

| | |
|---|---|
| BGS | = Below ground surface. |
| EPA | = Environmental Protection Agency. |
| J | = The analyte was positively identified; the associated numerical value is the approximate concentration. |
| JK | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias. |
| JL | = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias. |
| JQ | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit. |
| MTCA | = Model Toxics Control Act. |
| mg/kg | = Milligrams per kilogram (parts per million). |
| µg/kg | = Micrograms per kilogram (parts per billion). |
| PCBs | = Polychlorinated biphenyls. |
| RSL | = Regional screening levels for chemical contaminants at Superfund sites. |
| SVOCs | = Semivolatile organic hydrocarbons. |
| TPH | = Total petroleum hydrocarbons. |
| U | = The analyte was analyzed for, but not detected above the reported sample quantitation limit. |
| UJ | = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |

**Table 3-2B Soil Sample Results for TCLP in September 2009**

| EPA Sample ID | RCRA TCLP[1] | 09-09-0907 | 09-09-0919 |
|---|---|---|---|
| Sample Location | | SH01SS | SA01SS |
| Sample Depth | | Surface | Surface |
| Sample Collection Event | | Sep-09 | Sep-09 |
| **TCLP Metals (mg/L)** | | | |
| Arsenic | 5 | 0.4 U | |
| Barium | 100 | **22** | |
| Cadmium | 1 | 0.02 U | |
| Chromium | 5 | **0.02** | |
| Lead | 5 | 0.2 U | |
| Mercury | 0.2 | 0.005 U | |
| Selenium | 1 | 0.4 U | |
| Silver | 5 | 0.02 U | |
| **TCLP Pesticides (µg/L)** | | | |
| alpha-Chlordane | 30 | | |
| Endrin | 20 | 0.05 UJ | |
| gamma-BHC (Lindane) | 40 | 0.05 UJ | |
| gamma-Chlordane | 30 | | |
| Heptachlor | 8 | 0.05 UJ | |
| Heptachlor epoxide | 8 | 0.05 UJ | |
| Methoxychlor | 10,000 | 0.1 UJ | |
| Toxaphene | 500 | 0.5 UJ | |
| **TCLP SVOCs (µg/L)** | | | |
| 1,4-Dichlorobenzene | 2.4 | | 10 U |
| 2,4,5-Trichlorophenol | 400,000 | | 10 U |
| 2,4,6-Trichlorophenol | 2,000 | | 10 U |
| 2,4-Dinitrotoluene | 130 | | 10 U |
| 2-Methylphenol | 200,000 | | 10 U |
| 3 & 4-Methylphenol | 200,000 | | 10 U |
| Hexachlorobenzene | 130 | | 10 U |
| Hexachlorobutadiene | 500 | | 10 U |
| Hexachloroethane | 3,000 | | 10 U |
| Nitrobenzene | 2,000 | | 10 U |
| Pentachlorophenol | 100,000 | | 50 U |
| Pyridine | 5,000 | | 10 U |

**Table 3-2C Soil Sample Results for SPLP in September 2009**

| EPA Sample ID | EPA RSL - Tapwater[2] | 09-09-0907 | 09-09-0919 |
|---|---|---|---|
| Sample Location | | SH01SS | SA01SS |
| Sample Depth | | Surface | Surface |
| Sample Collection Event | | Sep-09 | Sep-09 |
| **SPLP SVOCs (µg/L)** | | | |
| 1,4-Dichlorobenzene | 370 | | 10 U |
| 2,4,5-Trichlorophenol | 3,700 | | 10 U |
| 2,4,6-Trichlorophenol | 6.1 | | 10 U |
| 2,4-Dinitrotoluene | 0.22 | | 10 U |
| 2-Methylphenol | 1,800 | | 10 U |
| 3 & 4-Methylphenol | 1,800 | | 10 U |
| Hexachlorobenzene | 0.042 | | 10 U |
| Hexachlorobutadiene | 0.86 | | 10 U |
| Hexachloroethane | 4.8 | | 10 U |
| Nitrobenzene | 0.12 | | 10 U |
| Pentachlorophenol | 0.17 | | 50 U |
| Pyridine | 37 | | 10 U |

Note:

= Greater than or equal to RCRA TCLP screening criteria.
= Greater than or equal to EPA RSL residential screening criteria.
= Not analyzed.

1. = TCLP data compared to RCRA TCLP screening criteria.
2. = SPLP data compared to EPA RSL tapwater screening criteria.

Key:

EPA = Environmental Protection Agency.
mg/L = Milligrams per liter (parts per million).
µg/L = Micrograms per liter (parts per billion).
RCRA = Resource Conservation and Recovery Act.
RSL = Regional screening levels for chemical contaminants at Superfund sites.
SPLP = Synthetic Precipitation Leaching Procedure.
SVOCs = Semivolatile organic hydrocarbons.
TCLP = Toxic Characteristic Leaching Procedure.
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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## 3.3 October 2009

### 3.3.1 Purpose

In October 2009, EPA mobilized to Stubblefield Salvage Yard, which was still operating as an active salvage yard. The purpose of the mobilization was to conduct a removal action of asbestos-containing material and abandoned drums, which is detailed in a separate removal report. During this mobilization EPA collected surface water samples from Mill Creek and performed additional characterization sampling, including the excavation of a test pit, to support an evaluation of cleanup alternatives for the process area (E & E 2009a).

### 3.3.2 Site Activity and Sample Collection

As part of the October 2009 mobilization, EPA excavated a test pit in the process area near the baler/shredder to approximately 6 feet bgs and collected one soil sample (TP01) near the bottom of the test pit. The test pit location is presented on Figure 3-3.

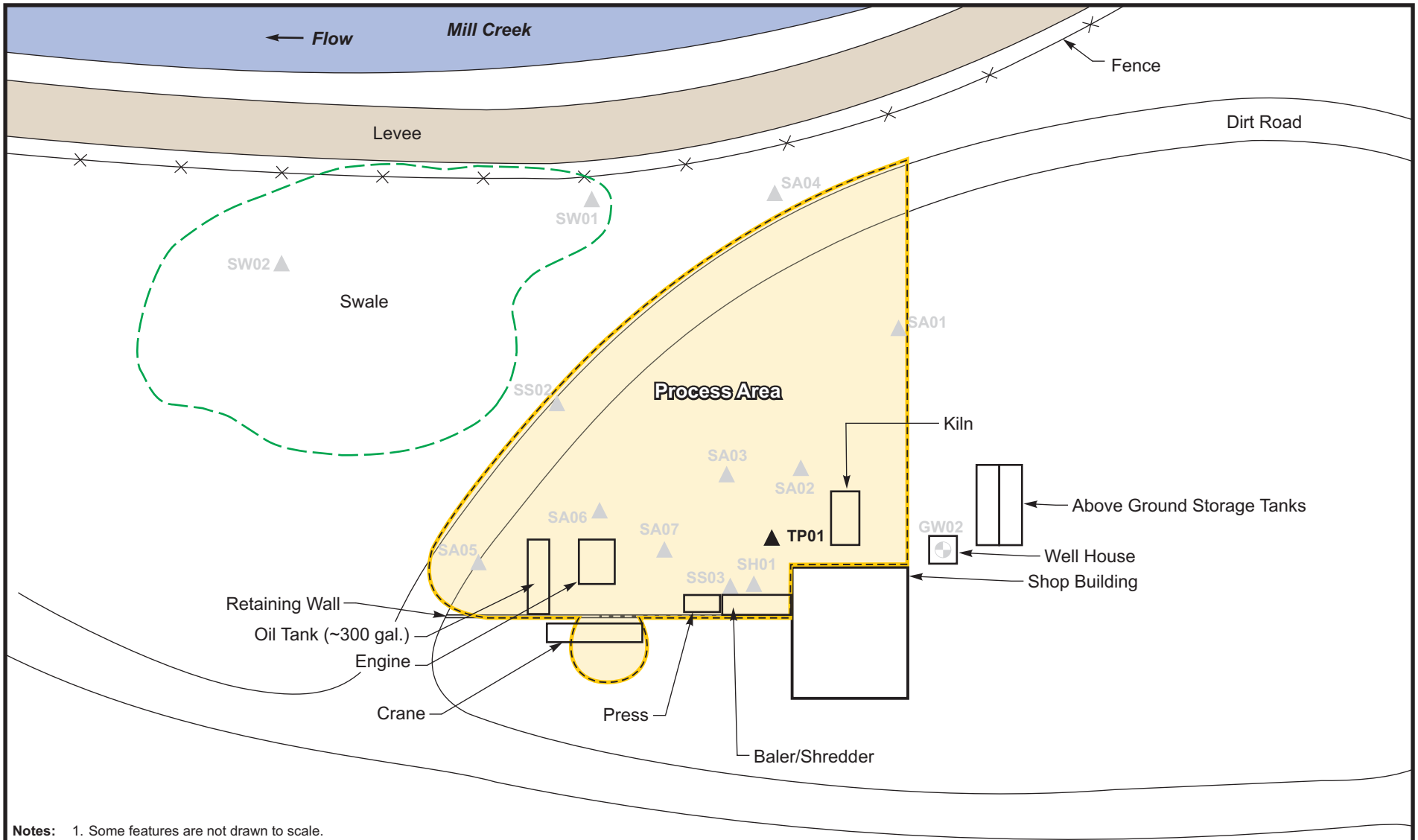
EPA collected four surface water samples (MC01SW through MC04SW) from Mill Creek, including one sample upstream, two samples adjacent to the northern boundary of the Stubblefield property, and one sample downstream.

### 3.3.3 Summary of Analytical Results

Data for the test pit soil sample indicated that lead was detected at a concentration of 840 mg/kg, which exceeds the RSL industrial criteria of 800 mg/kg. The PCBs Aroclor-1242 (4,000 µg/kg) and Aroclor-1254 (2,600 µg/kg) were both also detected at concentrations greater than the RSL industrial criteria of 740 µg/kg. The TPH results indicate that DRO was detected at a concentration of 12,000 J mg/kg and ORO was detected at a concentration of 18,000 J mg/kg, both above the MTCA cleanup level of 2,000 mg/kg, and the PAHs benzo[a]anthracene (2.5 J mg/kg), benzo[a]pyrene (1.2 J mg/kg), and benzo[b]fluoranthene (2.6 J mg/kg) were detected above the respective industrial RSLs. This data was consistent with subsurface soil data collected during the September 2009 sampling event. Soil from the test pit was classified as silt with sand and contained 30.91% moisture content. The soil sample analytical results are summarized in Table 3-3A.

The analytical results for the surface water samples from Mill Creek indicated that PCBs, pesticides, TPH, SVOCs, and VOCs were not detected. The only metal analytes detected are common constituents of natural waters and are below the screening levels. A summary of water sample results is found in Table 3-3B.

EPA's START contractor generated an Alternatives Evaluation Technical Memorandum that evaluated potential cleanup alternatives for the process area and that also recommended the installation of monitoring wells to determine the impact of subsurface soil contamination on groundwater (E & E 2010c). Copies of the data memoranda from the October 2009 sampling event can be found in Appendix F.




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. A light-gray sample location indicates a sample collected during a previous sampling event.

**Legend**
- Monitoring Well or Domestic Well
- Soil Sample
- Process Area

0 36 72
Approximate Scale in Feet

**Figure 3-4: October 2009 RSE Sample Location**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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Seattle, Washington

**Table 3-3A Summary of Soil Sample Results from October 2009**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-10-1047 |
|---|---|---|---|
| Sample Location | | | TP01 |
| Sample Depth | | | 6' BGS |
| Sample Collection Event | | | Oct-09 |
| **Metals (mg/kg)** | | | |
| Antimony (Metallic) | 31 | 410 | **7.5** |
| Arsenic (Inorganic) | 0.39 | 1.6 | 13 U |
| Cobalt | 23 | 300 | **22** |
| Iron | 55,000 | 720,000 | **48,000** |
| Lead & Compounds | 400 | 800 | **840 J** |
| **PCBs (µg/kg)** | | | |
| Aroclor-1242 | 220 | 740 | **4,000** |
| Aroclor-1248 | 220 | 740 | 660 U |
| Aroclor-1254 | 220 | 740 | **2,600** |
| Aroclor-1260 | 220 | 740 | 660 U |
| **Pesticides (µg/kg)** | | | |
| beta-BHC | 270 | 960 | |
| Dieldrin | 30 | 110 | |
| **TPH (mg/kg)** | | | |
| Diesel Range Organics | 2,000 [1] | 2,000 [1] | **12,000 J** |
| Oil Range Organics | 2,000 [1] | 2,000 [1] | **18,000 J** |
| **SVOCs (mg/kg)** | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | **2.5 J** |
| Benzo(a)pyrene | 0.015 | 0.21 | **1.2 J** |
| Benzo(b)fluoranthene | 0.15 | 2.1 | **2.6 J** |
| Benzo(k)fluoranthene | 1.5 | 21 | **0.86 J** |
| Chrysene | 15 | 210 | **2.8 J** |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | **0.18 J** |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | **0.51 J** |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 2.2 UJ |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

BGS = Below ground surface.

EPA = Environmental Protection Agency.

J = The analyte was positively identified; the associated numerical value is the approximate concentration.

JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.

JL = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias.

JQ = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit.

MTCA = Model Toxics Control Act.

mg/kg = Milligrams per kilogram (parts per million).

µg/kg = Micrograms per kilogram (parts per billion).

PCBs = Polychlorinated biphenyls.

RSL = Regional screening levels for chemical contaminants at Superfund sites.

SVOCs = Semivolatile organic hydrocarbons.

TPH = Total petroleum hydrocarbons.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

**Table 3-3B Summary of Water Sample Results from October 2009**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 09-10-1021 | | 09-10-1022 | | 09-10-1023 | | 09-10-1024 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MC01SW | | MC02SW | | MC03SW | | MC04SW | |
| Sample Details | | | Surface Water | | Surface Water | | Surface Water | | Surface Water | |
| Sample Collection Event | | | Oct-09 | | Oct-09 | | Oct-09 | | Oct-09 | |
| **Metals (µg/L)** | | | | | | | | | | |
| Arsenic (Inorganic) | 0.045 | 10 | 3.3 | UJ | 3.3 | U | 3.3 | U | 3.3 | U |
| Cobalt | 4.7 | NA | 11 | UJ | 11 | U | 11 | U | 11 | U |
| Iron | 11,000 | NA | **120** | **J** | **190** | | **82** | | **110** | |
| Lead & Compounds | NA | 15 | 1.1 | UJ | 1.1 | U | 1.1 | U | 1.1 | U |
| Manganese (Non-Diet) | 320 | NA | 11 | UJ | 11 | U | 11 | U | 11 | U |
| Vanadium & Compounds | 78 | NA | 11 | UJ | 11 | U | 11 | U | 11 | U |
| **PCBs (µg/L)** | | | | | | | | | | |
| Aroclor-1242 | 0.034 | NA | 0.048 | U | 0.048 | U | 0.048 | U | 0.048 | U |
| Aroclor-1254 | 0.034 | NA | 0.048 | U | 0.048 | U | 0.048 | U | 0.048 | U |
| Aroclor-1260 | 0.034 | NA | 0.048 | U | 0.048 | U | 0.048 | U | 0.048 | U |
| **Pesticides (µg/L)** | | | | | | | | | | |
| Aldrin | 0.00021 | NA | 0.0049 | UJ | 0.0048 | U | 0.0048 | U | 0.0048 | U |
| Dieldrin | 0.0015 | NA | 0.0049 | UJ | 0.0048 | UJ | 0.0048 | UJ | 0.0048 | UJ |
| **TPH (mg/L)** | | | | | | | | | | |
| Diesel Range Organics | 0.5 [1] | NA | 0.24 | U | 0.25 | U | 0.24 | U | 0.25 | U |
| Oil Range Organics | 0.5 [1] | NA | 0.39 | U | 0.4 | U | 0.39 | U | 0.4 | U |
| **SVOCs (µg/L)** | | | | | | | | | | |
| 1-Methylnaphthalene | 0.97 | NA | 0.098 | U | 0.098 | U | 0.096 | U | 0.096 | U |
| 2-Methylnaphthalene | 27 | NA | 0.098 | U | 0.098 | U | 0.096 | U | 0.096 | U |
| Benzo[a]anthracene | 0.029 | NA | 0.0098 | U | 0.0098 | U | 0.0096 | U | 0.0096 | U |
| Benzo[a]pyrene | 0.0029 | 0.2 | 0.0098 | U | 0.0098 | U | 0.0096 | U | 0.0096 | U |
| Benzo[b]fluoranthene | 0.029 | NA | 0.0098 | U | 0.0098 | U | 0.0096 | U | 0.0096 | U |
| Benzo[k]fluoranthene | 0.29 | NA | 0.0098 | U | 0.0098 | U | 0.0096 | U | 0.0096 | U |
| bis(2-Ethylhexyl)phthalate | 0.071 | 6 | 0.98 | U | 0.98 | U | 0.96 | U | 0.96 | U |
| Butylbenzylphthalate | 14 | NA | 0.98 | U | 0.98 | U | 0.96 | U | 0.96 | U |
| Dibenz[a,h]anthracene | 0.0029 | NA | 0.0098 | U | 0.0098 | U | 0.0096 | U | 0.0096 | U |
| Indeno[1,2,3-cd]pyrene | 0.029 | NA | 0.0098 | U | 0.0098 | U | 0.0096 | U | 0.0096 | U |
| Naphthalene | 0.14 | NA | 0.098 | U | 0.098 | U | 0.096 | U | 0.096 | U |
| **VOCs (µg/L)** | | | | | | | | | | |
| Chloroform | 0.19 | 80 | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |
| Tetrachloroethene | 9.7 | 5 | 0.2 | U | 0.2 | U | 0.2 | U | 0.2 | U |

Note:

= Greater than or equal to EPA RSL and/or Federal MCL.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in groundwater.

Key:

EPA = Environmental Protection Agency.

IDW = Investigation derived waste.

J = The analyte was identified; the associated numerical result is an estimate.

JH = The analyte was positively identified; the assoicated numerical value is the approximate concentration with a high bias.

JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.

MCL = Federal Maximum Contaminant Level drinking water standards.

MTCA = Model Toxics Control Act.

mg/L = Milligrams per liter (parts per million).

µg/L . = Micrograms per liter (parts per billion).

NA = Not applicable.

R = The sample results are rejected due to serious deficiencies; the presence or absence of the analyte cannot be verified.

RSL = Regional Screening Levels for Chemical Contaminants at Superfund Sites.

U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

## 3.4 March 2010

### 3.4.1 Purpose

In March 2010, EPA returned to Stubblefield Salvage Yard, which was still actively operating as a salvage yard. The purpose of the mobilization was to install four monitoring wells to determine depth and direction of groundwater flow and analyze for groundwater contamination, and collect additional soil samples from near the process area (E & E 2010b).

### 3.4.2 Site Activity and Sample Collection

As part of the March 2010 mobilization, EPA installed four monitoring wells; one background well (MW01) was installed upgradient of the source area; two wells (MW02 and MW03) were installed downgradient of the source area, and one well (MW04) was installed cross-gradient of the source area (E & E 2010a). Groundwater elevations and contours are discussed in Section 3.9.

Two investigative boreholes were also installed to further delineate the extent of contamination and to evaluate whether contamination extended beneath the baler/shredder. One soil boring (SB1) was installed west of the process area to evaluate how far the source area extended in that direction, addressing a data gap identified following a previous RSE phase. The second soil boring (SB2) was installed at an approximately 45-degree angle under the baler/shredder, which was believed to be the source of the hydraulic fluid (i.e., TPH) and associated organic and inorganic contaminants observed in the site soils (E & E 2010a).

A total of 11 soil samples from the boreholes and four groundwater samples from the newly completed and developed monitoring wells were collected during this phase. The locations of the monitoring wells and both investigative boreholes are presented on Figure 3-5.

### 3.4.3 Summary of Analytical Results

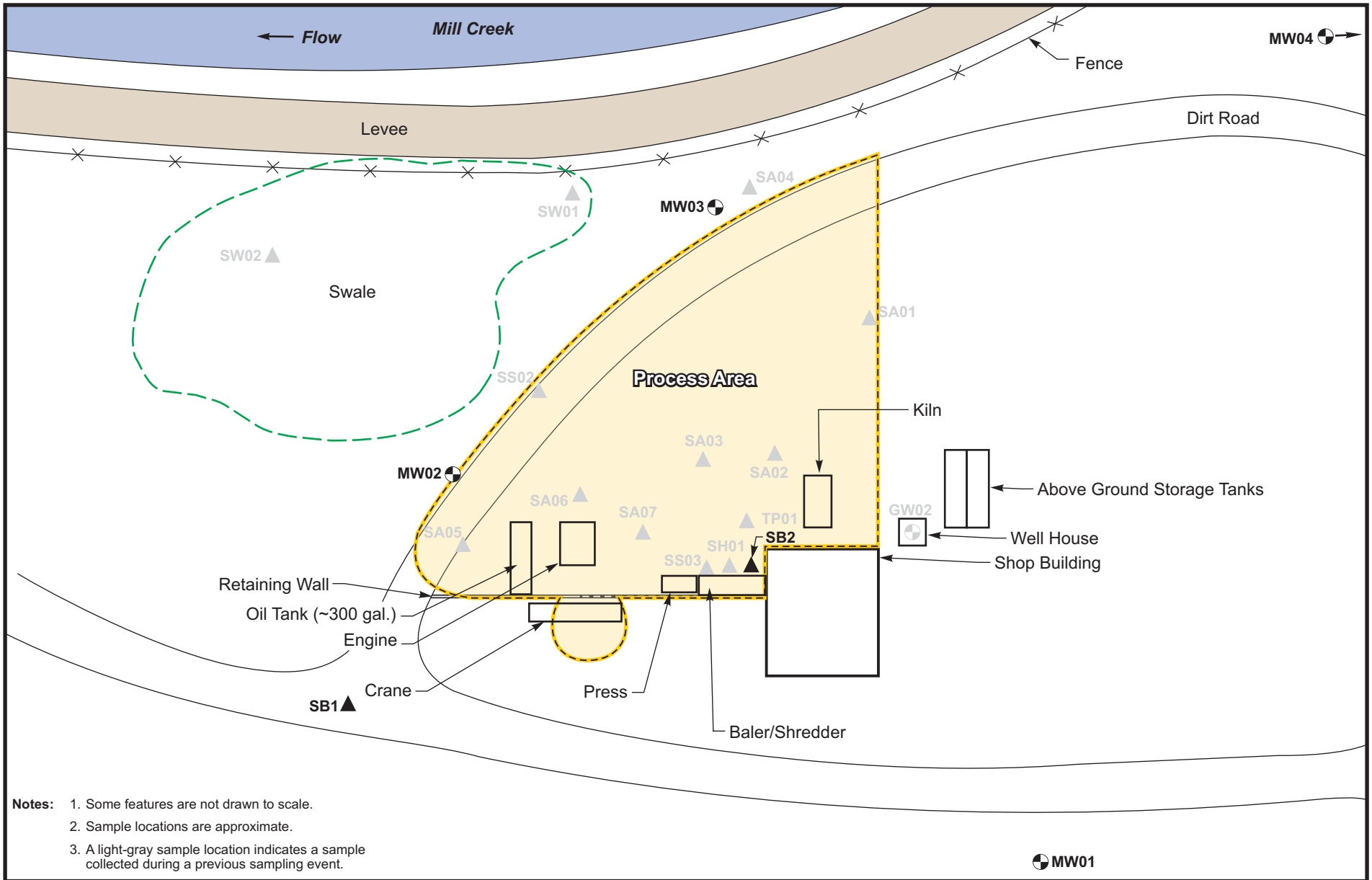
Subsurface soil samples were collected from the six boreholes and analyzed for metals, PCBs, and SVOCs, with the results summarized in Table 3-4A. The results indicate that some metals, PCBs, and SVOCs were detected in six of the samples, although the concentrations were lower than detected in previous phases of the RSE, as only a few of the compounds exceeded residential RSL screening levels, and none exceeded industrial RSLs. All sample locations except MW02 had iron concentrations greater than RSL residential criteria; no other metals were detected above screening criteria. Sample location SB02 had a PCB concentration (220 µg/kg of Aroclor-1242), which is equal to the residential RSL criteria; no other PCBs were detected. Sample location MW02 had SVOC concentrations of 0.094 mg/kg of benzo[a]pyrene which exceeded the residential RSL of 0.015 mg/kg, and 0.015 mg/kg of dibenzo[a,h]anthracene which was equal to the residential RSL criteria; no other SVOCs were detected above screening criteria.

Groundwater samples were analyzed for metals, PCBs, and SVOCs, and the data is summarized in Table 3-4B. Sample MW02 contained the PCB Aroclor-1242 at a concentration of 0.088 microgram per liter (µg/L), which is above the RSL tapwater criteria of 0.034 µg/L, but no other PCBs were detected. Sample location MW01 contained the SVOC bis(2-ethylhexyl)phthalate at a concentration of 6.5 µg/L which is above the RSL tapwater and MCL criteria, but no other SVOCs were detected. Also, this particular SVOC is a known cross-contaminant found in

polyvinyl chloride (PVC) tubing, including the PVC well casing and screen installed in the monitoring wells. No metals were detected at concentrations that exceeded their screening levels.

The analytical results for the groundwater sample downgradient from the source area (MW02) indicated that only the PCB compound Aroclor-1242 was detected above the screening criteria, which was interpreted to imply that impacts to downgradient groundwater were possibly minimal at least at the locations where the monitoring wells were installed. The locations of two wells (MW02 and MW03) appeared to be near the approximate western and northern extent of groundwater contamination of the process area, respectively. This approximation was supported by the data which indicated limited contamination at MW02 and no contamination greater than cleanup levels at MW03.

START generated a technical memorandum summarizing this field event and analytical results associated with the installation of monitoring wells and investigative boreholes (E & E 2010a). This phase of the RSE led to the recommendation for seasonal groundwater sampling to determine fluctuations of groundwater direction and depth, as well as to determine whether there were seasonal variations in contaminant concentrations. Copies of the data memoranda from the March 2010 sampling event can be found in Appendix G.




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. A light-gray sample location indicates a sample collected during a previous sampling event.

**Legend**
- Monitoring Well or Domestic Well
- Soil Sample
- Process Area

0 36 72
Approximate Scale in Feet

**Figure 3-5: March 2010 RSE Sample Locations**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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Global Specialists in the Environment
Seattle, Washington

**Table 3-4A Summary of Soil Sample Results from March 2010**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 10-03-0001 | 10-03-0003 | 10-03-0004 | 10-03-0006 | 10-03-0009 | 10-03-0010 | 10-03-0011 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW04SB07 | MW02SB05 | MW02SB07 | MW01SB06 | SB01SB14 | SB02SB04 | SB02SB06 |
| Sample Depth | | | 7' BGS | 5' BGS | 7' BGS | 6' BGS | 14' BGS | 4' BGS | 6' BGS |
| Sample Collection Event | | | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 |
| **Metals (mg/kg)** | | | | | | | | | |
| Antimony (Metallic) | 31 | 410 | 6.8 U | 6.5 U | 9.3 U | 6.7 U | 6.7 U | 7.3 U | 7.6 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | 14 U | 13 U | 19 U | 13 U | 13 U | 15 U | 15 U |
| Cobalt | 23 | 300 | **15** | **10** | **9.1** | **12** | **15** | **10** | **15** |
| Iron | 55,000 | 720,000 | **64,000** | **47,000** | **57,000** | **56,000** | **72,000** | **67,000** | **76,000** |
| Lead & Compounds | 400 | 800 | **9.4** | **46** | **17** | **8.1** | **11** | 7.3 U | **7.7** |
| **PCBs (µg/kg)** | | | | | | | | | |
| Aroclor-1242 | 220 | 740 | 68 U | 65 U | 93 U | 67 U | 67 U | **220** | 76 U |
| Aroclor-1248 | 220 | 740 | 68 U | 65 U | 93 U | 67 U | 67 U | 72 U | 76 U |
| Aroclor-1254 | 220 | 740 | 68 U | 65 U | 93 U | 67 U | 67 U | 72 U | 76 U |
| Aroclor-1260 | 220 | 740 | 68 U | 65 U | 93 U | 67 U | 67 U | 72 U | 76 U |
| **Pesticides (µg/kg)** | | | | | | | | | |
| beta-BHC | 270 | 960 | | | | | | | |
| Dieldrin | 30 | 110 | | | | | | | |
| **TPH (mg/kg)** | | | | | | | | | |
| Diesel Range Organics | 2,000 [1] | 2,000 [1] | | | | | | | |
| Oil Range Organics | 2,000 [1] | 2,000 [1] | | | | | | | |
| **SVOCs (mg/kg)** | | | | | | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | 0.0091 U | **0.093** | **0.015** | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U |
| Benzo(a)pyrene | 0.015 | 0.21 | 0.0091 U | **0.094** | **0.016** | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U |
| Benzo(b)fluoranthene | 0.15 | 2.1 | 0.0091 U | **0.055** | 0.012 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U |
| Benzo(k)fluoranthene | 1.5 | 21 | 0.0091 U | **0.071** | 0.012 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U |
| Chrysene | 15 | 210 | 0.0091 U | **0.090** | **0.015** | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 0.0091 U | **0.015** | 0.012 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | 0.0091 U | **0.048** | 0.012 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.046 U | 0.043 U | 0.062 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

BGS = Below ground surface.
EPA = Environmental Protection Agency.
J = The analyte was positively identified; the associated numerical value is the approximate concentration.
JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.
JL = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias.
JQ = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit.
MTCA = Model Toxics Control Act.
mg/kg = Milligrams per kilogram (parts per million).
µg/kg = Micrograms per kilogram (parts per billion).
PCBs = Polychlorinated biphenyls.
RSL = Regional screening levels for chemical contaminants at Superfund sites.
SVOCs = Semivolatile organic hydrocarbons.
TPH = Total petroleum hydrocarbons.
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

**Table 3-4B Summary of Water Sample Results from March 2010**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 10-03-0012 | 10-03-0013 | 10-03-0014 | 10-03-0015 |
|---|---|---|---|---|---|---|
| Sample Location | | | MW04GW15 | MW02GW20 | MW01GW20 | MW03GW15 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Mar-10 | Mar-10 | Mar-10 | Mar-10 |
| **Metals (µg/L)** | | | | | | |
| Arsenic (Inorganic) | 0.045 | 10 | 3.3 U | 3.3 U | 3.3 U | 3.3 U |
| Cobalt | 4.7 | NA | 11 U | 11 U | 11 U | 11 U |
| Iron | 11,000 | NA | **88** | **160** | **2,900** | **59** |
| Lead & Compounds | NA | 15 | 1.1 U | 1.1 U | 1.1 U | 1.1 U |
| Manganese (Non-Diet) | 320 | NA | **45** | **34** | **91** | 11 U |
| Vanadium & Compounds | 78 | NA | 11 U | 11 U | **14** | 11 U |
| **PCBs (µg/L)** | | | | | | |
| Aroclor-1242 | 0.034 | NA | 0.047 U | **0.088** | 0.048 U | 0.047 U |
| Aroclor-1254 | 0.034 | NA | 0.047 U | 0.047 U | 0.048 U | 0.047 U |
| Aroclor-1260 | 0.034 | NA | 0.047 U | 0.047 U | 0.048 U | 0.047 U |
| **Pesticides (µg/L)** | | | | | | |
| Aldrin | 0.00021 | NA | | | | |
| Dieldrin | 0.0015 | NA | | | | |
| **TPH (mg/L)** | | | | | | |
| Diesel Range Organics | 0.5 [1] | NA | | | | |
| Oil Range Organics | 0.5 [1] | NA | | | | |
| **SVOCs (µg/L)** | | | | | | |
| 1-Methylnaphthalene | 0.97 | NA | 0.094 U | 0.094 U | 0.095 U | 0.094 U |
| 2-Methylnaphthalene | 27 | NA | 0.094 U | 0.094 U | 0.095 U | 0.094 U |
| Benzo[a]anthracene | 0.029 | NA | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U |
| Benzo[a]pyrene | 0.0029 | 0.2 | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U |
| Benzo[b]fluoranthene | 0.029 | NA | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U |
| Benzo[k]fluoranthene | 0.29 | NA | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U |
| bis(2-Ethylhexyl)phthalate | 0.071 | 6 | 0.94 U | 0.94 U | **6.5** | 0.94 U |
| Butylbenzylphthalate | 14 | NA | 0.94 U | 0.94 U | 0.95 U | 0.94 U |
| Dibenz[a,h]anthracene | 0.0029 | NA | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U |
| Indeno[1,2,3-cd]pyrene | 0.029 | NA | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U |
| Naphthalene | 0.14 | NA | 0.094 U | 0.094 U | 0.095 U | 0.094 U |
| **VOCs (µg/L)** | | | | | | |
| Chloroform | 0.19 | 80 | | | | |
| Tetrachloroethene | 9.7 | 5 | | | | |

Note:

= Greater than or equal to EPA RSL and/or Federal MCL.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in groundwater.

Key:

EPA = Environmental Protection Agency.
IDW = Investigation derived waste.
J = The analyte was identified; the associated numerical result is an estimate.
JH = The analyte was positively identified; the assoicated numerical value is the approximate concentration with a high bias.
JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.
MCL = Federal Maximum Contaminant Level drinking water standards.
MTCA = Model Toxics Control Act.
mg/L = Milligrams per liter (parts per million).
µg/L . = Micrograms per liter (parts per billion).
NA = Not applicable.
R = The sample results are rejected due to serious deficiencies; the presence or absence of the analyte cannot be verified.
RSL = Regional Screening Levels for Chemical Contaminants at Superfund Sites.
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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## 3.5 October 2010

### 3.5.1 Purpose

In October 2010, EPA mobilized to the site and collected groundwater samples from monitoring wells installed in March 2010 to assess fluctuations of groundwater depth and direction and to determine whether there were seasonal variations in contaminant concentrations (E & E 2011b). The facility was not operating at that time, and the majority of salvageable material and hydraulic equipment had been removed from the site.

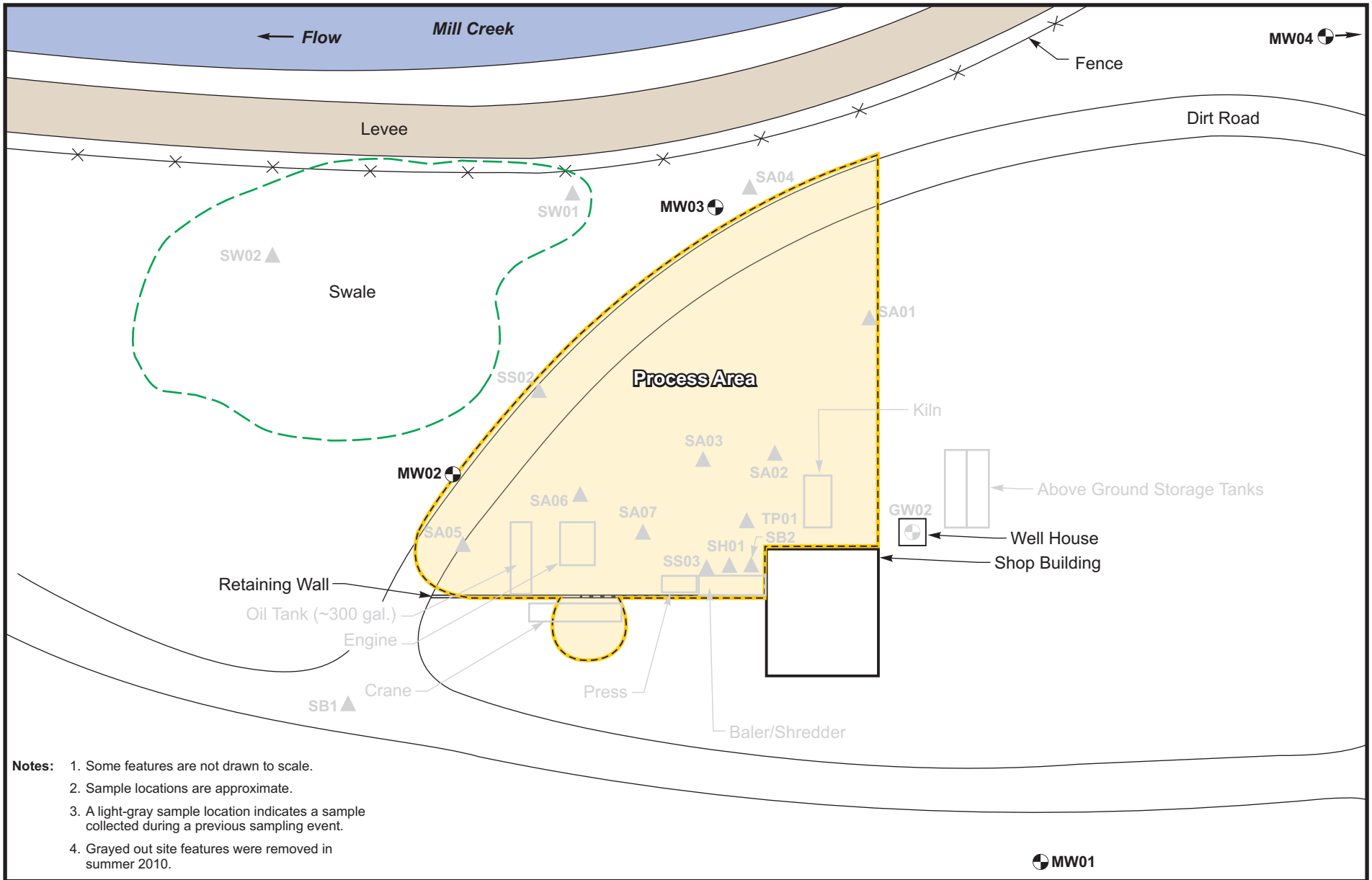
### 3.5.2 Site Activity and Sample Collection

As part of the October 2010 mobilization, EPA collected four groundwater samples from the monitoring wells installed in March 2010. The locations of the monitoring wells are presented on Figure 3-6. Groundwater elevations and contours are discussed in Section 3.9.

### 3.5.3 Summary of Analytical Results

Groundwater samples were analyzed for metals, PCBs, TPH, SVOCs, and VOCs, and the data is summarized in Table 3-5. Analytical results indicated that the SVOC bis(2-ethylhexyl)phthalate was detected above site screening criteria at MW01 (3.2 µg/L), MW02 (20 µg/L), and MW03 (5.2 µg/L), although as previously mentioned this analyte is a common cross-contaminant; no other SVOCs were detected above screening criteria. Metals, PCBs, TPH, and VOCs were not detected at concentrations above their screening levels.

Although PCBs were detected at MW02 in March 2010, they were not detected during the October 2010 sampling event. A common SVOC cross-contaminant, bis(2-ethylhexyl)phthalate, was previously detected at MW01, and the October 2010 results indicated that the compound was present in MW01, MW02, and MW03. The analytical results for the groundwater samples downgradient from the source area indicated that only one analyte was detected above the screening criteria, which was interpreted to imply that impacts to shallow groundwater downgradient from the process area continued to be minimal in the location of the two monitoring wells. A copy of the data memorandum from the October 2010 sampling event can be found in Appendix H.




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. A light-gray sample location indicates a sample collected during a previous sampling event.
4. Grayed out site features were removed in summer 2010.

**Legend**
- Monitoring Well or Domestic Well
- Soil Sample
- Process Area

0 36 72
Approximate Scale in Feet

**Figure 3-6: October 2010 RSE Sample Locations**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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Seattle, Washington

**Table 3-5 Summary of Water Sample Results from October 2010**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 10-10-0001 | 10-10-0002 | 10-10-0003 | 10-10-0004 |
|---|---|---|---|---|---|---|
| Sample Location | | | MW01 | MW02 | MW03 | MW04 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Oct-10 | Oct-10 | Oct-10 | Oct-10 |
| **Metals (µg/L)** | | | | | | |
| Arsenic (Inorganic) | 0.045 | 10 | 3.3 U | 3.3 U | 3.3 U | 3.3 U |
| Cobalt | 4.7 | NA | 11 U | 11 U | 11 U | 11 U |
| Iron | 11,000 | NA | **1,800 J** | **260 J** | 56 UJ | **94 J** |
| Lead & Compounds | NA | 15 | **1.5** | 1.1 U | 1.1 U | 1.1 U |
| Manganese (Non-Diet) | 320 | NA | **42** | **20** | 11 U | 11 U |
| Vanadium & Compounds | 7.8 | NA | **12** | 11 U | 11 U | 11 U |
| **PCBs (µg/L)** | | | | | | |
| Aroclor-1242 | 0.034 | NA | 0.051 U | 0.052 U | 0.051 U | 0.051 U |
| Aroclor-1254 | 0.034 | NA | 0.051 U | 0.052 U | 0.051 U | 0.051 U |
| Aroclor-1260 | 0.034 | NA | 0.051 U | 0.052 U | 0.051 U | 0.051 U |
| **Pesticides (µg/L)** | | | | | | |
| Aldrin | 0.00021 | NA | | | | |
| Dieldrin | 0.0015 | NA | | | | |
| **TPH (mg/L)** | | | | | | |
| Diesel Range Organics | 0.5 [1] | NA | 0.28 U | 0.27 U | 0.24 U | 0.27 U |
| Oil Range Organics | 0.5 [1] | NA | 0.44 U | 0.44 U | 0.38 U | 0.43 U |
| **SVOCs (µg/L)** | | | | | | |
| 1-Methylnaphthalene | 0.97 | NA | 0.12 U | 0.11 U | 0.1 U | 0.11 U |
| 2-Methylnaphthalene | 27 | NA | 0.12 U | 0.11 U | 0.1 U | 0.11 U |
| Benzo[a]anthracene | 0.029 | NA | 0.012 U | 0.011 U | 0.01 U | 0.011 U |
| Benzo[a]pyrene | 0.0029 | 0.2 | 0.012 U | 0.011 U | 0.01 U | 0.011 U |
| Benzo[b]fluoranthene | 0.029 | NA | 0.012 U | 0.011 U | 0.01 U | 0.011 U |
| Benzo[k]fluoranthene | 0.29 | NA | 0.012 U | 0.011 U | 0.01 U | 0.011 U |
| bis(2-Ethylhexyl)phthalate | 0.071 | 6 | **3.2** | **20** | **5.2** | 1.1 U |
| Butylbenzylphthalate | 14 | NA | 1.2 U | 1.1 U | 1 U | 1.1 U |
| Dibenz[a,h]anthracene | 0.0029 | NA | 0.012 U | 0.011 U | 0.01 U | 0.011 U |
| Indeno[1,2,3-cd]pyrene | 0.029 | NA | 0.012 U | 0.011 U | 0.01 U | 0.011 U |
| Naphthalene | 0.14 | NA | 0.12 U | 0.11 U | 0.1 U | 0.11 U |
| **VOCs (µg/L)** | | | | | | |
| Chloroform | 0.19 | 80 | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Tetrachloroethene | 9.7 | 5 | 0.2 U | **0.25** | **0.36** | 0.2 U |

Note:

= Greater than or equal to EPA RSL and/or Federal MCL.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in groundwater.

Key:

EPA = Environmental Protection Agency.
IDW = Investigation derived waste.
J = The analyte was identified; the associated numerical result is an estimate.
JH = The analyte was positively identified; the assoicated numerical value is the approximate concentration with a high bias.
JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.
MCL = Federal Maximum Contaminant Level drinking water standards.
MTCA = Model Toxics Control Act.
mg/L = Milligrams per liter (parts per million).
µg/L = Micrograms per liter (parts per billion).
NA = Not applicable.
R = The sample results are rejected due to serious deficiencies; the presence or absence of the analyte cannot be verified.
RSL = Regional Screening Levels for Chemical Contaminants at Superfund Sites.
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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## 3.6 June 2011

### 3.6.1 Purpose

In June 2011, EPA mobilized to the site to further delineate the extent of soil and groundwater contamination around the process area and evaluate whether contamination extended beneath the shop building. Groundwater samples were collected from some of the boreholes to assess groundwater contamination. The sampling event also included an additional round of groundwater sampling from the monitoring wells installed in March 2010 to assess seasonal variations in contaminant concentrations and determine fluctuations of groundwater direction and depth (E & E 2011a). The facility was not operating at that time.

### 3.6.2 Site Activity and Sample Collection

As part of the June 2011 sampling event, EPA installed 25 investigative boreholes at depths from 4 to 12 feet bgs to collect additional subsurface soil samples. A START subcontractor was hired to core through the concrete floor of the shop building to allow the installation of five boreholes. EPA collected groundwater samples from eight of the investigative boreholes and four groundwater samples from the previously installed monitoring wells.

A total of 45 soil samples and 12 groundwater samples were collected during this phase. The locations of the investigative boreholes and groundwater samples are presented on Figure 3-7. Groundwater elevations and contours are discussed in Section 3.9.

### 3.6.3 Summary of Analytical Results

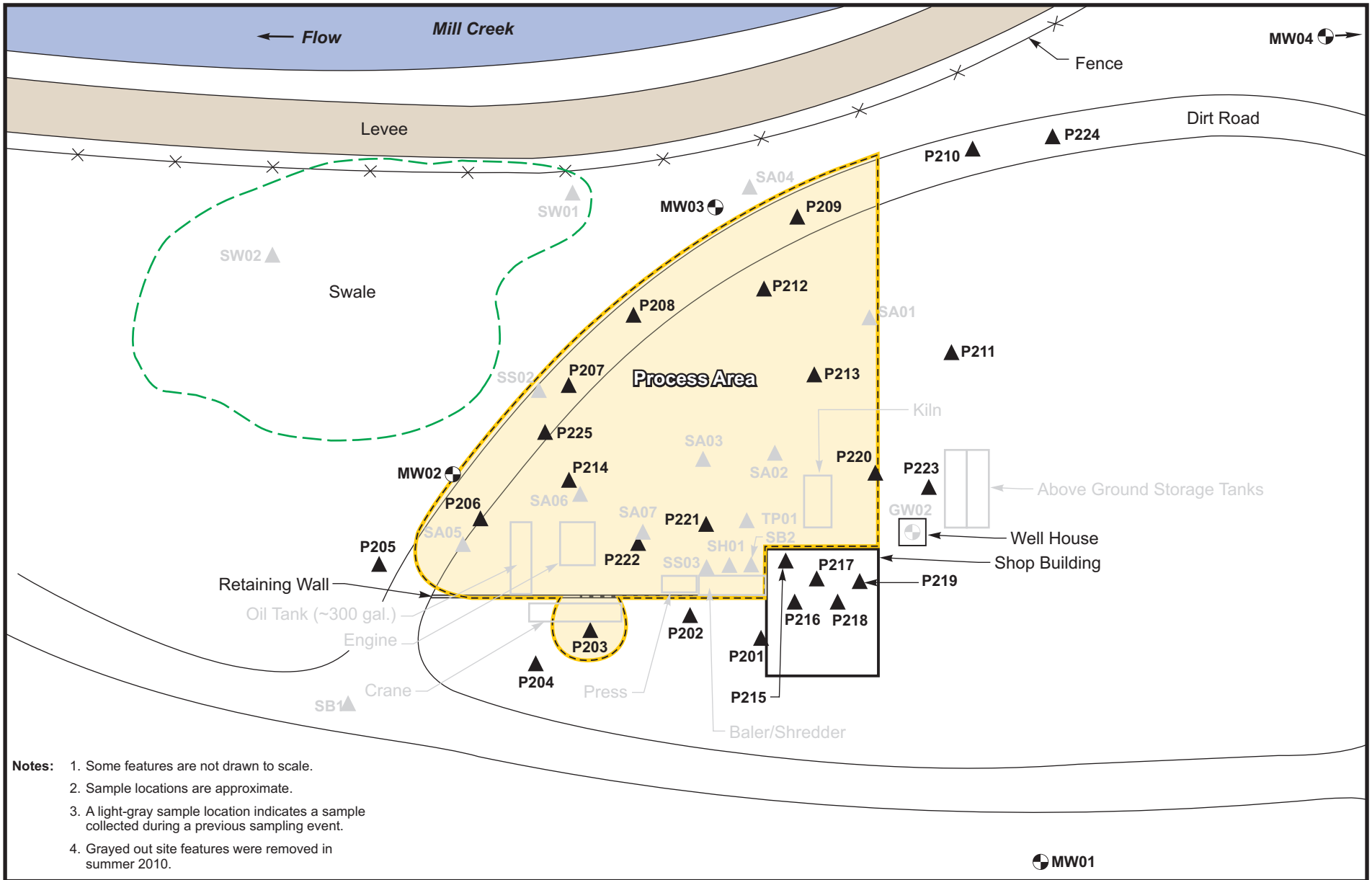
Soil samples were analyzed for metals, PCBs, TPH, and SVOCs, and the data is summarized in Table 3-6A. Sample results for metals at location P206 indicated concentrations of lead at 4,400 mg/kg, which is greater than the industrial RSL of 800 mg/kg, and six other locations had concentrations of iron or cobalt that were equal to or greater than the relevant RSL residential criteria. Two samples (P224 and P225) were analyzed for hexavalent chromium, but results for both samples were below the method detection limit. PCBs were detected at three sample locations (P203, P220, and P221) at concentrations exceeding the RSL industrial criteria with the maximum concentration of 38,000 µg/kg for Aroclor-1242 at sample location P203, which exceeded the industrial RSL criteria of 740 µg/kg. TPH was detected at three locations (P203, P220, and P221) greater than MTCA cleanup levels of 2,000 mg/kg with the maximum concentration of 12,000 mg/kg for ORO at P221. SVOCs were detected at concentrations greater than the industrial RSL at five sample locations with the maximum concentration of 5.4 mg/kg for benzo[a]pyrene at sample location P209, which exceeded the RSL industrial criteria of 0.21 mg/kg. Seven additional sample locations had concentrations of SVOCs greater than RSL residential criteria.

The analytical results for the subsurface soil samples established the horizontal extent of contamination to the south of the process area at the approximate location of a retaining wall that extends west from the shop building. Although the extent of contamination was not definitively established to the north, east, or west of the process area, the volume of most highly contaminated soil in the process area is estimated to be approximately 9,000 cubic yards which assumes an average depth to groundwater of 8 feet bgs.

Groundwater samples from the investigative boreholes were analyzed for metals, PCBs, TPH, and SVOCs, and the data is summarized in Table 3-6B. Sample results indicated that metals were detected at six sample locations above screening criteria for arsenic, cobalt, iron, lead, manganese, and/or vanadium. The maximum concentrations of metals were detected at P220 (6.1 µg/L for arsenic, 170 µg/L for lead) and at P221 (380 µg/L for lead) which exceeds the RSL tapwater criteria of 0.045 µg/L for arsenic and federal MCL criteria of 15 µg/L for lead. PCB concentrations were detected at three locations (P208, P221, and P222) above screening criteria with the maximum concentration of 1,500 µg/L of Aroclor-1242 at location P221, which exceeds the RSL tapwater criteria of 0.034 µg/L by a factor of five. TPH was detected at three locations (P202, P220, and P221) above screening criteria with a maximum concentration of 3,600 mg/kg for ORO at location P221, which exceeds the MTCA criteria of 0.5 milligrams per liter (mg/L). SVOCs were detected above screening criteria at all of the eight groundwater samples collected from the investigative boreholes. Bis(2-ethylhexyl)phthalate was detected at seven locations with the maximum concentration of 80,000 µg/L at P221, which is several orders of magnitude greater than the screening criteria. Maximum concentrations of PAHs detected at P221 include 14 µg/L for benzo[a]pyrene, which was greater than the RSL tapwater criteria of 0.0029 µg/L and the federal MCL of 0.2 µg/L, as well as 9.6 µg/L for benzo[b]fluoranthene and 4.1 µg/L for indeno[1,2,3-cd]pyrene, which both exceeded the RSL tapwater criteria of 0.029 µg/L.

Groundwater samples from the monitoring wells were analyzed for metals, PCBs, TPH, and SVOCs. Sample results indicate that SVOCs were detected in all four monitoring wells, including bis(2-ethylhexyl)phthalate with a maximum concentration of 350 µg/L at MW01. Additional SVOCs were detected above screening criteria at MW02 including the PAHs benzo[a]pyrene and dibenzo(a,h)anthracene. This was the first instance of SVOCs detected in the monitoring wells other than bis(2-ethylhexyl)phthalate. No metals, PCBs, or TPH were detected above screening levels in the monitoring wells.

The shallow groundwater samples collected from investigative boreholes in the process area contained elevated concentrations of metals, PCBs, TPH, and SVOCs, which indicates that groundwater is directly impacted by subsurface soil contamination. It appears that this area of shallow groundwater contamination is limited to the process area when compared to results from the downgradient monitoring wells MW02 and MW03. However, only one of the four existing monitoring wells (MW02) is directly downgradient of the most heavily contaminated portion of the source area. Because of the limited number of permanent monitoring wells in the process area and the lack of consistent monitoring and analytical results, it is unclear whether contaminants in the groundwater are migrating. Copies of the data memoranda from the June 2011 sampling event can be found in Appendix I.




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. A light-gray sample location indicates a sample collected during a previous sampling event.
4. Grayed out site features were removed in summer 2010.

**Legend**
- Monitoring Well or Domestic Well
- Soil Sample
- Process Area

0 36 72
Approximate Scale in Feet

**Figure 3-7: June 2011 RSE Sample Locations**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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Seattle, Washington

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**Table 3-6A Summary of Soil Sample Results from June 2011 (Page 1 of 2)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0012 | 11-06-0015 | 11-06-0018 | 11-06-0022 | 11-06-0023 | 11-06-0024 | 11-06-0025 | 11-06-0026 | 11-06-0027 | 11-06-0028 | 11-06-0029 | 11-06-0030 | 11-06-0033 | 11-06-0036 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P203SB04 | P204SB12 | P206SB04 | P207SB04 | P208SB04 | P209SB04 | P210SB04 | P211SB04 | P212SB04 | P213SB04 | P214SB04 | P214SB08 | P215SB12 | P216SB12 |
| Sample Depth | | | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 8' BGS | 12' BGS | 12' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Antimony (Metallic) | 31 | 410 | 6.3 U | 7.4 U | **25** | 6.5 U | 6.1 U | | | 6.2 U | | 6.6 U | 6.6 U | 7.1 U | 7.5 U | 7.4 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | 13 U | 15 U | 13 U | 13 U | 12 U | | | 12 U | | 13 U | 13 U | 14 U | 15 U | 15 U |
| Cobalt | 23 | 300 | **15** | **17** | **13** | **15** | **15** | | | **15** | | **17** | **14** | **13** | **20** | **21** |
| Iron | 55,000 | 720,000 | **45,000** | **55,000** | **39,000** | **34,000** | **38,000** | | | **38,000** | | **43,000** | **42,000** | **36,000** | **61,000** | **55,000** |
| Lead & Compounds | 400 | 800 | **220** | 7.4 U | **4,400** | **26** | **310** | | | **45** | | **30** | **9.8** | **15** | 7.5 U | 7.4 U |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1242 | 220 | 740 | **38,000** | 74 U | 64 U | 65 U | 61 U | 58 U | 62 U | 62 U | 61 U | 66 U | **120** | **85 JK** | 75 U | **99** |
| Aroclor-1248 | 220 | 740 | 6,300 U | 74 U | 64 U | 65 U | 61 U | 58 U | 62 U | 62 U | 61 U | 66 U | 66 U | 71 U | 75 U | 74 U |
| Aroclor-1254 | 220 | 740 | 6,300 U | 74 U | 64 U | 65 U | 61 U | 29 U | 62 U | 62 U | 61 U | 66 U | **180** | 71 U | 75 U | 74 U |
| Aroclor-1260 | 220 | 740 | 6,300 U | 74 U | 64 U | 65 U | 61 U | **96 JK** | 62 U | 62 U | 61 U | 66 U | 0.066 U | 71 U | 75 U | 74 U |
| **Pesticides (µg/kg)** | | | | | | | | | | | | | | | | |
| beta-BHC | 270 | 960 | | | | | | | | | | | | | | |
| Dieldrin | 30 | 110 | | | | | | | | | | | | | | |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2000 [1] | 2000 [1] | **1,200** | 37 U | 32 U | 33 U | 31 U | | | 31 U | | 33 U | **86** | **74** | **240** | **590** |
| Oil Range Organics | 2000 [1] | 2000 [1] | **3,200** | 74 U | 64 U | 65 U | 61 U | | | 62 U | | 66 U | **180** | **180** | **460** | **1,100** |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | **0.064** | 0.0099 U | **0.013** | **0.47** | **0.22** | **5.3** | **0.12** | **0.28** | **0.17** | **0.11** | **0.32** | **0.16** | 0.01 U | 0.0099 U |
| Benzo(a)pyrene | 0.015 | 0.21 | **0.073** | 0.0099 U | **0.027** | **0.5** | **0.25** | **5.4** | **0.14** | **0.29** | **0.18** | **0.12** | **0.21** | **0.15** | 0.01 U | 0.0099 U |
| Benzo(b)fluoranthene | 0.15 | 2.1 | **0.094** | 0.0099 U | **0.021** | **0.17** | **0.25** | **5.3** | **0.14** | **0.29** | **0.19** | **0.14** | **0.28** | **0.18** | 0.01 U | 0.0099 U |
| Benzo(k)fluoranthene | 1.5 | 21 | **0.11** | 0.0099 U | **0.02** | **0.57** | **0.098** | **1.4** | **0.064** | **0.13** | **0.072** | **0.048** | **0.098** | **0.06** | 0.01 U | 0.0099 U |
| Chrysene | 15 | 210 | **0.07** | 0.0099 U | **0.016** | **0.47** | **0.2** | **4.7** | **0.12** | **0.27** | **0.17** | **0.11** | **0.31** | **0.16** | 0.01 U | 0.0099 U |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | **0.033** | 0.0099 U | 0.0085 U | **0.071** | **0.037** | **0.53** | **0.024** | **0.042** | **0.027** | **0.021** | **0.041** | **0.026** | 0.01 U | 0.0099 U |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | **0.068** | 0.0099 U | **0.043** | **0.32** | **0.16** | **2.9** | **0.085** | **0.18** | **0.11** | **0.077** | **0.13** | **0.072** | 0.01 U | 0.0099 U |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.042 U | 0.049 U | 0.042 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.05 U | 0.049 U |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

| | |
|---|---|
| BGS | = Below ground surface. |
| EPA | = Environmental Protection Agency. |
| J | = The analyte was positively identified; the associated numerical value is the approximate concentration. |
| JK | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias. |
| JL | = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias. |
| JQ | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit. |
| MTCA | = Model Toxics Control Act. |
| mg/kg | = Milligrams per kilogram (parts per million). |
| µg/kg | = Micrograms per kilogram (parts per billion). |
| PCBs | = Polychlorinated biphenyls. |
| RSL | = Regional screening levels for chemical contaminants at Superfund sites. |
| SVOCs | = Semivolatile organic hydrocarbons. |
| TPH | = Total petroleum hydrocarbons. |
| U | = The analyte was analyzed for, but not detected above the reported sample quantitation limit. |
| UJ | = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |

**Table 3-6A Summary of Soil Sample Results from June 2011 (Page 2 of 2)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0038 | 11-06-0040 | 11-06-0044 | 11-06-0047 | 11-06-0048 | 11-06-0049 | 11-06-0057 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P217SB08 | P218SB08 | P219SB12 | P220SB04 | P221SB04 | P221SB08 | P223SB04 |
| Sample Depth | | | 8' BGS | 8' BGS | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **Metals (mg/kg)** | | | | | | | | | |
| Antimony (Metallic) | 31 | 410 | 7 U | 6.8 U | 7.9 U | 7.6 U | 7.1 U | 7.8 U | 5.9 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | 14 U | 14 U | 16 U | 15 U | 14 U | 16 U | 12 U |
| Cobalt | 23 | 300 | **21** | **24** | **23** | **15** | **16** | **13** | **16** |
| Iron | 55,000 | 720,000 | **86,000** | **59,000** | **57,000** | **36,000** | **42,000** | **41,000** | **41,000** |
| Lead & Compounds | 400 | 800 | 7 U | 6.8 U | 7.9 U | **31** | **30** | **8.6** | **210** |
| **PCBs (µg/kg)** | | | | | | | | | |
| Aroclor-1242 | 220 | 740 | 70 U | 68 U | 79 U | 76 U | **290** | **1,500** | 59 U |
| Aroclor-1248 | 220 | 740 | 70 U | 68 U | 79 U | 76 U | 71 U | 78 U | 59 U |
| Aroclor-1254 | 220 | 740 | 70 U | 68 U | 79 U | 76 U | **140 JK** | **210** | 59 U |
| Aroclor-1260 | 220 | 740 | 70 U | 68 U | 79 U | **1,100 JK** | 71 U | 78 U | 59 U |
| **Pesticides (µg/kg)** | | | | | | | | | |
| beta-BHC | 270 | 960 | | | | | | | |
| Dieldrin | 30 | 110 | | | | | | | |
| **TPH (mg/kg)** | | | | | | | | | |
| Diesel Range Organics | 2000 [1] | 2000 [1] | 35 U | 34 U | 40 U | **9,600** | **1,300** | **5,800** | **120** |
| Oil Range Organics | 2000 [1] | 2000 [1] | 70 U | 68 U | 79 U | 1,800 U | **3,200** | **12,000** | **160** |
| **SVOCs (mg/kg)** | | | | | | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | 0.0093 U | 0.0091 U | 0.011 U | **0.046** | 0.0095 U | **0.025** | **0.04** |
| Benzo(a)pyrene | 0.015 | 0.21 | 0.0093 U | 0.0091 U | 0.011 U | **0.057** | 0.0095 U | 0.01 U | **0.045** |
| Benzo(b)fluoranthene | 0.15 | 2.1 | 0.0093 U | 0.0091 U | 0.011 U | **0.071** | 0.0095 U | **0.015** | **0.072** |
| Benzo(k)fluoranthene | 1.5 | 21 | 0.0093 U | 0.0091 U | 0.011 U | **0.04** | 0.0095 U | 0.01 U | **0.042** |
| Chrysene | 15 | 210 | 0.0093 U | 0.0091 U | 0.011 U | **0.061** | 0.0095 U | **0.048** | **0.041** |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 0.0093 U | 0.0091 U | 0.011 U | 0.01 U | 0.0095 U | 0.01 U | **0.0092** |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | 0.0093 U | 0.0091 U | 0.011 U | **0.029** | 0.0095 U | 0.01 U | **0.04** |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.047 U | 0.045 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.039 U |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

| | |
|---|---|
| BGS | = Below ground surface. |
| EPA | = Environmental Protection Agency. |
| J | = The analyte was positively identified; the associated numerical value is the approximate concentration. |
| JK | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias. |
| JL | = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias. |
| JQ | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit. |
| MTCA | = Model Toxics Control Act. |
| mg/kg | = Milligrams per kilogram (parts per million). |
| µg/kg | = Micrograms per kilogram (parts per billion). |
| PCBs | = Polychlorinated biphenyls. |
| RSL | = Regional screening levels for chemical contaminants at Superfund sites. |
| SVOCs | = Semivolatile organic hydrocarbons. |
| TPH | = Total petroleum hydrocarbons. |
| U | = The analyte was analyzed for, but not detected above the reported sample quantitation limit. |
| UJ | = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |

**Table 3-6B Summary of Water Sample Results from June 2011**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 11-06-0001 | 11-06-0002 | 11-06-0003 | 11-06-0004 | 11-06-0005 | 11-06-0020 | 11-06-0021 | 11-06-0052 | 11-06-0053 | 11-06-0055 | 11-06-0056 | 11-06-0058 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW01 | MW02 | MW03 | MW04 | P202GW20 | P207GW08 | P208GW08 | P217GW12 | P222GW12 | P221GW12 | P214GW12 | P220GW09 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **Metals (µg/L)** | | | | | | | | | | | | | | |
| Arsenic (Inorganic) | 0.045 | 10 | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 11 U | 8.3 U | 3.3 U | **6.1** |
| Cobalt | 4.7 | NA | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | **16** | **12** | **29** |
| Iron | 11,000 | NA | **250** | **190** | 56 U | **520** | **5,200** | **190** | **13,000** | **7,600 JK** | **19,000 JK** | **7,100 JK** | **24,000 JK** | **68,000 JK** |
| Lead & Compounds | NA | 15 | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | **2.9** | **42** | 1.1 U | **9.4** | **380** | **7.3** | **170** |
| Manganese (Non-Diet) | 320 | NA | 11 U | 11 U | 11 U | **11** | **210** | 11 U | **190** | **480** | **2,500** | **4,500** | **880** | **2,300** |
| Vanadium & Compounds | 78 | NA | 11 U | 11 U | 11 U | **12** | **22** | 11 U | **45** | **34** | **53** | **150** | **97** | **300** |
| **PCBs (µg/L)** | | | | | | | | | | | | | | |
| Aroclor-1242 | 0.034 | NA | 0.05 U | 0.048 U | 0.049 U | 0.05 U | 0.048 U | 0.048 U | **0.28** | 0.049 U | 0.51 U | **1,500** | 0.049 U | 0.05 U |
| Aroclor-1254 | 0.034 | NA | 0.05 U | 0.048 U | 0.049 U | 0.05 U | 0.048 U | 0.048 U | 0.049 U | 0.049 U | **0.64 JK** | 200 U | 0.049 U | 0.05 U |
| Aroclor-1260 | 0.034 | NA | 0.05 U | 0.048 U | 0.049 U | 0.05 U | 0.048 U | 0.048 U | **0.091 JK** | 0.049 U | 0.051 U | 200 U | 0.049 U | 0.05 U |
| **Pesticides (µg/L)** | | | | | | | | | | | | | | |
| Aldrin | 0.00021 | NA | | | | | | | | | | | | |
| Dieldrin | 0.0015 | NA | | | | | | | | | | | | |
| **TPH (mg/L)** | | | | | | | | | | | | | | |
| Diesel Range Organics | 0.5 [1] | NA | 0.25 U | 0.24 U | 0.25 U | 0.25 U | 0.26 U | 0.24 U | 0.26 U | 0.24 U | **0.45 JH** | **2,000** | 0.24 U | **2.4** |
| Oil Range Organics | 0.5 [1] | NA | 0.4 U | 0.38 U | 0.4 U | 0.4 U | **0.77** | 0.39 U | 0.41 U | 0.39 U | 0.41 U | **3,600** | 0.39 U | 0.54 U |
| **SVOCs (µg/L)** | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | 0.97 | NA | 0.1 U | 0.096 U | 0.098 U | 0.1 U | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **270** | 0.1 U | **21** |
| 2-Methylnaphthalene | 27 | NA | 0.1 U | 0.096 U | 0.098 U | 0.1 U | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **210** | 0.1 U | **8.1** |
| Benzo[a]anthracene | 0.029 | NA | 0.01 U | **0.018** | **0.01** | 0.01 U | **0.014** | **0.011** | **0.012** | 0.0096 U | 0.24 U | 21 U | **0.015** | 0.0099 U |
| Benzo[a]pyrene | 0.0029 | 0.2 | 0.01 U | **0.017** | 0.0098 U | 0.01 U | 0.01 U | 0.0097 U | **0.018** | 0.0096 U | **0.32** | **14** | **0.012** | 0.0099 U |
| Benzo[b]fluoranthene | 0.029 | NA | 0.01 U | **0.016** | 0.0098 U | 0.01 U | **0.01** | 0.0097 U | **0.024** | 0.0096 U | **0.31** | **9.6** | **0.011** | 0.0099 U |
| Benzo[k]fluoranthene | 0.29 | NA | 0.01 U | **0.016** | 0.0098 U | 0.01 U | 0.01 U | 0.0097 U | **0.019** | 0.0096 U | 24 U | **26** | 0.01 U | 0.0099 U |
| bis(2-Ethylhexyl)phthalate | 0.071 | 6 | **350** | **10** | **5.3** | **7.8** | **240** | **1.5** | 0.99 U | **770** | **51** | **80,000** | **24** | **200** |
| Butylbenzylphthalate | 14 | NA | 1 U | 0.96 U | 0.98 U | 1 U | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | **600** | 1 U | 0.99 U |
| Dibenz[a,h]anthracene | 0.0029 | NA | 0.01 U | **0.017** | 0.0098 U | 0.01 U | 0.01 U | 0.0097 U | 0.0099 U | 0.0096 U | 0.24 U | 2.1 U | 0.01 U | 0.0099 U |
| Indeno[1,2,3-cd]pyrene | 0.029 | NA | 0.01 U | **0.016** | 0.0098 U | 0.01 U | 0.01 U | 0.0097 U | **0.019** | 0.0096 U | **0.27** | **4.1** | 0.01 U | 0.0099 U |
| Naphthalene | 0.14 | NA | 0.1 U | 0.096 U | 0.098 U | 0.1 U | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **30** | 0.1 U | **0.52** |
| **VOCs (µg/L)** | | | | | | | | | | | | | | |
| Chloroform | 0.19 | 80 | | | | | | | | | | | | |
| Tetrachloroethene | 9.7 | 5 | | | | | | | | | | | | |

Note:

= Greater than or equal to EPA RSL and/or Federal MCL.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in groundwater.

Key:

EPA = Environmental Protection Agency.
IDW = Investigation derived waste.
J = The analyte was identified; the associated numerical result is an estimate.
JH = The analyte was positively identified; the assoicated numerical value is the approximate concentration with a high bias.
JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.
MCL = Federal Maximum Contaminant Level drinking water standards.
MTCA = Model Toxics Control Act.
mg/L = Milligrams per liter (parts per million).
µg/L = Micrograms per liter (parts per billion).
NA = Not applicable.
R = The sample results are rejected due to serious deficiencies; the presence or absence of the analyte cannot be verified.
RSL = Regional Screening Levels for Chemical Contaminants at Superfund Sites.
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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## 3.7 April 2012

### 3.7.1 Purpose

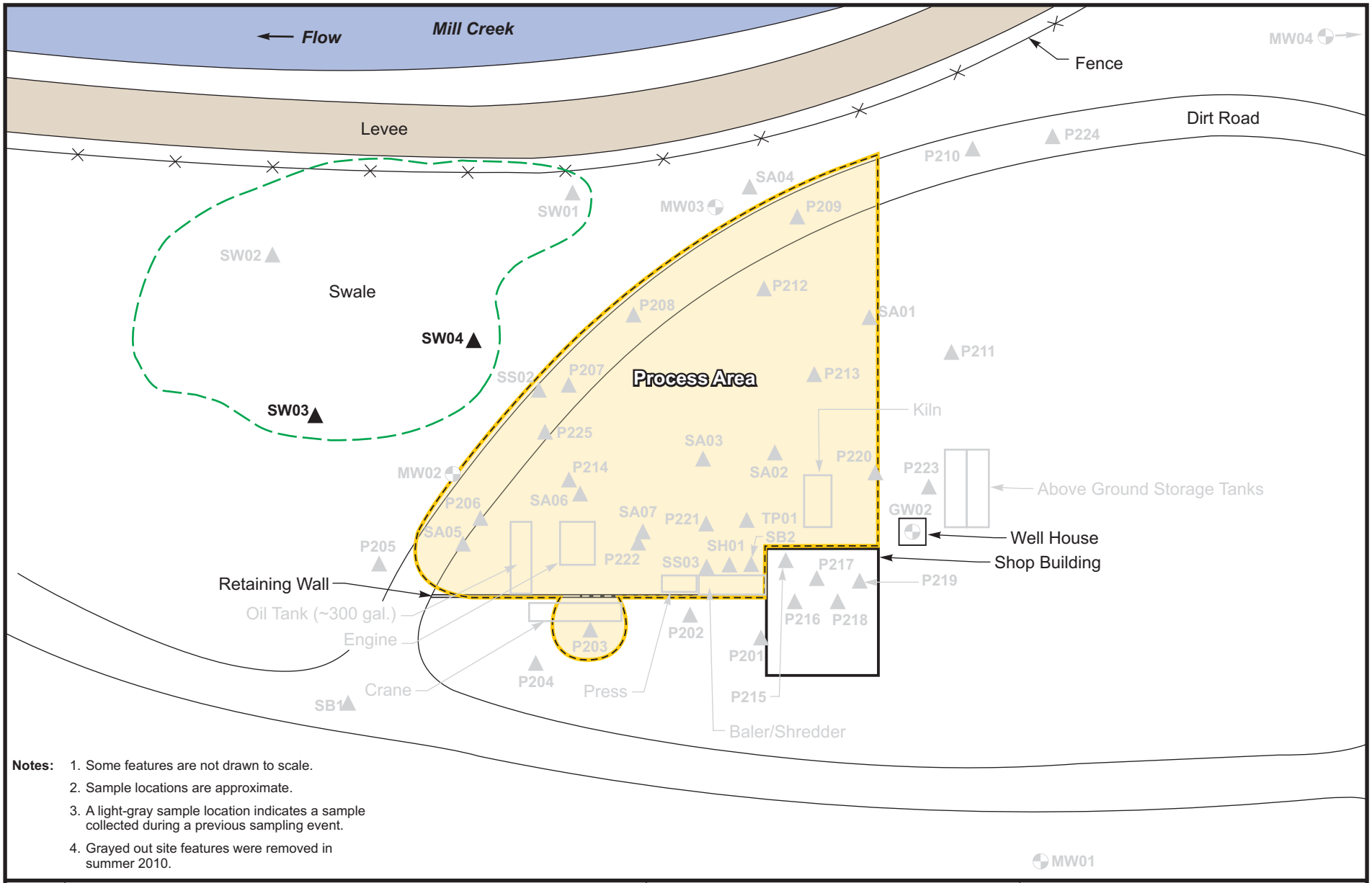
In April 2012, EPA mobilized to the site to perform additional removal activities to address abandoned drums at the site, which is discussed in a separate removal action report. During the mobilization, EPA collected soil samples from the swale, an area to the northwest of the process area that was sampled in September 2009, to further characterize the contamination outside the process area (E & E 2012b). The facility appeared to be not operating at the time, although there was some evidence of activity at the site prior to EPA's field event (i.e., some drums and debris piles had been moved, and there was some damage to some of the monitoring wells).

### 3.7.2 Site Activity and Sample Collection

During the April 2012 removal action, the EPA Region 10 Emergency and Rapid Response Services contractor used a small excavator to allow access to the swale which was obstructed by debris and vegetative overgrowth. EPA collected one surface soil sample (SW03) from the southern edge of the swale and another surface soil sample (SW04) from the eastern edge. The locations of the surface soil samples are presented on Figure 3-8.

### 3.7.3 Summary of Analytical Results

The soil samples were analyzed for metals, PCBs, and SVOCs, and the data is summarized in Table 3.7. Sample results indicate that arsenic was detected at SW03 at 2.25 mg/kg which is above the RSL industrial criteria of 1.6 mg/kg, and at SW04 at 0.822 mg/kg which exceeds the RSL residential criteria of 0.39 mg/kg. No other metal analytes were detected above screening criteria, and no PCBs were detected above screening criteria. For the SVOC results, sample SW03 contained the PAH benzo[a]pyrene at a concentration of 0.0684 mg/kg, which exceeded the RSL residential criteria of 0.015 mg/kg. Sample SW04 contained benzo[a]pyrene at a concentration of 0.228 mg/kg, which was above the RSL industrial criteria of 0.21 mg/kg. Additional SVOCs detected at SW04 include benzo(a)anthracene at 0.205 mg/kg and benzo(b)fluoranthene at 0.349 mg/kg, which both exceed the RSL residential criteria of 0.15 mg/kg. Copies of the data memoranda from the April 2012 sampling event can be found in Appendix J.




**Notes:**

1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. A light-gray sample location indicates a sample collected during a previous sampling event.
4. Grayed out site features were removed in summer 2010.

**Legend**

- Monitoring Well or Domestic Well
- Soil Sample
- Process Area

0 36 72

Approximate Scale in Feet

**Figure 3-8: April 2012 RSE Sample Locations**

**Stubblefield Salvage Yard Site**

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## Table 3-7 Summary of Soil Sample Results from April 2012

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 12-04-0001 | 12-04-0002 |
|---|---|---|---|---|
| Sample Location | | | SW03SS | SW04SS |
| Sample Depth | | | Surface | Surface |
| Sample Collection Event | | | Apr-12 | Apr-12 |
| **Metals (mg/kg)** | | | | |
| Antimony (Metallic) | 31 | 410 | | |
| Arsenic (Inorganic) | 0.39 | 1.6 | **2.25** | **0.822** |
| Cobalt | 23 | 300 | | |
| Iron | 55,000 | 720,000 | | |
| Lead & Compounds | 400 | 800 | **251** | **142** |
| **PCBs (µg/kg)** | | | | |
| Aroclor-1242 | 220 | 740 | 4.46 U | 4.21 U |
| Aroclor-1248 | 220 | 740 | **127** | **70.2** |
| Aroclor-1254 | 220 | 740 | **152** | **112** |
| Aroclor-1260 | 220 | 740 | **151** | **121 JK** |
| **Pesticides (µg/kg)** | | | | |
| beta-BHC | 270 | 960 | | |
| Dieldrin | 30 | 110 | | |
| **TPH (mg/kg)** | | | | |
| Diesel Range Organics | 2,000 [1] | 2,000 [1] | | |
| Oil Range Organics | 2,000 [1] | 2,000 [1] | | |
| **SVOCs (mg/kg)** | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | **0.0511** | **0.205** |
| Benzo(a)pyrene | 0.015 | 0.21 | **0.0684** | **0.228 JL** |
| Benzo(b)fluoranthene | 0.15 | 2.1 | **0.131** | **0.349 JL** |
| Benzo(k)fluoranthene | 1.5 | 21 | **0.0333 JQ** | **0.117 JL** |
| Chrysene | 15 | 210 | **0.0533** | **0.222** |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 0.0444 U | 0.0419 U |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | **0.0351 JQ** | **0.108 JL** |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.444 U | 0.419 U |

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

1. = Refers to Washington State MTCA cleanup levels for TPH in soil at unrestricted and industrial properties.

Key:

BGS = Below ground surface.
EPA = Environmental Protection Agency.
J = The analyte was positively identified; the associated numerical value is the approximate concentration.
JK = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias.
JL = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias.
JQ = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit.
MTCA = Model Toxics Control Act.
mg/kg = Milligrams per kilogram (parts per million).
µg/kg . = Micrograms per kilogram (parts per billion).
PCBs = Polychlorinated biphenyls.
RSL = Regional screening levels for chemical contaminants at Superfund sites.
SVOCs = Semivolatile organic hydrocarbons.
TPH = Total petroleum hydrocarbons.
U = The analyte was analyzed for, but not detected above the reported sample quantitation limit.
UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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## 3.8 Summary of Soil Contamination

Figures 3-9 through 3-12 summarize the results of the samples collected throughout the RSE and present a comprehensive depiction of the status of elevated contaminants in and near the process area. The figures are divided by type of compound, with metals presented in Figure 3-9, PCBs in Figure 3-10, TPH in Figure 3-11, and SVOCs in Figure 3-12. Each figure includes the sample/ borehole locations from all RSE sampling events, and the symbols are color-coded to indicate whether a sample (i.e., surface or subsurface soil sample) at that location exceeded the industrial or residential RSL (for metals, PCBs, and SVOCs) or the MTCA cleanup levels (for TPH).

## 3.9 Summary of Groundwater Conditions

### 3.9.1 Groundwater Elevations and Contours

The depths to groundwater were recorded from the site monitoring wells during three of the RSE sampling events (March 2010, October 2010, and June 2011). The depths to water and monitoring well casing elevations were used to calculate the elevations of groundwater in each well at the time. These groundwater elevations and the resulting contours and flow directions are presented on Figure 3-13 (March 2010), Figure 3-14 (October 2010), and Figure 3-15 (June 2011).

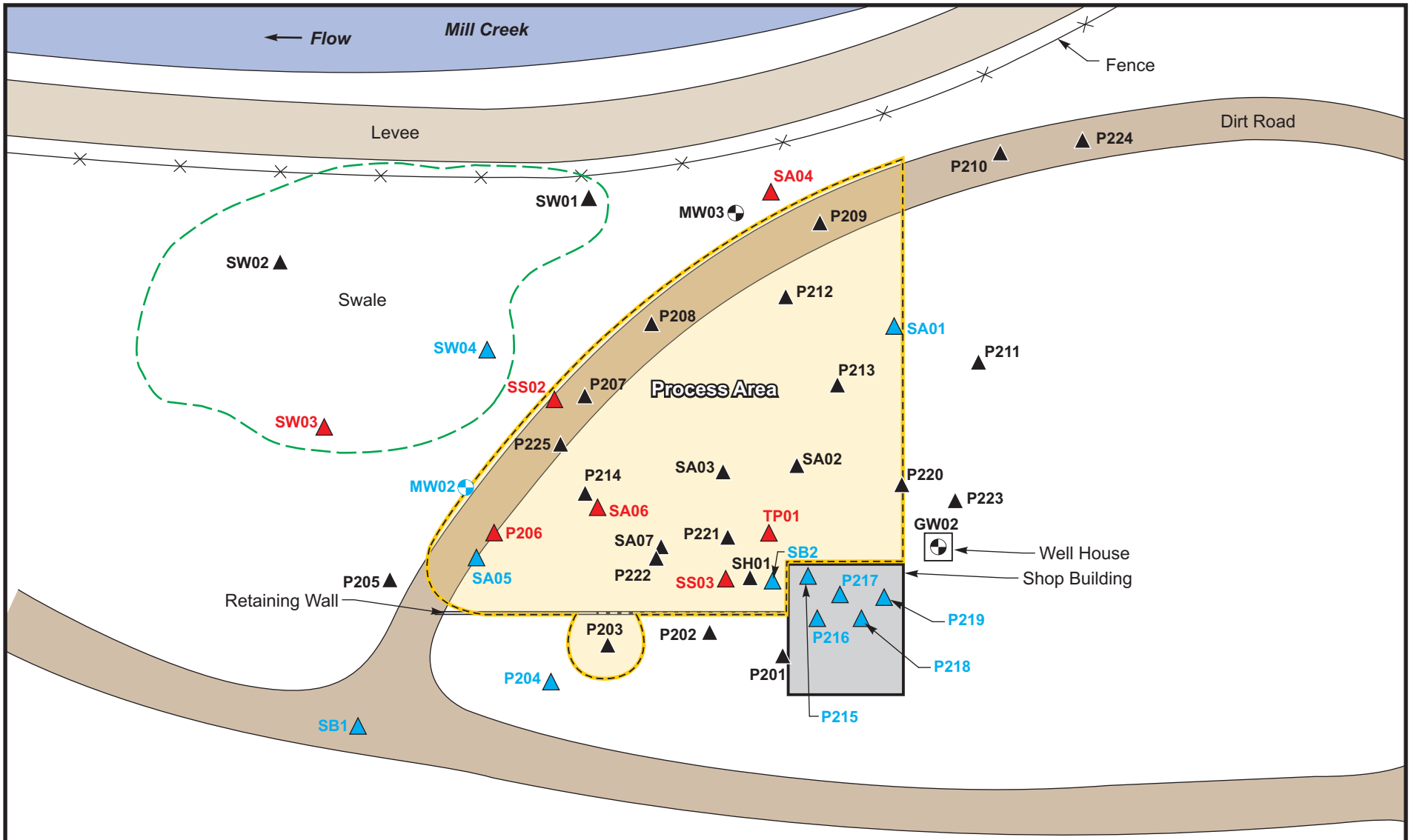
**March 2010** The monitoring wells were installed during the March 2010 RSE sampling event. The average depth to groundwater for monitoring wells MW02, MW03, and MW04, which are located at similar elevations near the process area, was approximately 8.5 feet bgs, and the depth to groundwater was 17.25 feet bgs for MW01. Direction of groundwater flow is depicted in Figure 3-13 and flows in a northwestern direction.

**October 2010** The average depth of groundwater for monitoring wells MW02, MW03, and MW04 was approximately 9.75 feet bgs, and the depth to groundwater was 18.25 feet bgs for MW01; individual groundwater depths vary from approximately 0.5 to 1.5 feet lower than the measurements collected in March 2010. Direction of groundwater flow is depicted in Figure 3-14 and is also to the northwest.

**June 2011** The average depth to groundwater for monitoring wells MW02, MW03, and MW04 was approximately 7.25 feet bgs, and depth to groundwater was 15.25 feet bgs for MW01. Individual groundwater depths are approximately 1 to 2 feet higher than those in March 2010, and the direction of groundwater flow continues to be to the northwest, as shown on Figure 3-15.

### 3.9.2 Summary of Groundwater Contamination

Figures 3-16 through 3-20 summarize the process area groundwater samples and results. Figure 3-16 depicts the groundwater sample locations throughout the RSE, including four monitoring wells, eight boreholes, and domestic well GW02. Subsequent figures summarize groundwater results by type of compound, with metals presented in Figure 3-17, PCBs in Figure 3-18, TPH in Figure 3-19, and SVOCs in Figure 3-20. Each figure includes color-coded symbols to indicate whether a sample exceeded the tapwater RSL or federal MCLs (for metals, PCBs, and SVOCs) or the MTCA cleanup level (for TPH).




**Notes:** 1. Some features are not drawn to scale.
2. Sample locations are approximate.

**Legend**

- Monitoring Well or Domestic Well
- Soil Sample
- Process Area
- Exceeds EPA RSL Industrial Criteria for Metals
- Exceeds EPA RSL Residential Criteria for Metals

0 36 72
Approximate Scale in Feet

**Figure 3-9: Metal Contamination in Soil**
**Stubblefield Salvage Yard Site**
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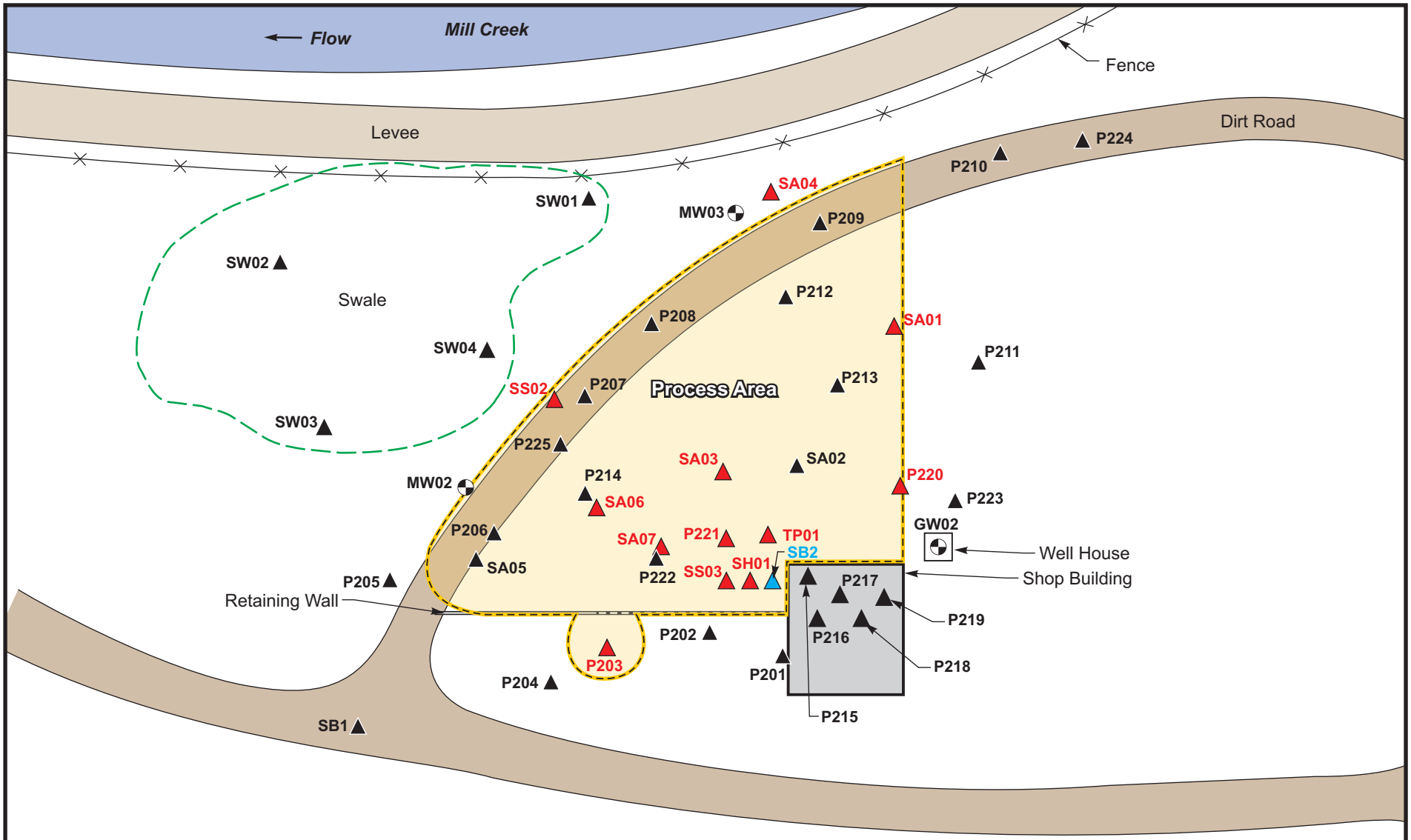


**Notes:** 1. Some features are not drawn to scale.
2. Sample locations are approximate.

MW01

**Legend**

- Monitoring Well or Domestic Well
- Soil Sample
- Process Area
- Exceeds EPA RSL Industrial Criteria for PCBs
- Exceeds EPA RSL Residential Criteria for PCBs

0 36 72
Approximate Scale in Feet

**Figure 3-10: PCB Contamination in Soil**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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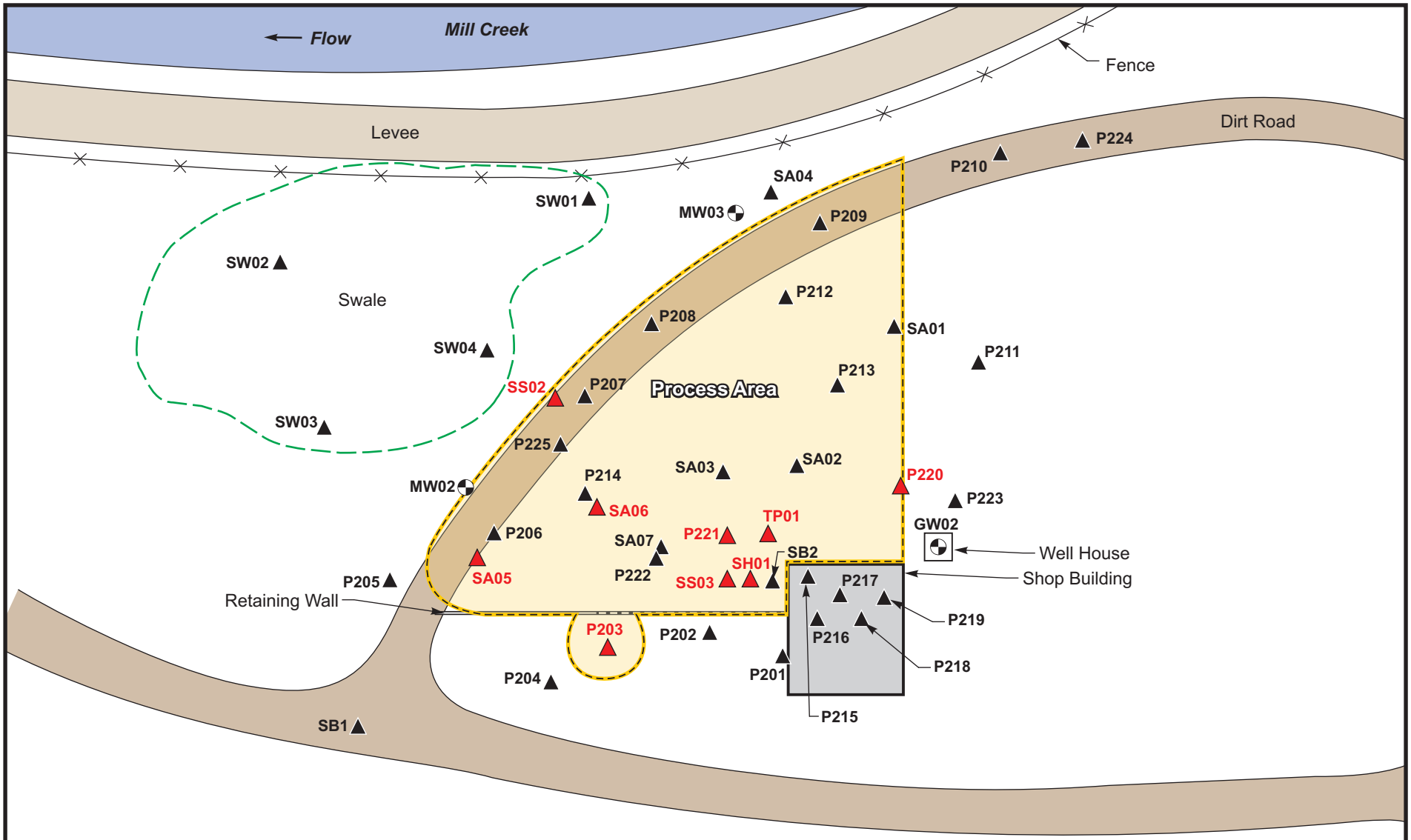


**Notes:** 1. Some features are not drawn to scale.
2. Sample locations are approximate.

MW01

**Legend**

- Monitoring Well or Domestic Well
- Soil Sample
- Process Area
- Exceed Washington MTCA for TPH

0 36 72
Approximate Scale in Feet

**Figure 3-11: TPH Contamination in Soil**
**Stubblefield Salvage Yard Site**
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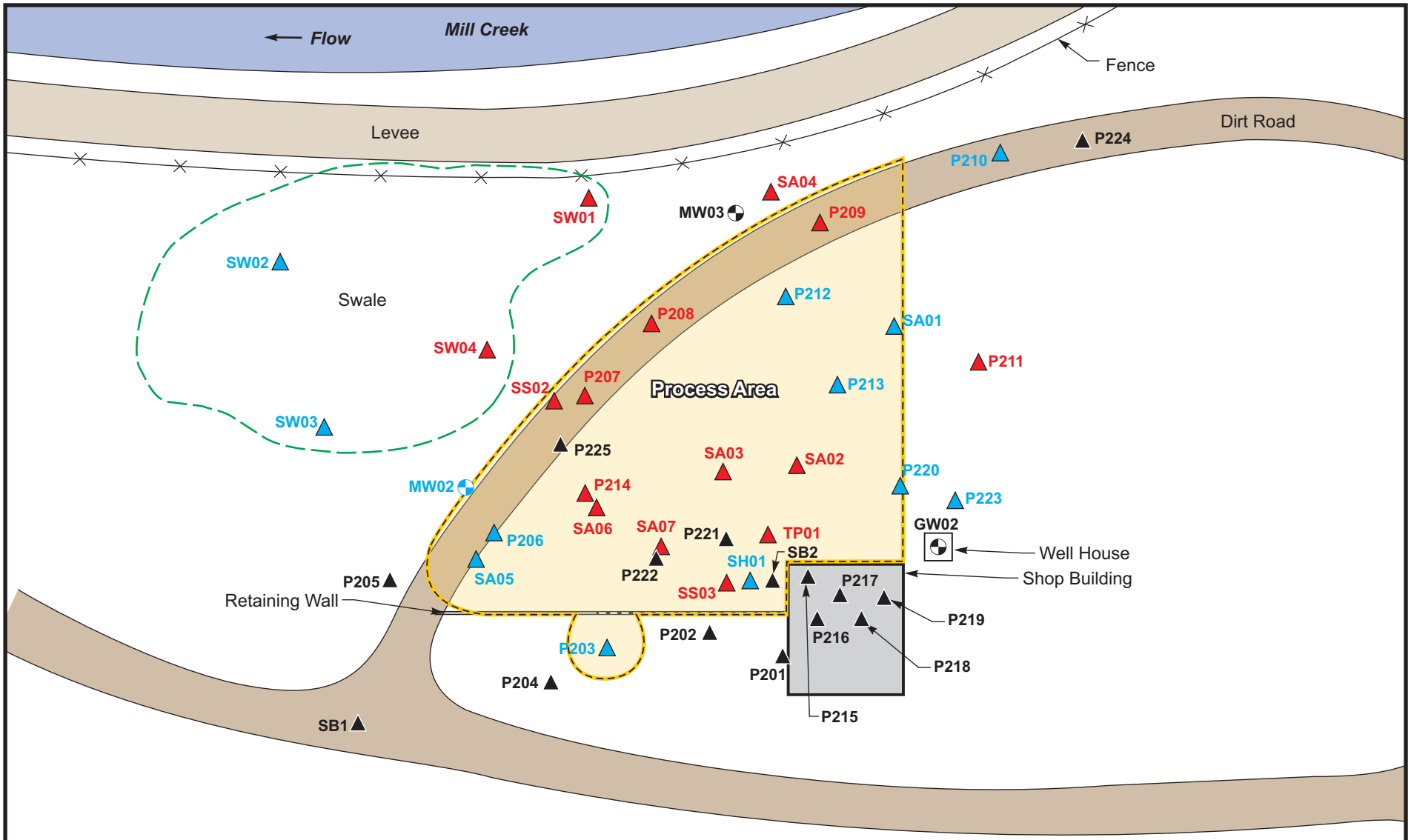


**Notes:** 1. Some features are not drawn to scale.
2. Sample locations are approximate.

MW01

**Legend**

- Monitoring Well or Domestic Well
- Soil Sample
- Process Area
- Exceeds EPA RSL Industrial Criteria for SVOCs
- Exceeds EPA RSL Residential Criteria for SVOCs

0 36 72
Approximate Scale in Feet

**Figure 3-12: SVOC Contamination in Soil**
**Stubblefield Salvage Yard Site**
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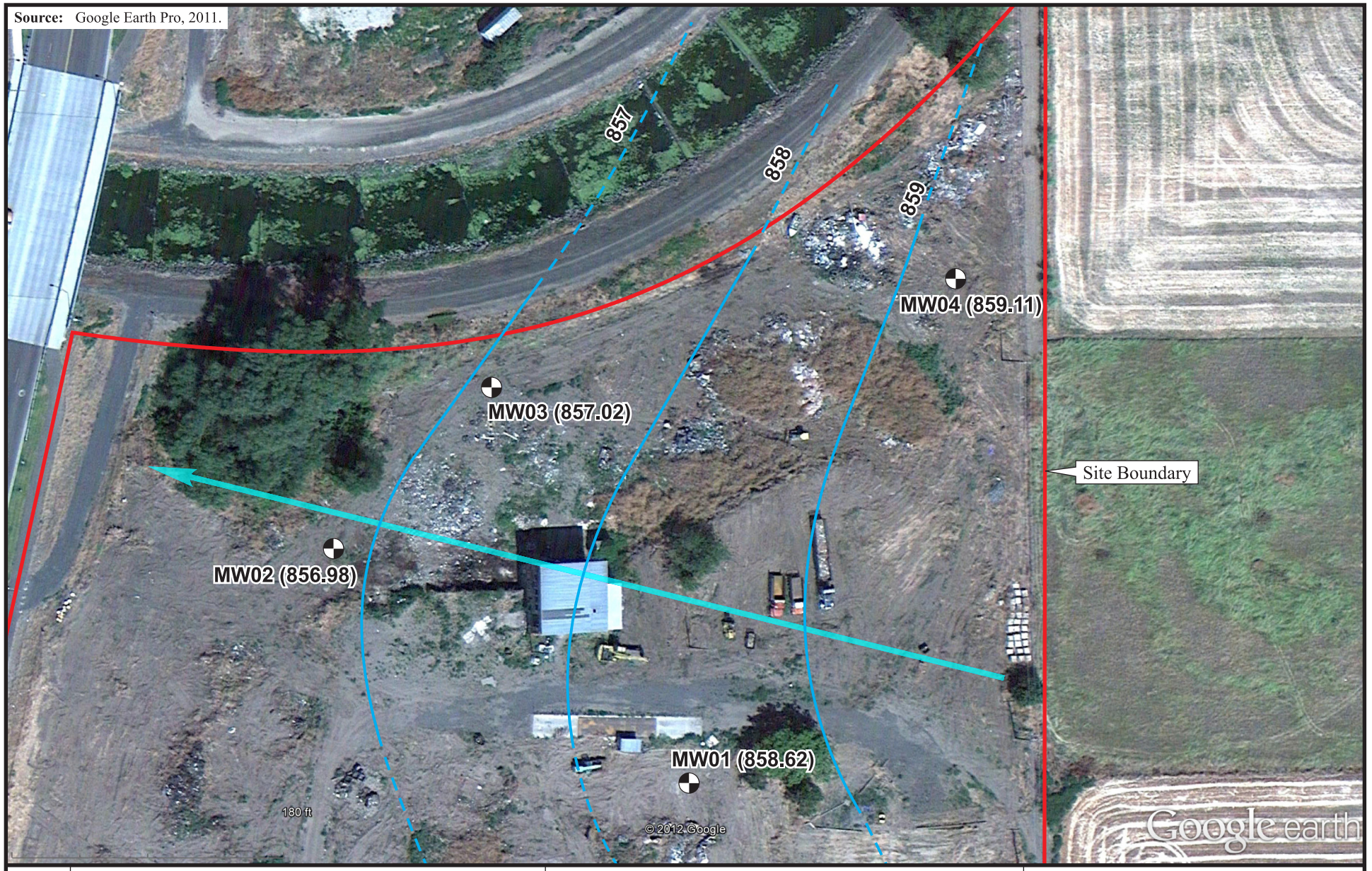
Seattle, Washington




**Key:**

- Monitoring Well Location
- Groundwater Contour
- Groundwater Flow Direction

0 90 180

Approximate Scale in Feet

**Figure 3-13: Groundwater Elevation and Contours**
**March 2010**
**Stubblefield Salvage Yard Site**
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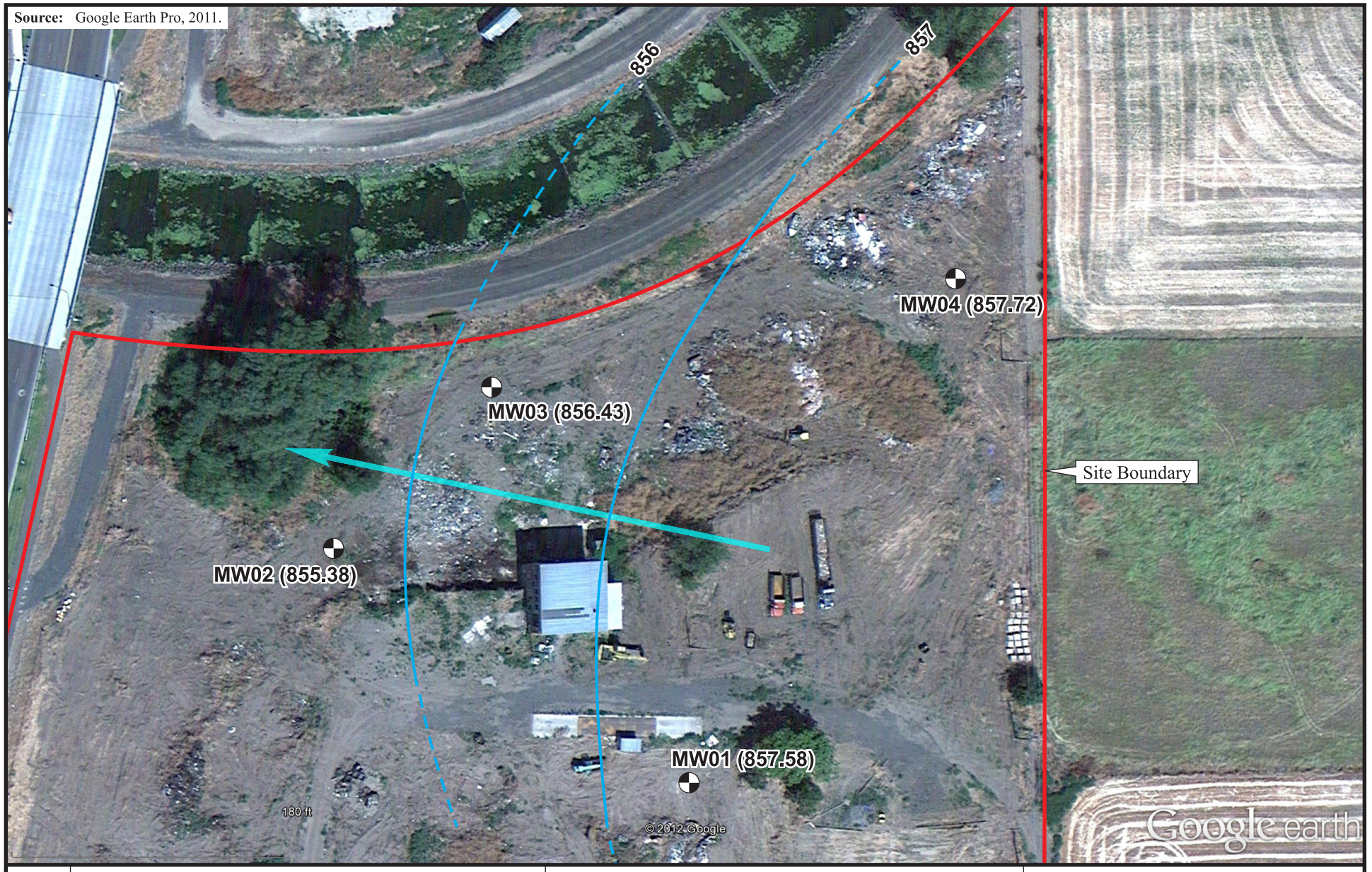


**Key:**

- Monitoring Well Location
- Groundwater Contour
- Groundwater Flow Direction

0 90 180

Approximate Scale in Feet

**Figure 3-14: Groundwater Elevation and Contours October 2010**

**Stubblefield Salvage Yard Site**

Walla Walla, Washington

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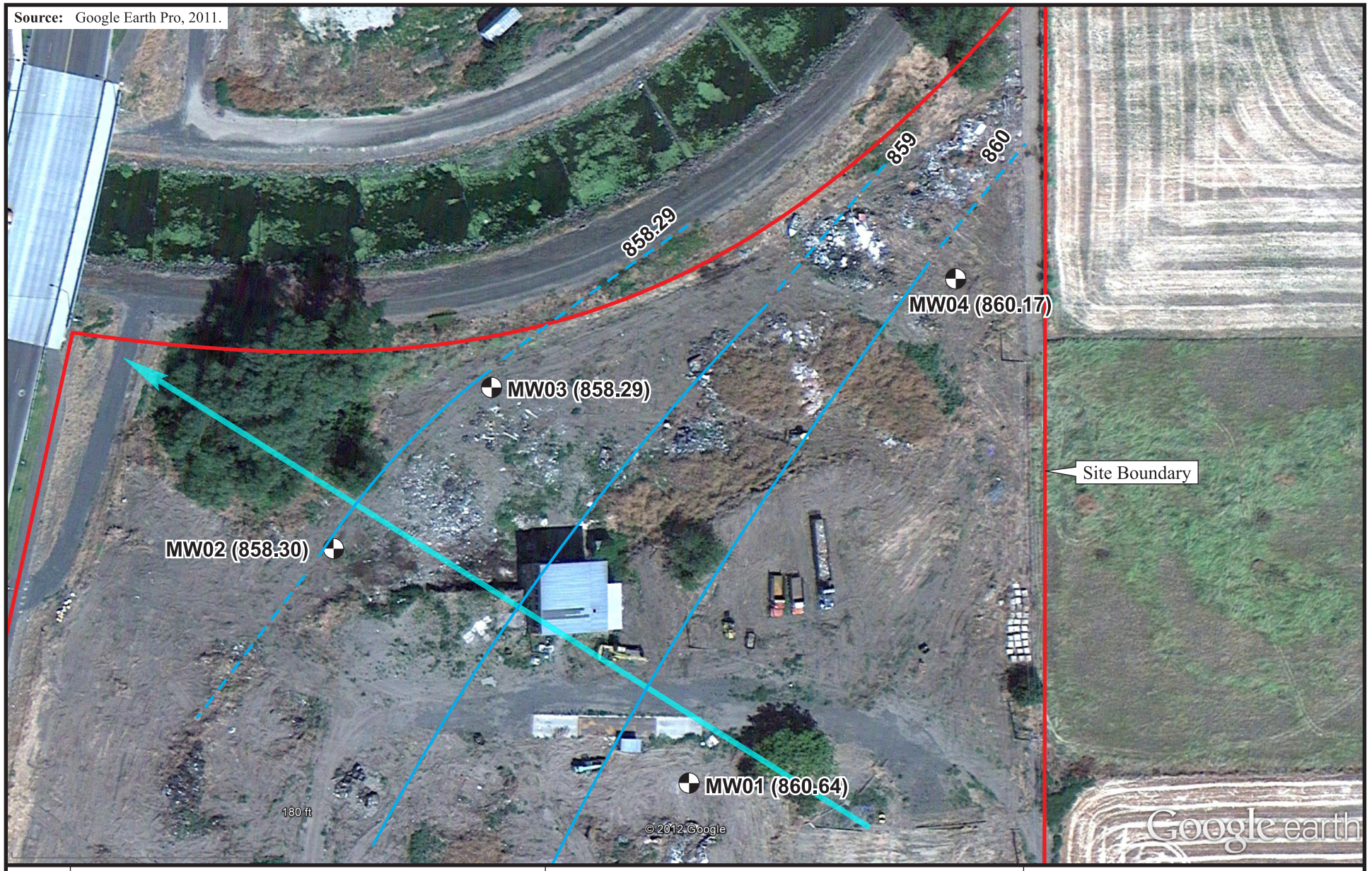


**Key:**

- Monitoring Well Location
- Groundwater Contour
- Groundwater Flow Direction

0 90 180

Approximate Scale in Feet

**Figure 3-15: Groundwater Elevation and Contours**
**June 2011**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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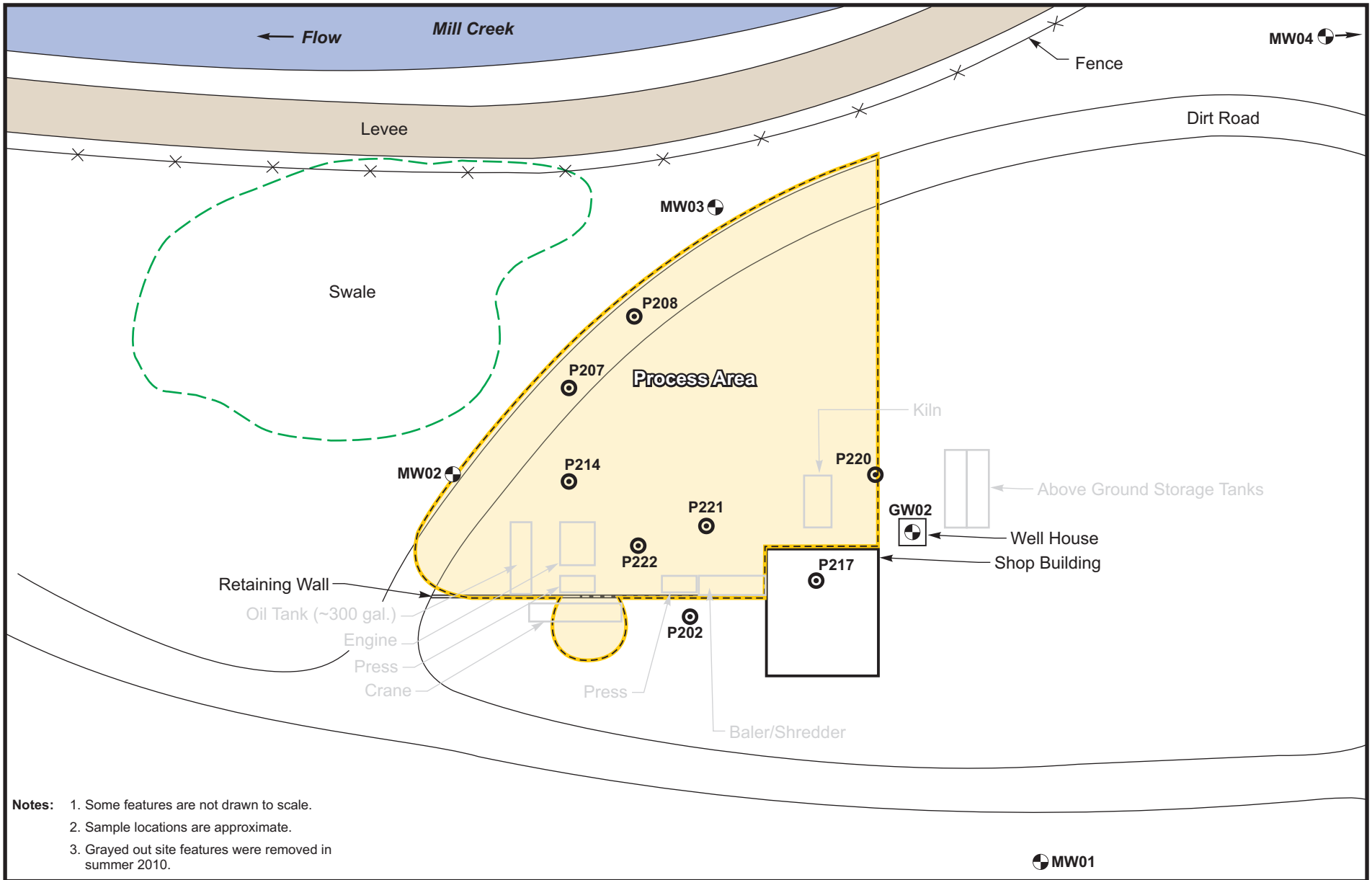


**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. Grayed out site features were removed in summer 2010.

**Legend**

- Monitoring Well or Domestic Well
- Process Area
- Targeted Groundwater Sample

0 36 72
Approximate Scale in Feet

**Figure 3-16: Groundwater Sample Locations in and Around the Process Area**
**Stubblefield Salvage Yard Site**
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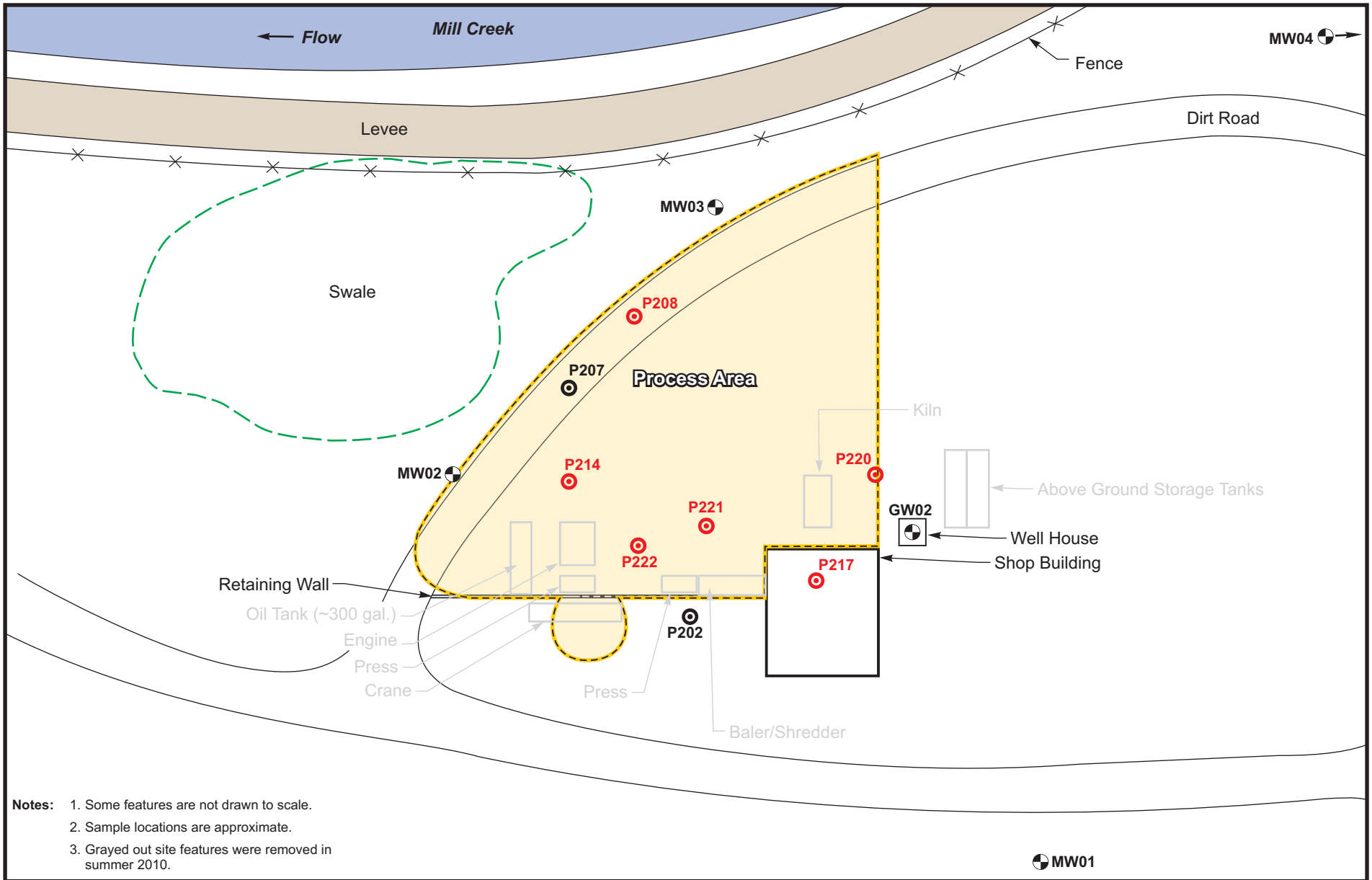


**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. Grayed out site features were removed in summer 2010.

**Legend**

- Monitoring Well or Domestic Well
- Process Area
- Targeted Groundwater Sample
- Exceeds EPA RSL Tapwater or Federal MCL's for Metals

0 36 72
Approximate Scale in Feet

**Figure 3-17: Metal Contamination in Groundwater**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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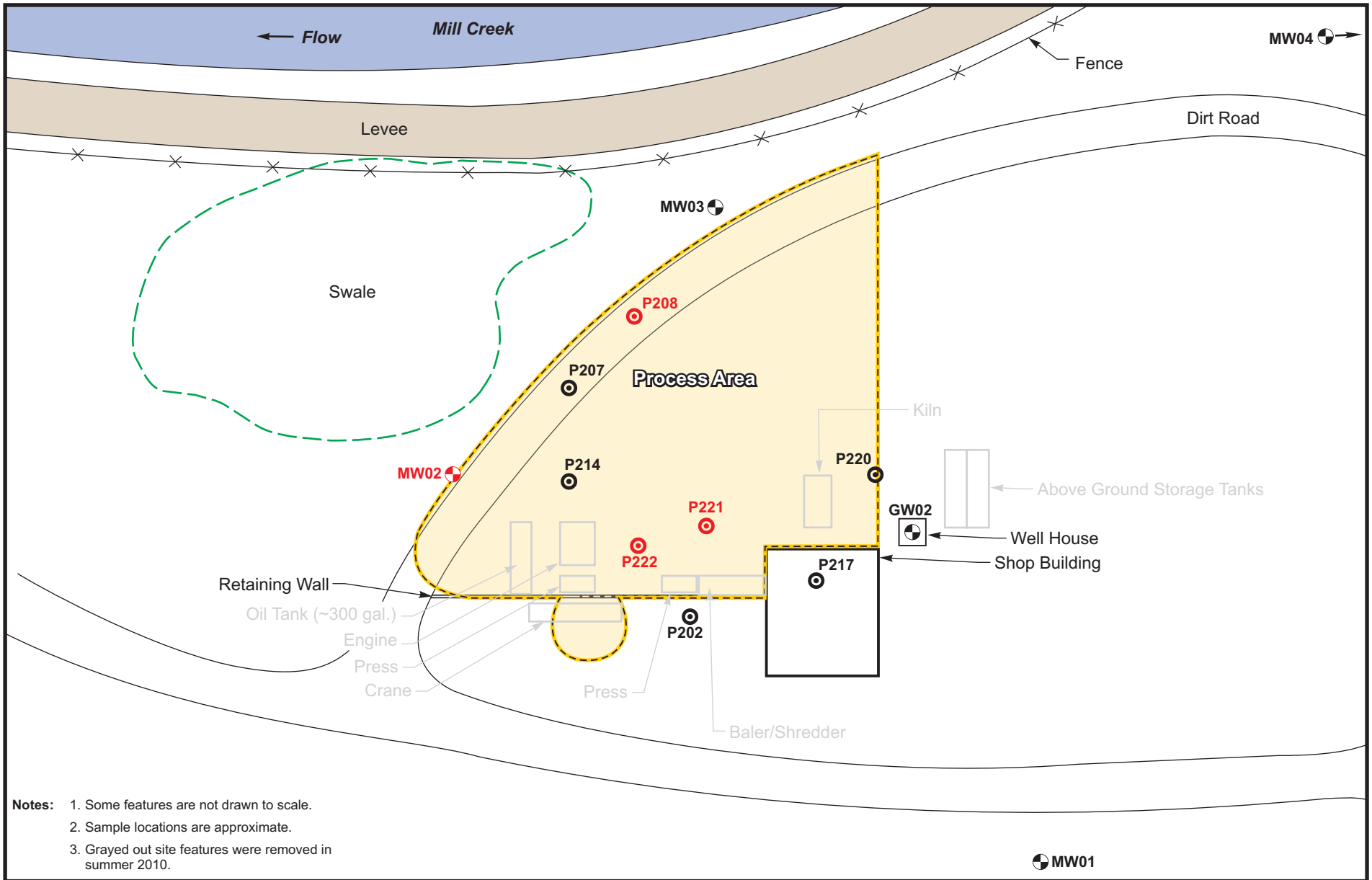
Seattle, Washington




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. Grayed out site features were removed in summer 2010.

**Legend**

- Monitoring Well or Domestic Well
- Process Area
- Targeted Groundwater Sample
- Exceeds EPA RSL Tapwater or Federal MCL's for PCBs

0 36 72
Approximate Scale in Feet

**Figure 3-18: PCB Contamination in Groundwater**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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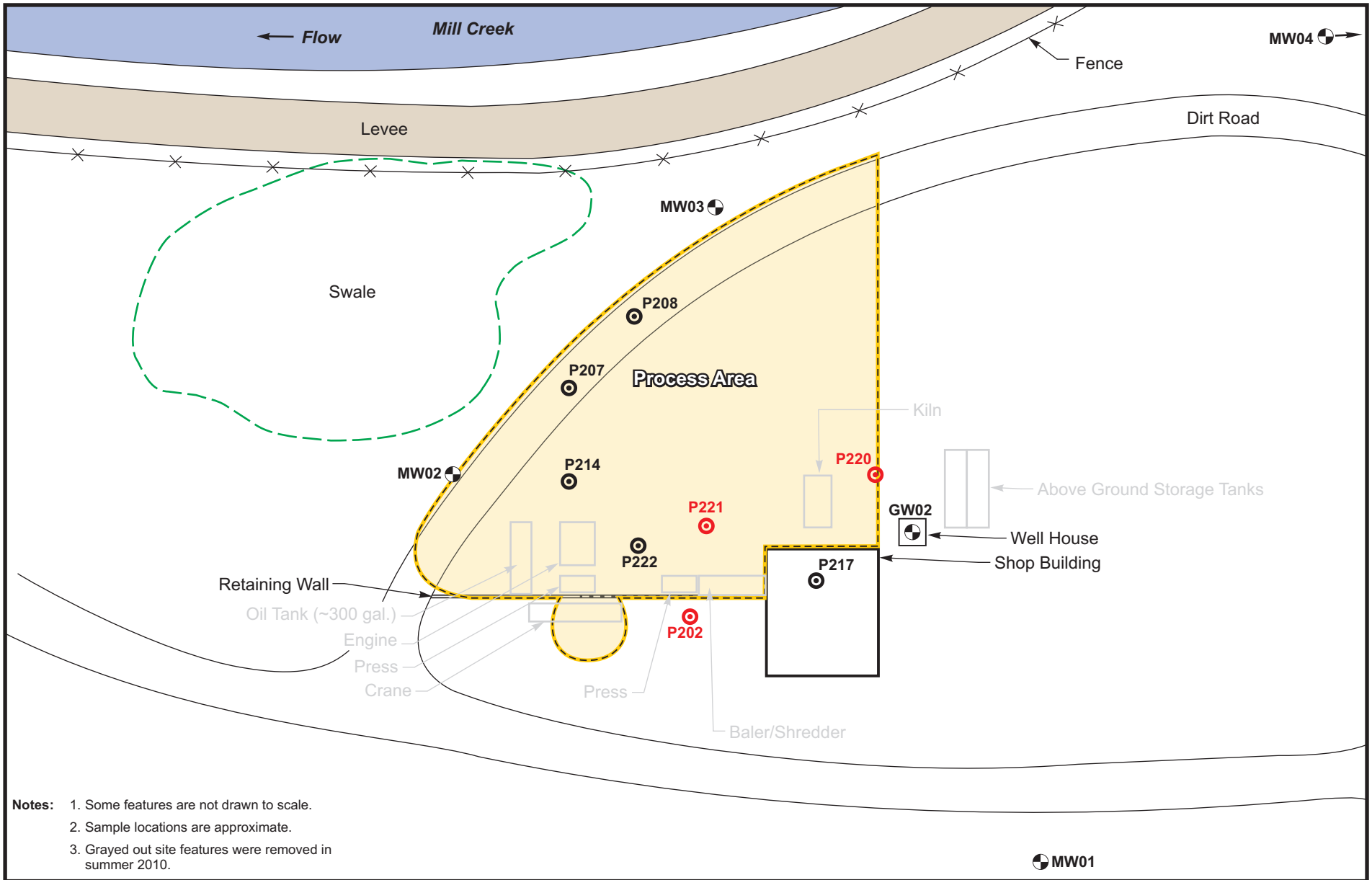


**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. Grayed out site features were removed in summer 2010.

**Legend**

- Monitoring Well or Domestic Well
- Process Area
- Targeted Groundwater Sample
- Exceeds Washington MTCA for TPH

0 36 72
Approximate Scale in Feet

**Figure 3-19: TPH Contamination in Groundwater**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

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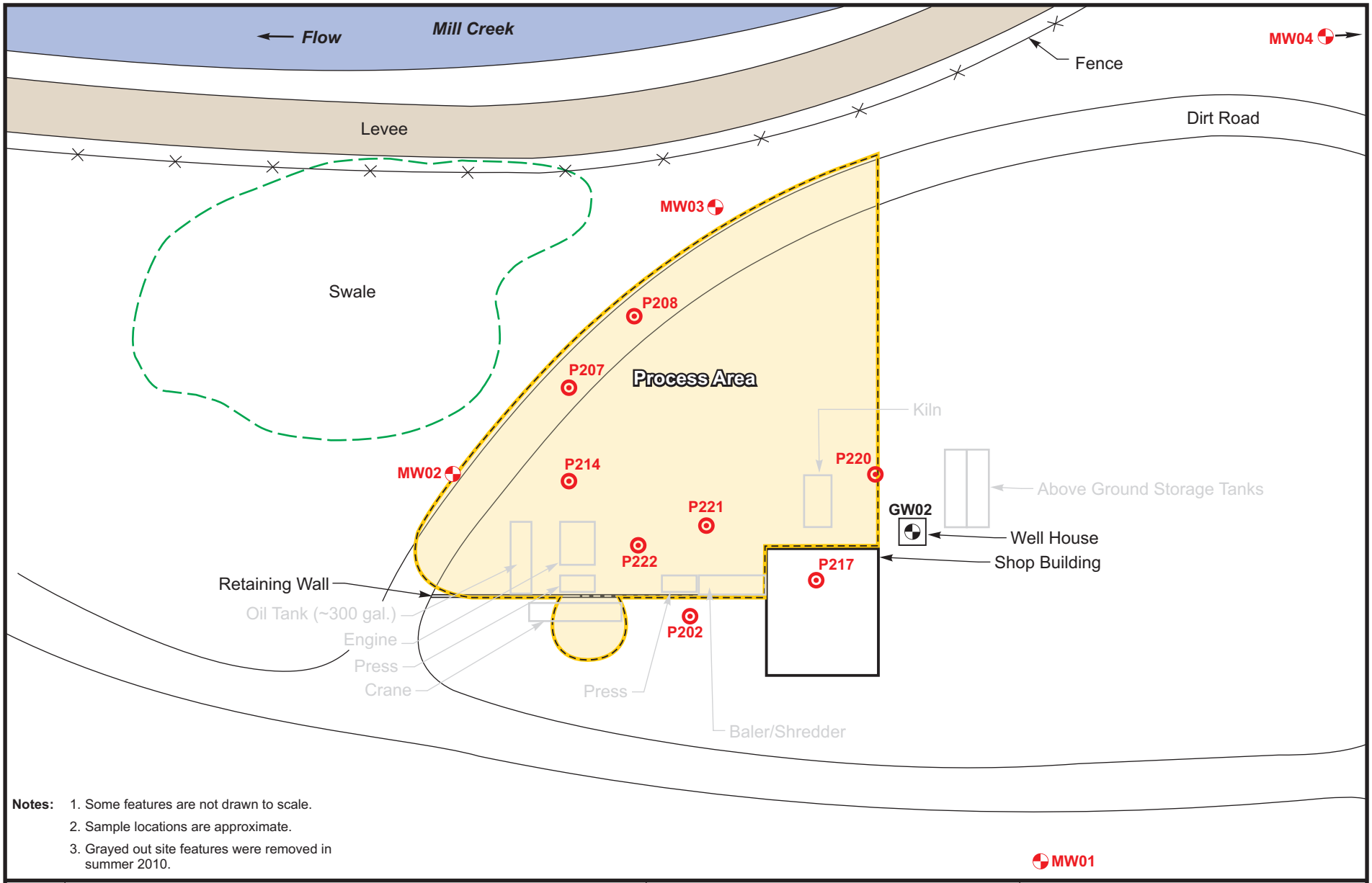
Seattle, Washington




**Notes:**
1. Some features are not drawn to scale.
2. Sample locations are approximate.
3. Grayed out site features were removed in summer 2010.

**Legend**

- Monitoring Well or Domestic Well
- Process Area
- Targeted Groundwater Sample
- Exceeds EPA RSL Tapwater or Federal MCL's for SVOCs

0 36 72
Approximate Scale in Feet

**Figure 3-20: SVOC Contamination in Groundwater**
**Stubblefield Salvage Yard Site**
Walla Walla, Washington

ecology and environment, inc.
Global Specialists in the Environment
Seattle, Washington

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# 4 Quality Assurance/Quality Control

QA/QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of sampling equipment, glassware and reagents. Specific QC requirements for laboratory analyses are incorporated in the *Contract Laboratory Program Statement of Work for Organic Analyses* (EPA 2007) and the *Contract Laboratory Program Statement of Work for Inorganic Analyses* (EPA 2011). These QC requirements or equivalent requirements found in the analytical methods were followed for analytical work on the project. This section describes the QA/QC measures taken for the project and provides an evaluation of the usability of data presented in this report.

Data from the START-subcontracted commercial laboratory were reviewed and validated by a START chemist. Data qualifiers were applied as necessary according to the following guidance:

- EPA (2008) *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*.
- EPA (2010) *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review*.

In the absence of other QC guidance, method- and/or standard operating procedure-specific QC limits were also utilized to apply qualifiers to the data.

## 4.1 Satisfaction of Data Quality Objectives

The following EPA (EPA 2000) guidance document was used to establish data quality objectives (DQOs) for this project:

- *Guidance for the Data Quality Objectives Process* (EPA QA/G-4), EPA/600/R-96/055.

EPA determined that definitive data without error and bias determination would be used for the sampling and analyses conducted during the field activities. The data quality achieved during the field work produced sufficient data that met the DQOs stated in the site-specific sampling plans (SSSP) and sample plan alteration forms (SPAF). A detailed discussion of accomplished project objectives is presented in the following sections.

## 4.2 Quality Assurance/Quality Control Samples

Rinsate blank QA samples were collected for each 20 samples collected using non-dedicated sampling equipment. One trip blank QA sample was collected for each sample cooler that contained samples to be analyzed for volatile organic compounds. QC samples included matrix spike/matrix spike duplicate (MS/MSD) and/or blank spike (BS) samples at a rate of one MS/MSD and/or BS per 20 samples per matrix.

## 4.3 Project-Specific Data Quality Objectives

The laboratory data were reviewed to ensure that DQOs for the project were met. The following describes the laboratories' abilities to meet project DQOs for precision, accuracy and

completeness and the field team's ability to meet project DQOs for representativeness and comparability. The laboratories and the field team were able to meet DQOs for the project.

### 4.3.1 Precision

Precision measures the reproducibility of the sampling and analytical methodology. Laboratory and field precision is defined as the relative percent difference (RPD) between duplicate sample analyses. The laboratory duplicate samples or MS/MSD samples measure the precision of the analytical method. The RPD values were reviewed for all commercial laboratory samples. A total of 65 sample results (approximately 0.4% of the data) were qualified based on precision outliers; therefore the project DQO for precision of 90% was met.

### 4.3.2 Accuracy

Accuracy indicates the conformity of the measurements to fact. Laboratory accuracy is defined as the surrogate spike percent recovery (%R) or the MS/MSD/BS %Rs for all laboratory analyses. The surrogate %R values were reviewed for all appropriate sample analyses. A total of 421 surrogate results (approximately 2.50% of the date) were qualified based on surrogate outliers; therefore the project DQO for accuracy of 90% was met.

The %R values were reviewed for all MS/MSD/BS analyses. A total of 258 sample results (approximately 1.57% of the data) were qualified based on accuracy outliers; therefore the project DQO for accuracy of 90% was met.

### 4.3.3 Completeness

Data completeness is defined as the percentage of usable data (usable data divided by the total possible data). All laboratory data were reviewed for data validation and usability. A total of four sample results (approximately 0.02% of the data) were rejected; therefore the project DQO for completeness of 90% was met.

### 4.3.4 Representativeness

Data representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point or environmental condition. The number and selection of samples were determined in the field to account accurately for site variations and sample matrices. The DQO for representativeness was met.

### 4.3.5 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Data produced for this site followed applicable field sampling techniques and specific analytical methodology. The DQO for comparability was met.

## 4.4 Laboratory Quality Assurance/Quality Control Parameters

The laboratory data also were reviewed for holding times/temperatures/sample containers, laboratory blank samples, serial dilution analyses, rinsate blanks, and trip blanks. These QA/QC parameters are summarized below.

### 4.4.1 Holding Times/Temperatures/Sample Containers

All holding times and sample containers were acceptable. A total of 604 sample results (approximately 3.68% of the data) were qualified based on temperature outliers.

### 4.4.2 Laboratory Blanks

All laboratory blanks met the frequency criteria. The following potential contaminant of concern was detected in the laboratory blanks:

- Inorganics: Aluminum, antimony, calcium, chromium, copper, iron, manganese, potassium, silver.
- SVOCs: Bis(2-ethylhexyl)phthalate, di-n-butylphthalate.
- VOCs: Acetone, 2-butanone, methylene chloride, n-propylbenzene, 1,2,4-trichlorobenzene, 1,3,5-trichlorobenzene.

See the data validation memoranda in the appendices for results qualified based on blank contamination.

### 4.4.3 Serial Dilution Analysis

Serial dilution analyses met the frequency criteria. A total of 120 sample results (approximately 0.73% of the data) were qualified based on serial dilution outliers.

### 4.4.4 Rinsate Blanks

Rinsate blank analyses were performed at a frequency of one per 20 samples collected using non-dedicated sampling equipment. There were no detections in the rinsate blank analyses except fluoranthene (0.13 µg/L), pyrene (0.14 µg/L), benzo(a)anthracene (0.12 µg/L), chrysene (0.13 µg/L), benzo(b) fluoranthene (0.13 µg/L), benzo(k)fluoranthene (0.04 µg/L), benzo[a]pyrene (0.085 µg/L), indeno(1,2,3-cd)pyrene (0.036 µg/L), dibenzo(a,h)anthracene (0.14 µg/L), and benzo(g,h,i)perylene (0.039 µg/L) in the September 10, 2009, rinsate blank. No qualifications were applied based on these low concentration (all less than 0.2 parts per billion) rinsate blank results.

### 4.4.5 Trip Blanks

Trip blank analyses were performed at a frequency of one per cooler containing samples to be analyzed for volatile organic compounds. There were no detections in the trip blank analyses.

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# 5 Summary and Conclusions

EPA performed a RSE at the Stubblefield Salvage Yard Site in Walla Walla, Washington, from May 2009 to April 2012. The salvage yard operated for approximately 60 years to process metal wastes for recycling or disposal, but it is currently inactive. Following investigations by Ecology and a Phase I/II ESA on behalf of Walla Walla County, an EPA OSC visited the site in May 2009 and documented conditions that presented a release and a threat of release of hazardous substances to the environment.

EPA conducted seven separate field events during the RSE. The first three field events (May, September, and October 2009) focused on general site characterization and identifying potential source areas. The following two field events (March and October 2010) focused on delineating the major source area (i.e., the process area) and included the installation of monitoring wells to evaluate potential impacts to shallow groundwater. The final two field events (June 2011 and April 2012) focused on characterization of the horizontal extent of subsurface soil contamination and assessment of changes in groundwater depth and direction over time.

The RSE characterized soil and groundwater in the metal salvage process area for contamination of metals, PCBs, pesticides, TPH, SVOCs, and VOCs. The process area contamination zone is approximately 30,000 square feet, and with an estimated maximum depth to groundwater of 8 feet bgs the volume of soil in the process area is estimated to be approximately 9,000 cubic yards. Analytical data from soil samples was compared to EPA RSLs for residential and industrial properties for all compounds except TPH which was compared to MTCA cleanup standards for unrestricted and restricted properties. Analytical data from water samples was compared to EPA RSLs for tapwater and federal MCLs for all compounds except TPH which was compared to MTCA cleanup standards for unrestricted and restricted properties.

Metals in soil were detected in and around the process area, including the swale, at seven locations with concentrations that exceed EPA RSLs for industrial properties for arsenic and lead. The maximum concentration for arsenic was 5.4 mg/kg at SS02, and for lead was 4,400 mg/kg at P206. Additional metal analytes detected above the more conservative EPA RSL for residential properties include antimony, arsenic, cobalt, iron, and lead. Iron was the only contaminant detected under the shop building at concentrations slightly above the EPA RSL for residential properties, with a maximum of 86,000 mg/kg at P217.

PCBs in soil were detected in and around the process area at 12 locations with concentrations that exceed EPA RSLs for industrial properties, and one additional location had concentrations greater that EPA RSLs for residential properties. The maximum concentrations were detected at SA06 with 41,000 µg/kg of Aroclor-1254, P203 with 38,000 µg/kg of Aroclor-1242, and SA07 with 37,000 µg/kg of Aroclor-1242. The PCB contaminated soil generally appears to be located near the previous location of the hydraulic equipment in the process area with the exception of a few outlying samples. Pesticides were detected above the conservative RSL for residential properties at only two locations, SA04 and SA07, and sampling for pesticides was therefore discontinued after the September 2009 field event.

TPH in soil was detected at nine locations above the MTCA screening criteria of 2,000 mg/kg, and eight of these locations have PCB concentrations greater than RSLs for industrial properties. All TPH locations are located within the process area.

SVOCs in soil were detected in and around the process area and a majority of sample locations indicated concentrations that exceeded screening criteria. The most heavily contaminated soil was located in the process area, including SA06 (84 mg/kg for benzo[a]pyrene), although four locations outside the process area had SVOC concentrations greater than RSLs for industrial properties. Samples to the south of the process area and under the shop building had concentrations of SVOCs less than the screening criteria, and samples to the northeast of the process area exceeded only RSLs for residential properties. Samples to the west of the process exceeded only RSLs for residential properties with the exception of P211 (0.29 mg/kg of benzo[a]pyrene) which exceeded RSLs for industrial properties. Three samples to the north of the process area, including SW04 in the swale, exceeded RSLs for industrial properties, which may imply that SVOC contamination in the swale is contiguous with contamination found in the process area.

Groundwater samples collected from the two domestic wells on site indicated concentrations of VOCs above the conservative RSL for tapwater in the form of chloroform (0.31 J µg/L at GW01, and 0.19 J µg/L at GW02). The domestic wells were otherwise below screening levels for metals, PCBs, pesticides, TPH, and SVOCs. The surface water samples from Mill Creek were below screening levels for metals, PCBs, pesticides, TPH, and SVOCs.

Five groundwater samples contained concentrations of metals greater than site screening criteria, including arsenic (maximum of 6.1 µg/L at P220), lead (maximum of 380 µg/L at P221), and other analytes including cobalt, iron, manganese, and vanadium. Four groundwater samples contained concentrations of PCBs with a maximum of 1,500 µg/L of Aroclor-1242 at P221. Pesticides were not detected above screening criteria, and after October 2009 sampling for pesticides was discontinued. TPH was detected at three locations with a maximum of 3,600 mg/L of ORO at P221. SVOCs were occasionally detected with bis(2-ethylhexyl)phthalate, a common cross-contaminant found in PVC sampling equipment, the most commonly encountered analyte. Benzo[a]pyrene was detected at five locations above screening criteria with a maximum of 14 µg/L at P221. Additional SVOCs, not including bis(2-ethylhexylphthalate), were detected at six other locations above screening criteria.

The groundwater sample locations that appear to contain the greatest number of analytes above screening criteria include MW02, P208, P214, P220, P221, and P222. Analysis of groundwater samples collected from within the process area indicated elevated concentrations of metals, PCBs, TPH, and SVOCs that appear to be directly impacted by subsurface soil contamination. Although contamination in the groundwater in the processing area has been confirmed, there is insufficient data to evaluate the degree to which groundwater contamination may be migrating.

The RSE was primarily performed to characterize contaminated soil and groundwater in and around the metal salvage process area of the site. The RSE did not address the entire property, and based on site operations and general site observations, it is possible that additional soil, and possibly groundwater, contamination may be present at other areas of the site.

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# A Photographs

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Photo 1 Shop building and kiln.

*Direction: Southeast* *May 2009 Sampling Event*

Photo 2 Process area with engine and crane.

*Direction: Southwest* *May 2009 Sampling Event*

Photo 3 Process area with baler and engine.

*Direction: Southwest* *May 2009 Sampling Event*

Photo 4 Spill area near the base of the baler and shop building.

*Direction: Closeup* *May 2009 Sampling Event*

Photo 5 Kiln, reportedly used to melt engine blocks.

*Direction: Southwest* *May 2009 Sampling Event*

Photo 6 Area south of the process area.

*Direction: South* *May 2009 Sampling Event*

Photo 7 Stained soil north of the process area.

*Direction: Southwest* *May 2009 Sampling Event*

Photo 8 Stained soil north of the process area; the swale is in the background.

*Direction: Northwest* *May 2009 Sampling Event*

Photo 9 Residence and deep wellhouse.

*Direction: North* *May 2009 Sampling Event*

Photo 10 Inside shallow wellhouse near process area.

*Direction: Closeup* *May 2009 Sampling Event*

Photo 11 Empty storage tanks; one is marked "gas."

*Direction: Northeast* *May 2009 Sampling Event*


Photo 12 Leaking transformer and stained soil east of process area.

*Direction*: *East* *May 2009 Sampling Event*

Photo 13 Drums without bungs.

*Direction*: *Closeup* *May 2009 Sampling Event*

Photo 14 Leaking drum on its side.

*Direction*: *Closeup* *May 2009 Sampling Event*

Photo 15 Collecting subsurface soil samples in the process area.

*Direction: North* *September 2009 Sampling Event*

Photo 16 Collecting subsurface soil samples in the west section of the process area.

*Direction: East* *September 2009 Sampling Event*

Photo 17 Collecting subsurface soil samples in the west section of the process area.

*Direction: East* *September 2009 Sampling Event*

Photo 18 Collecting sample SH01 near the baler at an angle.

*Direction: East* *September 2009 Sampling Event*

Photo 19 Oil stained subsurface soil sample.

*Direction: Closeup* *September 2009 Sampling Event*

Photo 20 Baler and press after sample SH01 was collected.

*Direction: South* *September 2009 Sampling Event*

Photo 21 Closeup of press.

*Direction: Southeast* *September 2009 Sampling Event*

Photo 22 Stained soil representative of conditions in the process area.

*Direction: Closeup* *October 2009 Sampling Event*

Photo 23 Leaking oil from machinery.

*Direction: Closeup* *October 2009 Sampling Event*

Photo 24 Active site; crane moving salvage material in the process area.

*Direction: Northeast* *October 2009 Sampling Event*

Photo 25 Shop building; note pallets of batteries in the lower left corner.

*Direction: Northeast* *October 2009 Sampling Event*

Photo 26 Partially demolished kiln; crane is operating in the background.

*Direction: Southwest* *October 2009 Sampling Event*

Photo 27 View of kiln, shop building, baler, and press.

*Direction: Southeast* *October 2009 Sampling Event*

Photo 28 Stained soil in the process area.

*Direction: Southeast* *October 2009 Sampling Event*

Photo 29 Hydraulic fluid and other liquids near the baler.

*Direction: Closeup* *October 2009 Sampling Event*

Photo 30 Open container of hydraulic fluid and stained soil by the engine.

*Direction: Closeup* *October 2009 Sampling Event*

Photo 31 View from press toward crane and engine.

*Direction: West* *October 2009 Sampling Event*

Photo 32 View from press toward swale.

*Direction: Northwest* *October 2009 Sampling Event*

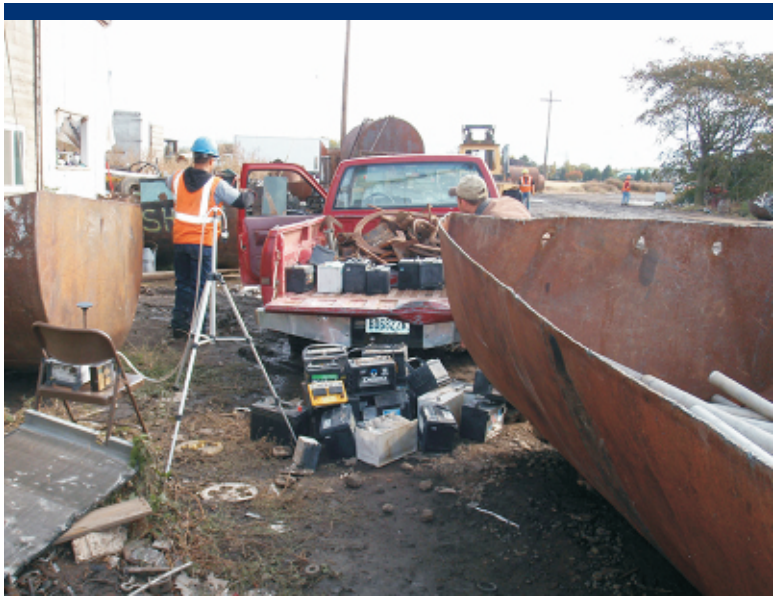

Photo 33 Batteries appear to be off-loaded south of shop building.

*Direction: East* *October 2009 Sampling Event*

Photo 34 Using an XRF instrument to analyze stained soil for metals.

*Direction: Closeup* *October 2009 Sampling Event*

Photo 35 Active salvage yard with START sampling in process area.

*Direction: South* *October 2009 Sampling Event*

Photo 36 Active salvage yard with START sampling in process area.

*Direction: South* *October 2009 Sampling Event*

Photo 37 Mill Creek flows along the northern edge of the site.

*Direction: Northeast* *October 2009 Sampling Event*

Photo 38 View of site from near the eastern edge of the swale.

*Direction: Southeast* *October 2009 Sampling Event*

Photo 39 West entrance to the site from Myra Road.

*Direction: West* *October 2009 Sampling Event*

Photo 40 View of active process area with the baler to the left.

*Direction: South* *October 2009 Sampling Event*

Photo 41 Engine and oil tank in the process area.

*Direction: Southwest* *October 2009 Sampling Event*

Photo 42 Installation of monitoring well MW04.

*Direction: East* *March 2010 Sampling Event*

Photo 43 Drill rig setting up at monitoring well MW03.

*Direction: North* *March 2010 Sampling Event*

Photo 44 Drill rig setting up at monitoring well MW01.

*Direction: Southwest* *March 2010 Sampling Event*

Photo 45 Installing investigative borehole SB01.

*Direction: Northeast* *March 2010 Sampling Event*

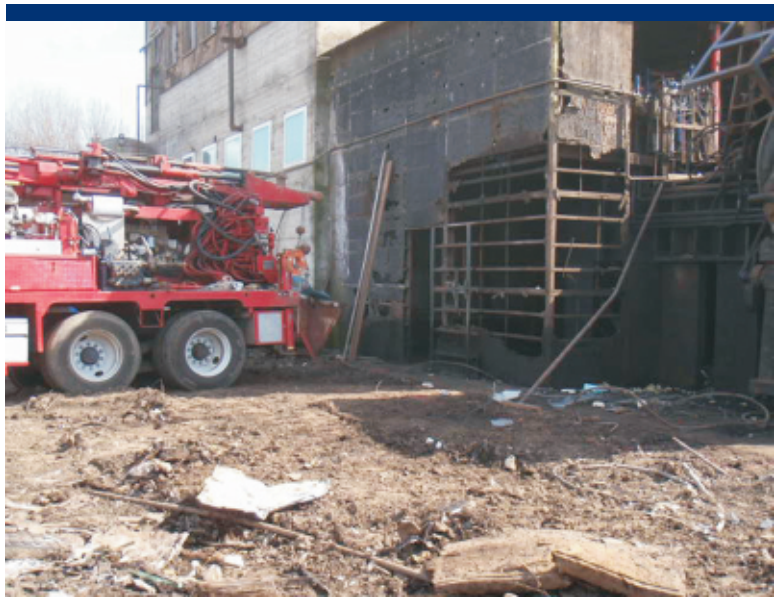

Photo 46 Setting up the drill rig for investigative borehole SB02.

*Direction: Southeast* *March 2010 Sampling Event*

Photo 47 Installing investigative borehole SB02 near the baler at an angle.

*Direction: East* *March 2010 Sampling Event*

Photo 48 Field screening for metals with XRF instrument.

*Direction: Closeup* *March 2010 Sampling Event*

Photo 49 Purging recently installed monitoring well MW04.

*Direction: North* *March 2010 Sampling Event*

Photo 50 Field sampling equipment and two 55-gallon drums for IDW.

*Direction: Closeup* *March 2010 Sampling Event*

Photo 51 Installed monitoring well MW04.

*Direction: North* *March 2010 Sampling Event*

Photo 52 Installed monitoring well MW03.

*Direction: North* *March 2010 Sampling Event*

Photo 53 Installed monitoring well MW02 near the swale.

*Direction: Northwest* *March 2010 Sampling Event*

Photo 54 Sampling from monitoring well MW01.

*Direction: North* *March 2010 Sampling Event*


Photo 55 Sampling from monitoring well MW01.

*Direction: West* *October 2010 Sampling Event*

Photo 56 Facing the shop building from the process area; the site is inactive and the hydraulic equipment has been moved off site.

*Direction: South* *October 2010 Sampling Event*

Photo 57 Facing the shop building and former location of the baler and press.

*Direction: Southeast* *October 2010 Sampling Event*

Photo 58 View of stained retaining wall and former location of baler and press; note the stained soil.

*Direction: Southeast* *October 2010 Sampling Event*

Photo 59 View of process area and former location of hydraulic salvage equipment.

*Direction: Southeast* *October 2010 Sampling Event*

Photo 60 View of shop building with pallets of discarded batteries in the foreground.

*Direction: East* *October 2010 Sampling Event*

Photo 61 Closeup of discarded batteries near the shop building.

*Direction: Closeup* *October 2010 Sampling Event*

Photo 62 View of shop building with process area to the left; foreground is previous location of crane.

*Direction: East* *October 2010 Sampling Event*

Photo 63 Coring through the concrete floor of the shop building.

*Direction: Northwest* *June 2011 Sampling Event*

Photo 64 Concrete core from the floor of the shop building.

*Direction: Closeup* *June 2011 Sampling Event*

Photo 65 Installing a borehole in soil underneath the shop building.

*Direction: East* *June 2011 Sampling Event*

Photo 66 Collecting a groundwater sample from a borehole in the shop building.

*Direction: Closeup* *June 2011 Sampling Event*

Photo 67 Holes in concrete floor were filled with quick-drying concrete upon completion of sampling.

*Direction: Closeup* *June 2011 Sampling Event*

Photo 68 Installing a borehole in the process area.

*Direction: North* *June 2011 Sampling Event*

Photo 69 Installing a borehole in the process area.

*Direction: Northwest* *June 2011 Sampling Event*

Photo 70 Collecting a groundwater sample from a borehole in the process area.

*Direction: North* *June 2011 Sampling Event*

Photo 71 View of stained soil in the process area and monitoring well MW02 with the swale in the background.

*Direction: North* *June 2011 Sampling Event*

Photo 72 View of stained soil in the process area.

*Direction: North* *June 2011 Sampling Event*

Photo 73 View of process area and former location of hydraulic salvage equipment.

*Direction: South* *June 2011 Sampling Event*

Photo 74 View of process area, shop building, wellhouse, and former location of hydraulic salvage equipment.
*Direction: East* *June 2011 Sampling Event*

Photo 75 Interior of wellhouse near the process area with container of oily substance and stained flooring.
*Direction: Closeup* *June 2011 Sampling Event*

Photo 76 Metal pipes, valves, and drum by the wellhouse near the process area.
*Direction: South* *June 2011 Sampling Event*

Photo 77 Leaking drums and stained concrete near the shop building in the process area.
*Direction: Closeup* *June 2011 Sampling Event*

Photo 78 Damaged monitoring well MW04.

*Direction: Northeast* *April 2012 Sampling Event*

Photo 79 Closeup of damaged monitoring well MW04.

*Direction: Closeup* *April 2012 Sampling Event*

Photo 80 View of monitoring well MW04 with debris pile in the background.

*Direction: Northeast* *April 2012 Sampling Event*

Photo 81 Stained soil on the northern edge of the process area.

*Direction: West* *April 2012 Sampling Event*

Photo 82 Intact monitoring well MW03.

*Direction: Closeup* *April 2012 Sampling Event*

Photo 83 Monitoring well MW02 with damaged concrete base.

*Direction: Northwest* *April 2012 Sampling Event*

Photo 84 Closeup of damaged base at monitoring well MW02.

*Direction: Closeup* *April 2012 Sampling Event*

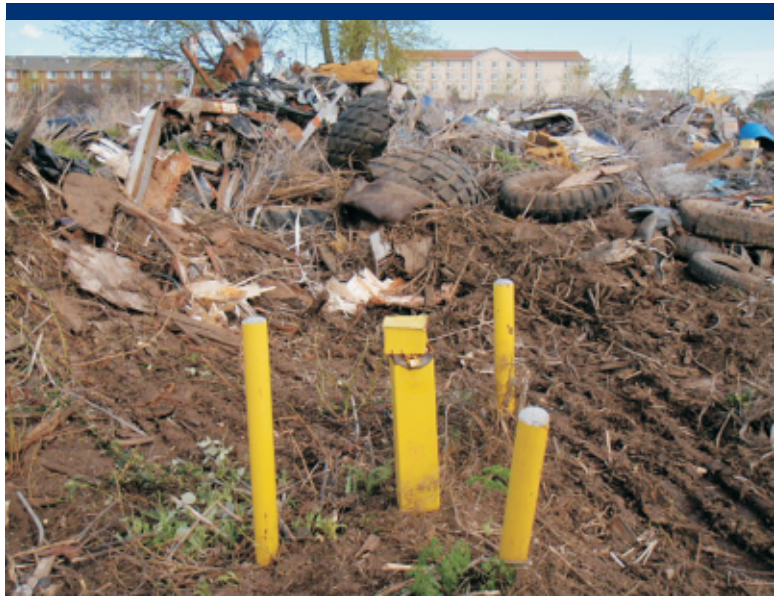

Photo 85 View of monitoring well MW04 cleared of debris and vegetation.

*Direction: North* *April 2012 Sampling Event*

Photo 86 View of damaged riser and padlock at monitoring well MW04.

*Direction: Closeup* *April 2012 Sampling Event*

Photo 87 The excavator clearing access to the swale near monitoring well MW02.

*Direction: East* *April 2012 Sampling Event*

Photo 88 The excavator clearing access to the swale near monitoring well MW02.

*Direction: Northwest* *April 2012 Sampling Event*

Photo 89 Exposed soil at the southern edge of swale for collection of SW03 surface soil sample.

*Direction: North* *April 2012 Sampling Event*


Photo 90 Sample SW03 in southern edge of swale.

*Direction: Closeup* *April 2012 Sampling Event*

Photo 91 Sample SW04 in eastern edge of swale.

*Direction: Northwest* *April 2012 Sampling Event*

Photo 92 View of access to sample SW04 in eastern edge of swale; monitoring well MW02 to the left.

*Direction: West* *April 2012 Sampling Event*

Photo 93 Stubblefield advertisement near Myra Road.

*Direction: South* *October 2010 Sampling Event*


Photo 94 Stubblefield Salvage & Recycling, LLC. "Building on the Past, Looking to the Future."

*Direction: Closeup* *October 2010 Sampling Event*

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# B Comprehensive Soil Data Tables

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**Table B-1 Comprehensive Analytical Data for Metals in Soil (Page 1 of 3)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-05-0702 | 09-05-0703 | 09-09-0908 | 09-09-0909 | 09-09-0912 | 09-09-0913 | 09-09-0915 | 09-09-0916 | 9090917 | 9090919 | 09-09-0920 | 09-09-0921 | 09-09-0924 | 09-09-0925 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 | SA07SB04 | SA07SB08 | SA04SB04 | SA04SB08 | SA04SS | SA01SB04 | SA01SB08 | SA01SS | SA03SB04 | SA03SB08 | SA06SB04 | SA06SB08 |
| Sample Depth | | | Surface | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | May-09 | May-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Aluminum | 77,000 | 990,000 | 23,900 | 38,800 | | | 17,000 | 7,700 | 16,000 | 16,000 | 10,000 | 15,000 | | | 13,000 | 20,000 |
| Antimony (Metallic) | 31 | 410 | 4.7 J | 4.7 UJ | | | 6.6 | 5.6 U | 21 | 6.1 U | 5.6 U | 16 | | | 6.4 U | 7.2 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | 5.5 UJ | 5.4 | | | 11 U | 11 U | 10 U | 12 U | 11 U | 10 U | | | 13 U | 14 U |
| Barium | 15,000 | 190,000 | 253 | 387 | | | 140 | 87 | 540 | 150 | 100 | 270 | | | 140 | 160 |
| Beryllium & Compounds | 160 | 2,000 | 0.32 | 0.33 | | | 0.55 U | 0.56 U | 0.51 U | 0.61 U | 0.56 U | 0.52 U | | | 0.64 U | 0.72 U |
| Cadmium (Diet) | 70 | 800 | 10.7 J | 16.5 J | | | 0.59 | 0.56 U | 14 | 1.9 | 0.62 | 5.6 | | | 0.98 | 2.3 |
| Calcium | NA | NA | 6,330 | 9,140 | | | 7,500 | 4,700 | 9,700 | 8,200 | 7,100 | 11,000 | | | 8,600 | 5,900 |
| Chromium (Total) | NA | NA | 41.6 | 71.6 | | | 13 | 6.7 | 37 | 19 | 11 | 33 | | | 13 | 22 |
| Chromium (VI) | 0.29 | 5.6 | | | | | | | | | | | | | | |
| Cobalt | 23 | 300 | 10.9 J | 15.7 J | | | 16 | 14 | 16 | 16 | 14 | 18 | | | 12 | 16 |
| Copper | 3,100 | 41,000 | 1,730 J | 2,420 J | | | 36 | 17 | 490 | 320 | 110 | 620 | | | 47 | 120 |
| Iron | 55,000 | 720,000 | 36,800 J | 49,500 J | | | 45,000 | 42,000 | 76,000 | 43,000 | 43,000 | 63,000 | | | 39,000 | 43,000 |
| Lead & Compounds | 400 | 800 | 1,140 | 1,250 | | | 52 J | 5.6 UJ | 830 J | 140 J | 63 J | 660 J | | | 600 | 180 |
| Magnesium | NA | NA | 3,280 J | 4,540 J | | | 2,900 | 1,900 | 3,200 | 2,800 | 2,500 | 4,700 | | | 4,000 | 3,200 |
| Manganese (Non-Diet) | 1,800 | 23,000 | 483 J | 613 J | | | 540 | 700 | 680 | 470 | 440 | 810 | | | 450 | 440 |
| Mercury (Elemental) | 10 | 43 | 1.33 J | 3.11 J | | | 0.27 U | 0.28 U | 0.58 | 0.3 U | 0.28 U | 0.26 U | | | 0.32 U | 0.36 U |
| Nickel (Soluble Salts) | 1,500 | 20,000 | 48.7 J | 86.1 J | | | 11 J | 6.2 J | 64 J | 17 J | 25 J | 54 J | | | 16 | 20 |
| Potassium | NA | NA | 1,920 | 1,370 | | | 1,800 | 750 | 2,500 | 2,000 | 1,200 | 2,100 | | | 2,800 | 1,900 |
| Selenium | 390 | 5,100 | 1.8 J | 1.5 J | | | 11 U | 11 U | 10 U | 12 U | 11 U | 10 U | | | 13 U | 14 U |
| Silver | 390 | 5,100 | 6.3 J | 2 UJ | | | 0.55 U | 0.56 U | 0.51 U | 0.61 U | 0.56 U | 0.52 U | | | 0.64 U | 0.72 U |
| Sodium | NA | NA | 282 J | 370 | | | 730 J | 490 J | 590 J | 730 J | 720 J | 700 J | | | 720 | 680 |
| Thallium (Soluble Salts) | 0.78 | 10 | 0.3 UJ | 0.30 UJ | | | 5.5 U | 5.6 U | 5.1 U | 6.1 U | 5.6 U | 5.2 U | | | 6.4 U | 7.2 U |
| Vanadium & Compounds | 390 | 5,200 | 80.6 | 74 | | | 140 | 140 | 120 | 140 | 140 | 140 | | | 160 | 140 |
| Zinc & Compounds | 23,000 | 310,000 | 5,300 J | 4,350 J | | | 950 | 69 | 3,100 | 380 J | 180 J | 1,300 | | | 350 | 930 |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-09-0927 | 09-09-0928 | 09-09-0929 | 09-09-0932 | 09-09-0933 | 09-09-0936 | 09-09-0937 | 09-09-0953 | 09-09-0954 | 09-09-0956 | 09-09-0957 | 09-10-1047 | 10-03-0001 | 10-03-0002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SA06SS | SA02SB04 | SA02SB08 | SA05SB04 | SA05SB08 | SH01SB04 | SH01SB08 | SW01SB08 | SW01SB04 | SW02SS | SW02SB02 | TP01 | MW04SB07 | MW03SB05 |
| Sample Depth | | | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 8' BGS | 4' BGS | Surface | 2' BGS | 6' BGS | 7' BGS | 5' BGS |
| Sample Collection Event | | | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Oct-09 | Mar-10 | Mar-10 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Aluminum | 77,000 | 990,000 | 27,000 | | | 32,000 | 16,000 | 12,000 | 11,000 | 10,000 | 9,000 | 13,000 J | 19,000 J | 12,000 | 8,700 | 3,900 |
| Antimony (Metallic) | 31 | 410 | 54 | | | 8.8 | 6.8 U | 8.8 | 7.8 U | 5.8 U | 11 | 7.8 U | 8.1 U | 7.5 | 6.8 U | 5.4 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | 10 U | | | 13 U | 14 U | 14 U | 16 U | 12 U | 11 U | 16 U | 16 U | 13 U | 14 U | 11 U |
| Barium | 15,000 | 190,000 | 490 | | | 140 | 120 | 120 | 92 | 91 | 120 | 100 | 130 | 300 J | 100 | 67 |
| Beryllium & Compounds | 160 | 2,000 | 0.52 U | | | 0.66 U | 0.68 U | 0.71 U | 0.78 U | 0.58 U | 0.56 U | 0.78 U | 0.81 U | 0.66 U | 0.68 U | 0.54 U |
| Cadmium (Diet) | 70 | 800 | 18 | | | 1.2 | 0.68 U | 0.71 U | 0.78 U | 0.58 U | 0.7 | 0.78 U | 0.81 U | 10 | 0.68 U | 0.54 U |
| Calcium | NA | NA | 13,000 | | | 7,600 | 5,900 | 5,000 | 2,700 | 4,000 | 4,600 | 4,700 | 5,400 | 7,800 | 4,400 | 3,200 |
| Chromium (Total) | NA | NA | 77 | | | 44 | 18 | 13 | 4.8 | 9.7 | 9.9 | 12 | 15 | 46 | 7.5 | 4.5 |
| Chromium (VI) | 0.29 | 5.6 | | | | | | | | | | | | | | |
| Cobalt | 23 | 300 | 21 | | | 13 | 19 | 7.2 | 3.4 | 12 | 13 | 8 | 14 | 22 | 15 | 6.0 |
| Copper | 3,100 | 41,000 | 1,600 | | | 780 | 41 | 260 | 20 | 18 | 28 | 33 | 28 | 300 | 16 | 11 |
| Iron | 55,000 | 720,000 | 76,000 | | | 40,000 | 57,000 | 23,000 | 9,200 | 35,000 | 42,000 | 29,000 J | 41,000 J | 48,000 | 64,000 | 54,000 |
| Lead & Compounds | 400 | 800 | 1,400 J | | | 120 | 40 | 21 | 7.8 U | 32 J | 51 J | 100 | 18 | 840 J | 9.4 | 36 |
| Magnesium | NA | NA | 4,300 | | | 4,100 | 3,800 | 2,900 | 870 | 2,300 | 2,200 | 2,800 | 3,500 | 3,300 | 2,100 | 1,000 |
| Manganese (Non-Diet) | 1,800 | 23,000 | 710 | | | 420 | 490 | 340 | 78 | 260 | 300 | 180 | 230 | 440 | 670 | 510 |
| Mercury (Elemental) | 10 | 43 | 2.1 | | | 0.33 U | 0.34 U | 0.36 U | 0.39 U | 0.29 U | 0.28 U | 0.39 U | 0.4 U | 0.33 U | 0.34 U | 0.27 U |
| Nickel (Soluble Salts) | 1,500 | 20,000 | 120 J | | | 22 | 11 | 7.8 | 3.9 | 7.5 J | 8.1 | 9.6 | 11 | 42 | 5.9 | 3.4 |
| Potassium | NA | NA | 2,300 | | | 2,100 | 1,600 | 2,000 | 640 | 1,100 | 1,100 | 1,600 J | 2,300 J | 2,600 | 1,000 | 460 |
| Selenium | 390 | 5,100 | 10 U | | | 13 U | 14 U | 14 U | 16 U | 12 U | 11 U | 16 U | 16 U | 13 U | 14 UJ | 11 UJ |
| Silver | 390 | 5,100 | 1.1 | | | 0.66 U | 0.68 U | 0.71 U | 0.78 U | 0.58 U | 1.2 | 0.78 U | 0.81 U | 0.66 U | 0.68 U | 0.54 U |
| Sodium | NA | NA | 890 J | | | 640 | 620 | 690 | 1,100 | 570 J | 460 | 530 | 480 | 590 | 240 | 170 |
| Thallium (Soluble Salts) | 0.78 | 10 | 5.2 U | | | 6.6 U | 6.8 U | 7.1 U | 7.8 U | 5.8 U | 5.6 U | 7.8 U | 8.1 U | 6.6 U | 6.8 U | 5.4 U |
| Vanadium & Compounds | 390 | 5,200 | 110 | | | 160 | 200 | 90 | 31 | 130 | 140 | 150 | 170 | 130 | 97 | 38 |
| Zinc & Compounds | 23,000 | 310,000 | 4,800 | | | 400 | 120 | 140 | 16 | 96 | 270 | 170 | 95 | 1,500 | 56 | 28 |

**Table B-1 Comprehensive Analytical Data for Metals in Soil (Page 2 of 3)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 10-03-0003 | 10-03-0004 | 10-03-0005 | 10-03-0006 | 10-03-0007 | 10-03-0008 | 10-03-0009 | 10-03-0010 | 10-03-0011 | 11-06-0006 | 11-06-0007 | 11-06-0008 | 11-06-0009 | 11-06-0010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW02SB05 | MW02SB07 | MW01SB03 | MW01SB06 | MW01SB12 | SB01SB05 | SB01SB14 | SB02SB04 | SB02SB06 | P201SB04 | P201SB08 | P201SB12 | P202SB04 | P202SB08 |
| Sample Depth | | | 5' BGS | 7' BGS | 3' BGS | 6' BGS | 12' BGS | 5' BGS | 14' BGS | 4' BGS | 6' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Aluminum | 77,000 | 990,000 | 9,700 | 12,000 | 7,500 | 10,000 | 9,500 | 8,600 | 11,000 | 8,600 | 12,000 | 11,000 | 16,000 | 13,000 | 12,000 | 13,000 |
| Antimony (Metallic) | 31 | 410 | 6.5 U | 9.3 U | 6.1 U | 6.7 U | 7.7 U | 6.6 U | 6.7 U | 7.3 U | 7.6 U | 6.1 U | 7 U | 7.9 U | 6.6 U | 7.3 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | 13 U | 19 U | 12 U | 13 U | 15 U | 13 U | 13 U | 15 U | 15 U | 12 U | 14 U | 16 U | 13 U | 15 U |
| Barium | 15,000 | 190,000 | 120 | 130 | 110 | 120 | 110 | 89 | 130 | 100 | 120 | 95 | 120 | 75 | 110 | 120 |
| Beryllium & Compounds | 160 | 2,000 | 0.65 U | 0.93 U | 0.61 U | 0.67 U | 0.77 U | 0.66 U | 0.67 U | 0.73 U | 0.76 U | 0.61 U | 0.7 U | 0.79 U | 0.66 U | 0.73 U |
| Cadmium (Diet) | 70 | 800 | 0.65 U | 0.93 U | 0.61 U | 0.67 U | 0.77 U | 0.66 U | 0.67 U | 0.73 U | 0.76 U | 0.61 U | 0.7 U | 0.79 U | 0.66 U | 0.73 U |
| Calcium | NA | NA | 5,200 | 4,700 | 8,800 | 8,100 | 3,000 | 3,500 | 4,900 | 5,000 | 5,400 | 15,000 | 5,100 | 2,900 | 5,500 | 5,100 |
| Chromium (Total) | NA | NA | 9.4 | 11 | 6.2 | 7.2 | 6.0 | 7.7 | 11 | 9.2 | 11 | 7.2 | 8.8 | 5.7 | 8.9 | 9.3 |
| Chromium (VI) | 0.29 | 5.6 | | | | | | | | | | | | | | |
| Cobalt | 23 | 300 | 10 | 9.1 | 9.4 | 12 | 4.6 | 8.6 | 15 | 10 | 15 | 14 | 21 | 3.4 | 13 | 19 |
| Copper | 3,100 | 41,000 | 730 | 39 | 16 | 17 | 12 | 13 | 17 | 21 | 21 | 11 | 11 | 15 | 12 | 12 |
| Iron | 55,000 | 720,000 | 47,000 | 57,000 | 46,000 | 56,000 | 18,000 | 51,000 | 72,000 | 67,000 | 76,000 | 44,000 | 54,000 | 12,000 | 37,000 | 53,000 |
| Lead & Compounds | 400 | 800 | 46 | 17 | 20 | 8.1 | 7.7 U | 6.6 U | 11 | 7.3 U | 7.7 | 12 | 7 U | 7.9 U | 14 | 7.3 U |
| Magnesium | NA | NA | 2,400 | 2,500 | 4,100 | 4,200 | 1,800 | 3,200 | 3,400 | 2,700 | 3,600 | 5,400 | 4,400 | 2,000 | 3,900 | 4,200 |
| Manganese (Non-Diet) | 1,800 | 23,000 | 660 | 330 | 610 | 590 | 150 | 300 | 560 | 390 | 620 | 550 | 440 | 80 | 380 | 460 |
| Mercury (Elemental) | 10 | 43 | 0.32 U | 0.46 U | 0.30 U | 0.33 U | 0.39 U | 0.33 U | 0.33 U | 0.36 U | 0.38 U | 0.3 U | 0.35 U | 0.4 U | 0.33 U | 0.37 U |
| Nickel (Soluble Salts) | 1,500 | 20,000 | 12 | 7.2 | 6.1 | 6.8 | 5.2 | 5.2 | 8.0 | 5.2 | 8.2 | 7.5 | 8.2 | 6.5 | 7.4 | 8.1 |
| Potassium | NA | NA | 1,900 | 1,300 | 2,800 | 1,900 | 900 | 1,100 | 1,100 | 1,300 | 1,300 | 2,800 | 1,600 | 1,200 | 2,400 | 1,800 |
| Selenium | 390 | 5,100 | 13 UJ | 19 UJ | 12 UJ | 13 UJ | 15 UJ | 13 UJ | 13 UJ | 15 UJ | 15 UJ | 12 U | 14 U | 16 U | 13 U | 15 U |
| Silver | 390 | 5,100 | 0.65 U | 0.93 U | 0.61 U | 0.67 U | 0.77 U | 0.66 U | 0.67 U | 0.73 U | 0.76 U | 0.61 U | 0.7 U | 0.79 U | 0.66 U | 0.73 U |
| Sodium | NA | NA | 280 | 260 | 250 | 450 | 640 | 940 | 260 | 270 | 360 | 910 | 1,500 | 1,100 | 610 | 770 |
| Thallium (Soluble Salts) | 0.78 | 10 | 6.5 U | 9.3 U | 6.1 U | 6.7 U | 7.7 U | 6.6 U | 6.7 U | 7.3 U | 7.6 U | 3 U | 3.5 U | 4 U | 3.3 U | 3.7 U |
| Vanadium & Compounds | 390 | 5,200 | 68 | 140 | 57 | 90 | 30 | 81 | 63 | 69 | 97 | 230 | 140 | 38 | 140 | 140 |
| Zinc & Compounds | 23,000 | 310,000 | 110 | 91 | 66 | 57 | 24 | 47 | 57 | 100 | 80 | 65 | 61 | 28 | 59 | 58 |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0011 | 11-06-0012 | 11-06-0013 | 11-06-0014 | 11-06-0015 | 11-06-0016 | 11-06-0017 | 11-06-0018 | 11-06-0019 | 11-06-0022 | 11-06-0023 | 11-06-0024 | 11-06-0025 | 11-06-0026 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P202SB12 | P203SB04 | P204SB04 | P204SB08 | P204SB12 | P205SB04 | P205SB08 | P206SB04 | P206SB08 | P207SB04 | P208SB04 | P209SB04 | P210SB04 | P211SB04 |
| Sample Depth | | | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Aluminum | 77,000 | 990,000 | 14,000 | 11,000 | 9,800 | 11,000 | 16,000 | 9,700 | 16,000 | 11,000 | 17,000 | 14,000 | 12,000 | | | 11,000 |
| Antimony (Metallic) | 31 | 410 | 7.5 U | 6.3 U | 6 U | 6.6 U | 7.4 U | 6.2 U | 8.1 U | 25 | 7.1 U | 6.5 U | 6.1 U | | | 6.2 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | 15 U | 13 U | 12 U | 13 U | 15 U | 12 U | 16 U | 13 U | 14 U | 13 U | 12 U | | | 12 U |
| Barium | 15,000 | 190,000 | 130 | 200 | 120 | 110 | 110 | 160 | 150 | 190 | 140 | 120 | 130 | | | 120 |
| Beryllium & Compounds | 160 | 2,000 | 0.75 U | 0.63 U | 0.6 U | 0.66 U | 0.74 U | 0.62 U | 0.81 U | 0.64 U | 0.71 U | 0.65 U | 0.61 U | | | 0.62 U |
| Cadmium (Diet) | 70 | 800 | 0.75 U | 3.6 | 0.6 U | 0.66 U | 0.74 U | 2.4 | 0.81 U | 1.2 | 0.71 U | 0.65 U | 0.72 | | | 0.62 U |
| Calcium | NA | NA | 4,500 | 12,000 | 10,000 | 6,100 | 5,500 | 9,500 | 6,600 | 8,800 | 6,600 | 5,300 | 5,300 | | | 5,800 |
| Chromium (Total) | NA | NA | 9.1 | 18 | 8.4 | 8.6 | 12 | 11 | 16 | 11 | 12 | 12 | 12 | | | 12 |
| Chromium (VI) | 0.29 | 5.6 | | | | | | | | | | | | | | |
| Cobalt | 23 | 300 | 7.6 | 15 | 13 | 15 | 17 | 14 | 9.9 | 13 | 17 | 15 | 15 | | | 15 |
| Copper | 3,100 | 41,000 | 14 | 280 | 15 | 12 | 11 | 62 | 23 | 83 | 16 | 20 | 22 | | | 18 |
| Iron | 55,000 | 720,000 | 26,000 | 45,000 | 37,000 | 47,000 | 55,000 | 43,000 | 29,000 | 39,000 | 46,000 | 34,000 | 38,000 | | | 38,000 |
| Lead & Compounds | 400 | 800 | 7.5 U | 220 | 76 | 6.6 U | 7.4 U | 110 | 9.9 | 4,400 | 9.6 | 26 | 310 | | | 45 |
| Magnesium | NA | NA | 2,900 | 4,900 | 5,300 | 4,600 | 3,200 | 4,200 | 3,100 | 4,000 | 3,700 | 2,900 | 2,700 | | | 2,600 |
| Manganese (Non-Diet) | 1,800 | 23,000 | 150 | 500 | 560 | 470 | 410 | 480 | 250 | 460 | 610 | 560 | 600 | | | 610 |
| Mercury (Elemental) | 10 | 43 | 0.37 U | 1.5 | 0.3 U | 0.33 U | 0.37 U | 0.31 U | 0.41 U | 0.32 U | 0.36 U | 0.33 U | 0.31 U | | | 0.31 U |
| Nickel (Soluble Salts) | 1,500 | 20,000 | 6.3 | 21 | 7.2 | 7.3 | 7.9 | 69 | 8.7 | 11 | 8.4 | 8.9 | 13 | | | 8.3 |
| Potassium | NA | NA | 1,200 | 2,900 | 3,800 | 2,700 | 1,100 | 2,800 | 1,600 | 3,000 | 1,700 | 1,900 | 1,700 | | | 1,100 |
| Selenium | 390 | 5,100 | 15 U | 13 U | 12 U | 13 U | 15 U | 12 U | 16 U | 13 U | 14 U | 13 U | 12 U | | | 12 U |
| Silver | 390 | 5,100 | 0.75 U | 0.63 U | 0.6 U | 0.66 U | 0.74 U | 0.62 U | 0.81 U | 0.64 U | 0.71 U | 0.65 U | 0.61 U | | | 0.62 U |
| Sodium | NA | NA | 1,100 | 770 | 570 | 690 | 1,300 | 630 | 490 | 550 | 470 | 340 | 420 | | | 350 |
| Thallium (Soluble Salts) | 0.78 | 10 | 3.7 U | 3.2 U | 3 U | 3.3 U | 3.7 U | 3.1 U | 4.1 U | 3.2 U | 3.6 U | 3.3 U | 3.1 U | | | 3.1 U |
| Vanadium & Compounds | 390 | 5,200 | 130 | 160 | 150 | 190 | 270 | 160 | 160 | 160 | 200 | 120 | 150 | | | 150 |
| Zinc & Compounds | 23,000 | 310,000 | 43 | 1,200 | 150 | 63 | 95 | 1,200 | 100 | 530 | 78 | 95 | 140 | | | 88 |

**Table B-1 Comprehensive Analytical Data for Metals in Soil (Page 3 of 3)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0027 | 11-06-0028 | 11-06-0029 | 11-06-0030 | 11-06-0031 | 11-06-0032 | 11-06-0033 | 11-06-0034 | 11-06-0035 | 11-06-0036 | 11-06-0037 | 11-06-0038 | 11-06-0039 | 11-06-0040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P212SB04 | P213SB04 | P214SB04 | P214SB08 | P215SB04 | P215SB08 | P215SB12 | P216SB04 | P216SB08 | P216SB12 | P217SB04 | P217SB08 | P218SB04 | P218SB08 |
| Sample Depth | | | 4' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Aluminum | 77,000 | 990,000 | | 12,000 | 12,000 | 12,000 | 12,000 | 11,000 | 16,000 | 12,000 | 12,000 | 17,000 | 12,000 | 13,000 | 11,000 | 14,000 |
| Antimony (Metallic) | 31 | 410 | | 6.6 U | 6.6 U | 7.1 U | 7.4 U | 7.6 U | 7.5 U | 7.8 U | 7.4 U | 7.4 U | 7 U | 7 U | 7.8 U | 6.8 U |
| Arsenic (Inorganic) | 0.39 | 1.6 | | 13 U | 13 U | 14 U | 15 U | 15 U | 15 U | 16 U | 15 U | 15 U | 14 U | 14 U | 16 U | 14 U |
| Barium | 15,000 | 190,000 | | 130 | 120 | 110 | 60 | 110 | 120 | 100 | 150 | 110 | 100 | 100 | 70 | 120 |
| Beryllium & Compounds | 160 | 2,000 | | 0.66 U | 0.66 U | 0.71 U | 0.74 U | 0.76 U | 0.75 U | 0.78 U | 0.74 U | 0.74 U | 0.7 U | 0.7 U | 0.78 U | 0.68 U |
| Cadmium (Diet) | 70 | 800 | | 0.66 U | 0.66 U | 0.71 U | 0.74 U | 0.76 U | 0.75 U | 0.78 U | 0.74 U | 0.74 U | 0.7 U | 0.7 U | 0.78 U | 0.68 U |
| Calcium | NA | NA | | 5,900 | 7,200 | 4,100 | 2,800 | 1,800 | 5,600 | 2,600 | 3,200 | 5,600 | 4,000 | 4,800 | 2,400 | 5,100 |
| Chromium (Total) | NA | NA | | 14 | 9.6 | 9.9 | 7.2 | 4.3 | 13 | 10 | 9.8 | 12 | 9.7 | 13 | 6.5 | 13 |
| Chromium (VI) | 0.29 | 5.6 | | | | | | | | | | | | | | |
| Cobalt | 23 | 300 | | 17 | 14 | 13 | 4.5 | 5 | 20 | 10 | 16 | 21 | 11 | 21 | 2.8 | 24 |
| Copper | 3,100 | 41,000 | | 46 | 14 | 15 | 12 | 9.3 | 23 | 18 | 17 | 21 | 17 | 23 | 10 | 22 |
| Iron | 55,000 | 720,000 | | 43,000 | 42,000 | 36,000 | 14,000 | 11,000 | 61,000 | 26,000 | 38,000 | 55,000 | 30,000 | 86,000 | 11,000 | 59,000 |
| Lead & Compounds | 400 | 800 | | 30 | 9.8 | 15 | 7.4 U | 7.6 U | 7.5 U | 7.8 U | 7.4 U | 7.4 U | 7 U | 7 U | 7.8 U | 6.8 U |
| Magnesium | NA | NA | | 3,000 | 4,200 | 2,400 | 2,100 | 980 | 4,100 | 2,600 | 3,100 | 3,700 | 2,900 | 4,100 | 1,800 | 4,200 |
| Manganese (Non-Diet) | 1,800 | 23,000 | | 690 | 510 | 260 | 120 | 89 | 520 | 180 | 420 | 510 | 200 | 760 | 73 | 920 |
| Mercury (Elemental) | 10 | 43 | | 0.33 U | 0.33 U | 0.36 U | 0.37 U | 0.38 U | 0.37 U | 0.39 U | 0.37 U | 0.37 U | 0.35 U | 0.35 U | 0.39 U | 0.34 U |
| Nickel (Soluble Salts) | 1,500 | 20,000 | | 50 | 9.2 | 6.6 | 6 | 6.3 | 9 | 8.4 | 7.9 | 9.2 | 7.7 | 9.8 | 5.2 | 10 |
| Potassium | NA | NA | | 1,500 | 2,600 | 1,300 | 1,100 | 530 | 1,400 | 1,300 | 1,100 | 1,300 | 1,200 | 1,200 | 1,100 | 1,900 |
| Selenium | 390 | 5,100 | | 13 U | 13 U | 14 U | 15 U | 15 U | 15 U | 16 U | 15 U | 15 U | 14 U | 14 U | 16 U | 14 U |
| Silver | 390 | 5,100 | | 0.66 U | 0.66 U | 0.71 U | 0.74 U | 0.76 U | 0.75 U | 0.78 U | 0.74 U | 0.74 U | 0.7 U | 0.7 U | 0.78 U | 0.68 U |
| Sodium | NA | NA | | 380 | 390 | 360 | 1,200 | 760 | 670 | 2,500 | 580 | 630 | 950 | 790 | 480 | 570 |
| Thallium (Soluble Salts) | 0.78 | 10 | | 3.3 U | 3.3 U | 3.6 U | 3.7 U | 3.8 U | 3.7 U | 3.9 U | 3.7 U | 3.7 U | 3.5 U | 3.5 U | 3.9 U | 3.4 U |
| Vanadium & Compounds | 390 | 5,200 | | 170 | 160 | 180 | 46 | 31 | 210 | 120 | 140 | 200 | 150 | 290 | 37 | 240 |
| Zinc & Compounds | 23,000 | 310,000 | | 86 | 86 | 110 | 36 | 12 | 93 | 39 | 38 | 94 | 54 | 82 | 25 | 89 |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0041 | 11-06-0042 | 11-06-0043 | 11-06-0044 | 11-06-0047 | 11-06-0048 | 11-06-0049 | 11-06-0050 | 11-06-0051 | 11-06-0057 | 11-06-0059 | 11-06-0060 | 12-04-0001 | 12-04-0002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P218SB12 | P219SB04 | P219SB08 | P219SB12 | P220SB04 | P221SB04 | P221SB08 | P222SB04 | P222SB08 | P223SB04 | P224SB04 | P225SB04 | SW03SS | SW04SS |
| Sample Depth | | | 12' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | Surface | Surface |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Apr-12 | Apr-12 |
| **Metals (mg/kg)** | | | | | | | | | | | | | | | | |
| Aluminum | 77,000 | 990,000 | 13,000 | 21,000 | 12,000 | 15,000 | 16,000 | 13,000 | 16,000 | 13,000 | 7,100 | 14,000 | | | | |
| Antimony (Metallic) | 31 | 410 | 7 U | 7 U | 7.3 U | 7.9 U | 7.6 U | 7.1 U | 7.8 U | 7.7 U | 8 U | 5.9 U | | | | |
| Arsenic (Inorganic) | 0.39 | 1.6 | 14 U | 14 U | 15 U | 16 U | 15 U | 14 U | 16 U | 15 U | 16 U | 12 U | | | 2.25 | 0.822 |
| Barium | 15,000 | 190,000 | 90 | 100 | 130 | 110 | 130 | 120 | 130 | 68 | 73 | 140 | | | 332 | 164 |
| Beryllium & Compounds | 160 | 2,000 | 0.7 U | 0.7 U | 0.73 U | 0.79 U | 0.76 U | 0.71 U | 0.78 U | 0.77 U | 0.8 U | 0.59 U | | | | |
| Cadmium (Diet) | 70 | 800 | 0.7 U | 0.7 U | 0.73 U | 0.79 U | 0.76 U | 0.71 U | 0.78 U | 0.77 U | 0.8 U | 1.3 | | | 4.85 | 2.9 |
| Calcium | NA | NA | 5,100 | 3,100 | 2,900 | 5,200 | 5,600 | 5,100 | 4,700 | 2,900 | 2,700 | 7,600 | | | | |
| Chromium (Total) | NA | NA | 10 | 8.1 | 7.3 | 11 | 11 | 11 | 12 | 4.6 | 8.4 | 12 | | | 18.8 | 11.6 |
| Chromium (VI) | 0.29 | 5.6 | | | | | | | | | | | 1.1 U | 1.3 U | | |
| Cobalt | 23 | 300 | 18 | 9.6 | 12 | 23 | 15 | 16 | 13 | 2.7 | 10 | 16 | | | | |
| Copper | 3,100 | 41,000 | 20 | 15 | 14 | 21 | 25 | 19 | 21 | 9 | 14 | 24 | | | 488 JK | 126 JK |
| Iron | 55,000 | 720,000 | 49,000 | 23,000 | 24,000 | 57,000 | 36,000 | 42,000 | 41,000 | 9,200 | 29,000 | 41,000 | | | | |
| Lead & Compounds | 400 | 800 | 7 U | 7 U | 7.3 U | 7.9 U | 31 | 30 | 8.6 | 7.7 U | 8 U | 210 | | | 251 | 142 |
| Magnesium | NA | NA | 3,200 | 2,600 | 2,000 | 3,800 | 2,400 | 3,000 | 2,900 | 1,400 | 2,100 | 3,000 | | | | |
| Manganese (Non-Diet) | 1,800 | 23,000 | 600 | 240 | 290 | 600 | 440 | 390 | 270 | 53 | 140 | 540 | | | | |
| Mercury (Elemental) | 10 | 43 | 0.35 U | 0.35 U | 0.37 U | 0.39 U | 0.38 U | 0.35 U | 0.39 U | 0.39 U | 0.4 U | 0.29 U | | | 0.173 JK | 0.244 JK |
| Nickel (Soluble Salts) | 1,500 | 20,000 | 7.3 | 6.3 | 6.1 | 7.7 | 9 | 7.9 | 6.7 | 4 | 5.9 | 8.7 | | | 33.9 JK | 12.5 JK |
| Potassium | NA | NA | 1,400 | 1,400 | 920 | 1,300 | 1,600 | 1,600 | 1,400 | 880 | 1,100 | 2,100 | | | | |
| Selenium | 390 | 5,100 | 14 U | 14 U | 15 U | 16 U | 15 U | 14 U | 16 U | 15 U | 16 U | 12 U | | | 3.22 | 2.94 |
| Silver | 390 | 5,100 | 0.7 U | 0.7 U | 0.73 U | 0.79 U | 0.76 U | 0.71 U | 0.78 U | 0.77 U | 0.8 U | 0.59 U | | | 0.572 | 0.352 |
| Sodium | NA | NA | 350 | 1,700 | 900 | 570 | 250 | 420 | 420 | 1,200 | 650 | 360 | | | | |
| Thallium (Soluble Salts) | 0.78 | 10 | 3.5 U | 3.5 U | 3.7 U | 3.9 U | 3.8 U | 3.5 U | 3.9 U | 3.9 U | 4 U | 2.9 U | | | | |
| Vanadium & Compounds | 390 | 5,200 | 210 | 100 | 88 | 230 | 170 | 210 | 230 | 27 | 150 | 170 | | | | |
| Zinc & Compounds | 23,000 | 310,000 | 89 | 45 | 33 | 87 | 150 | 99 | 70 | 21 | 36 | 630 | | | 2,840 JK | 551 JK |

**Table B-2 Comprehensive Analytical Data for PCBs in Soil (Page 1 of 2)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-05-0702 | 09-05-0703 | 09-09-0908 | 09-09-0909 | 09-09-0912 | 09-09-0913 | 09-09-0915 | 09-09-0916 | 9090917 | 9090919 | 09-09-0920 | 09-09-0921 | 09-09-0924 | 09-09-0925 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 | SA07SB04 | SA07SB08 | SA04SB04 | SA04SB08 | SA04SS | SA01SB04 | SA01SB08 | SA01SS | SA03SB04 | SA03SB08 | SA06SB04 | SA06SB08 |
| Sample Depth | | | Surface | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | May-09 | May-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1016 | 3,900 | 21,000 | 200 UJ | 210 UJ | 6,700 U | 1,400 U | 55 U | 56 U | 510 U | 61 U | 56 U | 52 U | 63 U | 59 U | 64 U | 360 U |
| Aroclor-1221 | 140 | 540 | 200 UJ | 210 U | 6,700 U | 1,400 U | 55 U | 56 U | 510 U | 61 U | 56 U | 52 U | 63 U | 59 U | 64 U | 360 U |
| Aroclor-1232 | 140 | 540 | 200 UJ | 210 U | 6,700 U | 1,400 U | 55 U | 56 U | 510 U | 61 U | 56 U | 52 U | 63 U | 59 U | 64 U | 360 U |
| Aroclor-1242 | 220 | 740 | 200 UJ | 210 U | **35,000** | **18,000** | 55 U | 56 U | **710** | 61 U | 56 U | **300** | **280** | **420** | **270** | 360 U |
| Aroclor-1248 | 220 | 740 | **16,000 J** | **19,000 J** | 6,700 U | 1,400 U | 55 U | 56 U | 510 U | 61 U | 56 U | 52 U | 63 U | 59 U | 64 U | 360 U |
| Aroclor-1254 | 220 | 740 | **5,700 J** | **6,100 J** | 6,700 U | 1,400 U | 55 U | 56 U | **4,100** | 61 U | 56 U | **840** | **780** | **490** | **700** | **2,300** |
| Aroclor-1260 | 220 | 740 | **2,300 J** | 210 U | 6,700 U | 1,400 U | 55 U | 56 U | 510 U | **110** | 56 U | **450** | **740** | **180** | **200 J** | **710** |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-09-0927 | 09-09-0928 | 09-09-0929 | 09-09-0932 | 09-09-0933 | 09-09-0936 | 09-09-0937 | 09-09-0953 | 09-09-0954 | 09-09-0956 | 09-09-0957 | 09-10-1047 | 10-03-0001 | 10-03-0002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SA06SS | SA02SB04 | SA02SB08 | SA05SB04 | SA05SB08 | SH01SB04 | SH01SB08 | SW01SB08 | SW01SB04 | SW02SS | SW02SB02 | TP01 | MW04SB07 | MW03SB05 |
| Sample Depth | | | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 8' BGS | 4' BGS | Surface | 2' BGS | 6' BGS | 7' BGS | 5' BGS |
| Sample Collection Event | | | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Oct-09 | Mar-10 | Mar-10 |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1016 | 3,900 | 21,000 | 5,200 U | 61 U | 65 U | 66 U | 68 U | 710 U | 78 U | 58 U | 560 U | 78 U | 81 U | 660 U | 68 U | 54 U |
| Aroclor-1221 | 140 | 540 | 5,200 U | 61 U | 65 U | 66 U | 68 U | 710 U | 78 U | 58 U | 560 U | 78 U | 81 U | 660 U | 68 U | 54 U |
| Aroclor-1232 | 140 | 540 | 5,200 U | 61 U | 65 U | 66 U | 68 U | 710 U | 78 U | 58 U | 560 U | 78 U | 81 U | 660 U | 68 U | 54 U |
| Aroclor-1242 | 220 | 740 | **10,000** | **62** | 65 U | **75 J** | **160** | **4,500** | **540** | 58 U | 560 U | 78 U | 81 U | **4,000** | 68 U | 54 U |
| Aroclor-1248 | 220 | 740 | 5,200 U | 61 U | 65 U | 66 U | 68 U | 710 U | 78 U | 58 U | 560 U | 78 U | 81 U | 660 U | 68 U | 54 U |
| Aroclor-1254 | 220 | 740 | **41,000** | **180** | 65 U | **160** | 68 U | 710 U | 78 U | 58 U | 560 U | 78 U | 81 U | **2,600** | 68 U | 54 U |
| Aroclor-1260 | 220 | 740 | 5,200 U | **200** | 65 U | **85** | **150** | 710 U | 78 U | 58 U | 560 U | **120 J** | 81 U | 660 U | 68 U | 54 U |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 10-03-0003 | 10-03-0004 | 10-03-0005 | 10-03-0006 | 10-03-0007 | 10-03-0008 | 10-03-0009 | 10-03-0010 | 10-03-0011 | 11-06-0006 | 11-06-0007 | 11-06-0008 | 11-06-0009 | 11-06-0010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW02SB05 | MW02SB07 | MW01SB03 | MW01SB06 | MW01SB12 | SB01SB05 | SB01SB14 | SB02SB04 | SB02SB06 | P201SB04 | P201SB08 | P201SB12 | P202SB04 | P202SB08 |
| Sample Depth | | | 5' BGS | 7' BGS | 3' BGS | 6' BGS | 12' BGS | 5' BGS | 14' BGS | 4' BGS | 6' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1016 | 3,900 | 21,000 | 65 U | 93 U | 61 U | 67 U | 77 U | 67 U | 67 U | 72 U | 76 U | 61 U | 70 U | 79 U | 66 U | 73 U |
| Aroclor-1221 | 140 | 540 | 65 U | 93 U | 61 U | 67 U | 77 U | 67 U | 67 U | 72 U | 76 U | 61 U | 70 U | 79 U | 66 U | 73 U |
| Aroclor-1232 | 140 | 540 | 65 U | 93 U | 61 U | 67 U | 77 U | 67 U | 67 U | 72 U | 76 U | 61 U | 70 U | 79 U | 66 U | 73 U |
| Aroclor-1242 | 220 | 740 | 65 U | 93 U | 61 U | 67 U | 77 U | 67 U | 67 U | **220** | 76 U | 61 U | 70 U | 79 U | 66 U | 73 U |
| Aroclor-1248 | 220 | 740 | 65 U | 93 U | 61 U | 67 U | 77 U | 67 U | 67 U | 72 U | 76 U | 61 U | 70 U | 79 U | 66 U | 73 U |
| Aroclor-1254 | 220 | 740 | 65 U | 93 U | 61 U | 67 U | 77 U | 67 U | 67 U | 72 U | 76 U | 61 U | 70 U | 79 U | 66 U | 73 U |
| Aroclor-1260 | 220 | 740 | 65 U | 93 U | 61 U | 67 U | 77 U | 67 U | 67 U | 72 U | 76 U | 61 U | 70 U | 79 U | 66 U | 73 U |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0011 | 11-06-0012 | 11-06-0013 | 11-06-0014 | 11-06-0015 | 11-06-0016 | 11-06-0017 | 11-06-0018 | 11-06-0019 | 11-06-0022 | 11-06-0023 | 11-06-0024 | 11-06-0025 | 11-06-0026 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P202SB12 | P203SB04 | P204SB04 | P204SB08 | P204SB12 | P205SB04 | P205SB08 | P206SB04 | P206SB08 | P207SB04 | P208SB04 | P209SB04 | P210SB04 | P211SB04 |
| Sample Depth | | | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1016 | 3,900 | 21,000 | 75 U | 6,200 U | 60 U | 66 U | 74 U | 31 U | 81 U | 64 U | 71 U | 65 U | 61 U | 56 U | 62 U | 62 U |
| Aroclor-1221 | 140 | 540 | 75 U | 6,300 U | 60 U | 66 U | 74 U | 31 U | 81 U | 64 U | 71 U | 65 U | 61 U | 58 U | 62 U | 62 U |
| Aroclor-1232 | 140 | 540 | 75 U | 6,300 U | 60 U | 66 U | 74 U | 31 U | 81 U | 64 U | 71 U | 65 U | 61 U | 58 U | 62 U | 62 U |
| Aroclor-1242 | 220 | 740 | 75 U | **38,000** | 60 U | 66 U | 74 U | 31 U | 81 U | 64 U | 71 U | 65 U | 61 U | 58 U | 62 U | 62 U |
| Aroclor-1248 | 220 | 740 | 75 U | 6,300 U | 60 U | 66 U | 74 U | 31 U | 81 U | 64 U | 71 U | 65 U | 61 U | 58 U | 62 U | 62 U |
| Aroclor-1254 | 220 | 740 | 75 U | 6,300 U | 60 U | 66 U | 74 U | 31 U | 81 U | 64 U | 71 U | 65 U | 61 U | 29 U | 62 U | 62 U |
| Aroclor-1260 | 220 | 740 | 75 U | 6,300 U | 60 U | 66 U | 74 U | 31 U | 81 U | 64 U | 71 U | 65 U | 61 U | **96 JK** | 62 U | 62 U |

**Table B-2 Comprehensive Analytical Data for PCBs in Soil (Page 2 of 2)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0027 | 11-06-0028 | 11-06-0029 | 11-06-0030 | 11-06-0031 | 11-06-0032 | 11-06-0033 | 11-06-0034 | 11-06-0035 | 11-06-0036 | 11-06-0037 | 11-06-0038 | 11-06-0039 | 11-06-0040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P212SB04 | P213SB04 | P214SB04 | P214SB08 | P215SB04 | P215SB08 | P215SB12 | P216SB04 | P216SB08 | P216SB12 | P217SB04 | P217SB08 | P218SB04 | P218SB08 |
| Sample Depth | | | 4' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1016 | 3,900 | 21,000 | 61 U | 66 U | 66 U | 71 U | 74 U | 76 U | 75 U | 78 U | 74 U | 74 U | 70 U | 70 U | 78 U | 68 U |
| Aroclor-1221 | 140 | 540 | 61 U | 66 U | 66 U | 71 U | 74 U | 76 U | 75 U | 78 U | 74 U | 74 U | 70 U | 70 U | 78 U | 68 U |
| Aroclor-1232 | 140 | 540 | 61 U | 66 U | 66 U | 71 U | 74 U | 76 U | 75 U | 78 U | 74 U | 74 U | 70 U | 70 U | 78 U | 68 U |
| Aroclor-1242 | 220 | 740 | 61 U | 66 U | **120** | **85 JK** | 74 U | 76 U | 75 U | 78 U | **74** | **99** | 70 U | 70 U | 78 U | 68 U |
| Aroclor-1248 | 220 | 740 | 61 U | 66 U | 66 U | 71 U | 74 U | 76 U | 75 U | 78 U | 74 U | 74 U | 70 U | 70 U | 78 U | 68 U |
| Aroclor-1254 | 220 | 740 | 61 U | 66 U | **180** | 71 U | 74 U | 76 U | 75 U | 78 U | 74 U | 74 U | 70 U | 70 U | 78 U | 68 U |
| Aroclor-1260 | 220 | 740 | 61 U | 66 U | 0.066 U | 71 U | 74 U | 76 U | 75 U | 78 U | 74 U | 74 U | 70 U | 70 U | 78 U | 68 U |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0041 | 11-06-0042 | 11-06-0043 | 11-06-0044 | 11-06-0047 | 11-06-0048 | 11-06-0049 | 11-06-0050 | 11-06-0051 | 11-06-0057 | 11-06-0059 | 11-06-0060 | 12-04-0001 | 12-04-0002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P218SB12 | P219SB04 | P219SB08 | P219SB12 | P220SB04 | P221SB04 | P221SB08 | P222SB04 | P222SB08 | P223SB04 | P224SB04 | P225SB04 | SW03SS | SW04SS |
| Sample Depth | | | 12' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | Surface | Surface |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Apr-12 | Apr-12 |
| **PCBs (µg/kg)** | | | | | | | | | | | | | | | | |
| Aroclor-1016 | 3,900 | 21,000 | 70 U | 70 U | 73 U | 79 U | 76 U | 71 U | 78 U | 78 U | 80 U | 59 U | | | 4.46 U | 4.21 U |
| Aroclor-1221 | 140 | 540 | 70 U | 70 U | 73 U | 79 U | 76 U | 71 U | 78 U | 78 U | 80 U | 59 U | | | 4.46 U | 4.21 U |
| Aroclor-1232 | 140 | 540 | 70 U | 70 U | 73 U | 79 U | 76 U | 71 U | 78 U | 78 U | 80 U | 59 U | | | 4.46 U | 4.21 U |
| Aroclor-1242 | 220 | 740 | 70 U | 70 U | 73 U | 79 U | 76 U | **290** | **1,500** | 78 U | 80 U | 59 U | | | 4.46 U | 4.21 U |
| Aroclor-1248 | 220 | 740 | 70 U | 70 U | 73 U | 79 U | 76 U | 71 U | 78 U | 78 U | 80 U | 59 U | | | **127** | **70.2** |
| Aroclor-1254 | 220 | 740 | 70 U | 70 U | 73 U | 79 U | 76 U | **140 JK** | **210** | 78 U | 80 U | 59 U | | | **152** | **112** |
| Aroclor-1260 | 220 | 740 | 70 U | 70 U | 73 U | 79 U | **1,100 JK** | 71 U | 78 U | 78 U | 80 U | 59 U | | | **151** | **121 JK** |

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**Table B-3 Comprehensive Analytical Data for TPH in Soil (Page 1 of 1)**

| EPA Sample ID | MTCA - Unrestricted Soil | MTCA - Industrial Soil | 09-05-0702 | 09-05-0703 | 09-09-0908 | 09-09-0909 | 09-09-0912 | 09-09-0913 | 09-09-0915 | 09-09-0916 | 9090917 | 9090919 | 09-09-0920 | 09-09-0921 | 09-09-0924 | 09-09-0925 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 | SA07SB04 | SA07SB08 | SA04SB04 | SA04SB08 | SA04SS | SA01SB04 | SA01SB08 | SA01SS | SA03SB04 | SA03SB08 | SA06SB04 | SA06SB08 |
| Sample Depth | | | Surface | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | May-09 | May-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 | 2,000 | 20,000 J | 43,000 J | | | 28 U | 28 U | 93 U | 31 U | 28 U | | | | 130 U | 570 U |
| Oil Range Organics | 2,000 | 2,000 | 110,000 J | 99,000 J | | | 55 U | 56 U | **700** | **91** | **62** | | | | **1,400** | 3,400 |

| EPA Sample ID | MTCA - Unrestricted Soil | MTCA - Industrial Soil | 09-09-0927 | 09-09-0928 | 09-09-0929 | 09-09-0932 | 09-09-0933 | 09-09-0936 | 09-09-0937 | 09-09-0953 | 09-09-0954 | 09-09-0956 | 09-09-0957 | 09-10-1047 | 10-03-0001 | 10-03-0002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SA06SS | SA02SB04 | SA02SB08 | SA05SB04 | SA05SB08 | SH01SB04 | SH01SB08 | SW01SB08 | SW01SB04 | SW02SS | SW02SB02 | TP01 | MW04SB07 | MW03SB05 |
| Sample Depth | | | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 8' BGS | 4' BGS | Surface | 2' BGS | 6' BGS | 7' BGS | 5' BGS |
| Sample Collection Event | | | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Oct-09 | Mar-10 | Mar-10 |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 | 2,000 | 11,000 U | | | 2,200 U | 2,200 U | 27,000 | 2,600 | 29 U | **33** | 39 U | 40 U | 12,000 J | | |
| Oil Range Organics | 2,000 | 2,000 | 100,000 | | | 35,000 | 29,000 | 46,000 | 4,400 | 58 U | **140** | **210** | **110** | 18,000 J | | |

| EPA Sample ID | MTCA - Unrestricted Soil | MTCA - Industrial Soil | 10-03-0003 | 10-03-0004 | 10-03-0005 | 10-03-0006 | 10-03-0007 | 10-03-0008 | 10-03-0009 | 10-03-0010 | 10-03-0011 | 11-06-0006 | 11-06-0007 | 11-06-0008 | 11-06-0009 | 11-06-0010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW02SB05 | MW02SB07 | MW01SB03 | MW01SB06 | MW01SB12 | SB01SB05 | SB01SB14 | SB02SB04 | SB02SB06 | P201SB04 | P201SB08 | P201SB12 | P202SB04 | P202SB08 |
| Sample Depth | | | 5' BGS | 7' BGS | 3' BGS | 6' BGS | 12' BGS | 5' BGS | 14' BGS | 4' BGS | 6' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 | 2,000 | | | | | | | | | | 30 U | 35 U | 40 U | 33 U | 37 U |
| Oil Range Organics | 2,000 | 2,000 | | | | | | | | | | 61 U | 70 U | 79 U | **100** | 73 U |

| EPA Sample ID | MTCA - Unrestricted Soil | MTCA - Industrial Soil | 11-06-0011 | 11-06-0012 | 11-06-0013 | 11-06-0014 | 11-06-0015 | 11-06-0016 | 11-06-0017 | 11-06-0018 | 11-06-0019 | 11-06-0022 | 11-06-0023 | 11-06-0024 | 11-06-0025 | 11-06-0026 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P202SB12 | P203SB04 | P204SB04 | P204SB08 | P204SB12 | P205SB04 | P205SB08 | P206SB04 | P206SB08 | P207SB04 | P208SB04 | P209SB04 | P210SB04 | P211SB04 |
| Sample Depth | | | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 | 2,000 | 37 U | **1,200** | 30 U | 33 U | 37 U | **34** | 41 U | 32 U | 36 U | 33 U | 31 U | | | 31 U |
| Oil Range Organics | 2,000 | 2,000 | 75 U | 3,200 | 60 U | 66 U | 74 U | 62 U | 81 U | 64 U | 71 U | 65 U | 61 U | | | 62 U |

| EPA Sample ID | MTCA - Unrestricted Soil | MTCA - Industrial Soil | 11-06-0027 | 11-06-0028 | 11-06-0029 | 11-06-0030 | 11-06-0031 | 11-06-0032 | 11-06-0033 | 11-06-0034 | 11-06-0035 | 11-06-0036 | 11-06-0037 | 11-06-0038 | 11-06-0039 | 11-06-0040 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P212SB04 | P213SB04 | P214SB04 | P214SB08 | P215SB04 | P215SB08 | P215SB12 | P216SB04 | P216SB08 | P216SB12 | P217SB04 | P217SB08 | P218SB04 | P218SB08 |
| Sample Depth | | | 4' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 | 2,000 | | 33 U | **86** | **74** | 37 U | **310** | **240** | 39 U | **370** | **590** | 35 U | 35 U | 39 U | 34 U |
| Oil Range Organics | 2,000 | 2,000 | | 66 U | **180** | **180** | 74 U | **640** | **460** | 78 U | **710** | **1,100** | 70 U | 70 U | 78 U | 68 U |

| EPA Sample ID | MTCA - Unrestricted Soil | MTCA - Industrial Soil | 11-06-0041 | 11-06-0042 | 11-06-0043 | 11-06-0044 | 11-06-0047 | 11-06-0048 | 11-06-0049 | 11-06-0050 | 11-06-0051 | 11-06-0057 | 11-06-0059 | 11-06-0060 | 12-04-0001 | 12-04-0002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P218SB12 | P219SB04 | P219SB08 | P219SB12 | P220SB04 | P221SB04 | P221SB08 | P222SB04 | P222SB08 | P223SB04 | P224SB04 | P225SB04 | SW03SS | SW04SS |
| Sample Depth | | | 12' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | Surface | Surface |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Apr-12 | Apr-12 |
| **TPH (mg/kg)** | | | | | | | | | | | | | | | | |
| Diesel Range Organics | 2,000 | 2,000 | 35 U | 35 U | 37 U | 40 U | 9,600 | **1,300** | 5,800 | 39 U | 40 U | **120** | | | | |
| Oil Range Organics | 2,000 | 2,000 | 70 U | 70 U | 73 U | 79 U | 1,800 U | 3,200 | 12,000 | 78 U | 80 U | **160** | | | | |

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**Table B-4 Comprehensive Analytical Data for SVOCs in Soil (Page 1 of 4)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-05-0702 | 09-05-0703 | 09-09-0908 | 09-09-0909 | 09-09-0912 | 09-09-0913 | 09-09-0915 | 09-09-0916 | 9090917 | 9090919 | 09-09-0920 | 09-09-0921 | 09-09-0924 | 09-09-0925 | 09-09-0927 | 09-09-0928 | 09-09-0929 | 09-09-0932 | 09-09-0933 | 09-09-0936 | 09-09-0937 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 | SA07SB04 | SA07SB08 | SA04SB04 | SA04SB08 | SA04SS | SA01SB04 | SA01SB08 | SA01SS | SA03SB04 | SA03SB08 | SA06SB04 | SA06SB08 | SA06SS | SA02SB04 | SA02SB08 | SA05SB04 | SA05SB08 | SH01SB04 | SH01SB08 |
| Sample Depth | | | Surface | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | May-09 | May-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 22 | 99 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1,2-Dichlorobenzene | 1,900 | 9,800 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1,2-Dinitrobenzene | 6.1 | 62 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1,2-Diphenylhydrazine | 0.61 | 2.2 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1,3-Dichlorobenzene | NA | NA | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1,3-Dinitrobenzene | 6.1 | 62 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1,4-Dichlorobenzene | 2.4 | 12 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 0.042 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1,4-Dinitrobenzene | 6.1 | 62 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 1-Methylnaphthalene | 22 | 99 | | | **0.12** | **0.04** | 0.0073 U | 0.0074 U | **0.0086** | 0.0081 U | 0.0075 U | | 0.042 U | **0.012** | **0.014** | **0.37** | **0.74** | 0.0081 U | 0.0087 U | **0.067** | **0.048** | **2** | **0.31** |
| 2,3,4,6-Tetrachlorophenol | 1,800 | 18,000 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2,3,5,6-Tetrachlorophenol | NA | NA | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2,3-Dichloroaniline | NA | NA | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 2,4,5-Trichlorophenol | 6,100 | 62,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2,4,6-Trichlorophenol | 44 | 160 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2,4-Dichlorophenol | 180 | 1,800 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2,4-Dimethylphenol | 1,200 | 12,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2,4-Dinitrophenol | 120 | 1,200 | **6.2 J** | 6.0 U | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | 1.6 | 5.5 | 3.1 UJ | 3.0 U | | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | 61 | 620 | 3.1 UJ | 3.0 U | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | 6,300 | 82,000 | 3.1 UJ | 3.0 U | | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | 390 | 5,100 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2-Methylnaphthalene | 310 | 4,100 | 3.1 UJ | 3.0 U | **0.17** | **0.053** | 0.0073 U | 0.0074 U | **0.013** | **0.011** | 0.0075 U | | 0.042 U | **0.014** | **0.016** | **0.49** | **0.89** | 0.0081 U | 0.0087 U | **0.018** | **0.067** | **2.2** | **0.38** |
| 2-Methylphenol | 3,100 | 31,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 2-Nitroaniline | 610 | 6000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 2-Nitrophenol | NA | NA | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 3 & 4-Methylphenol | 3,100 | 31,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | **0.071** | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 3,3'-Dichlorobenzidine | 1.1 | 3.8 | 3.1 UJ | 3.0 U | 4.4 U | 2.2 U | 0.37 U | 0.37 U | 1.7 U | 0.41 U | 0.37 U | | 2.1 U | 0.39 U | 4.3 U | 48 U | 34 UJ | 2 U | 2.2 U | 2.2 U | 4.5 U | 48 U | 2.6 U |
| 3-Nitroaniline | NA | NA | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 4,6-Dinitro-2-methylphenol | 4.9 | 49 | 3.1 UJ | 3.0 U | 2.2 U | 1.1 U | 0.18 U | 0.19 U | 0.85 UJ | 0.2 U | 0.19 U | | 2.1 UJ | 0.2 UJ | 2.1 UJ | 24 UJ | 17 UJ | 1 UJ | 1.1 UJ | 1.1 UJ | 2.3 UJ | 24 UJ | 1.3 UJ |
| 4-Bromophenyl-phenyl ether | NA | NA | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 4-Chloro-3-methylphenol | 6,100 | 62,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| 4-Chloroaniline | 2.4 | 8.6 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 4-Chlorophenyl-phenylether | NA | NA | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 4-Nitroaniline | 24 | 86 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| 4-Nitrophenol | NA | NA | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| Acenaphthene | 3,400 | 33,000 | **1.6 J** | 3.0 U | **2** | **1** | 0.0073 U | 0.0074 U | **0.019** | 0.0081 U | 0.0075 U | | **0.049** | **0.26** | **0.56** | **7.3** | **18** | 0.0081 U | 0.0087 U | **0.029** | **0.023** | **0.37** | **0.029** |
| Acenaphthylene | NA | NA | 3.1 UJ | 3.0 U | **0.05** | **0.018** | **0.013** | 0.0074 U | **0.04** | **0.01** | 0.0075 U | | 2.1 U | 0.0078 U | **0.16** | 0.19 U | **0.37** | **0.019** | **0.03** | 0.0088 U | 0.018 U | 0.19 U | 0.01 U |
| Aniline | 85 | 300 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Anthracene | 17,000 | 170,000 | **3.0 J** | **2.0 J** | **5.7** | **3.6** | **0.018** | 0.0074 U | **0.099** | **0.02** | 0.0075 U | | **0.22** | **0.85** | **2.2** | **18** | **53** | **0.066** | **0.03** | **0.034** | **0.03** | 0.19 U | 0.01 U |
| Benzidine | 0.0005 | 0.0075 | | | 4.4 U | 2.2 U | 0.37 U | 0.37 U | 1.7 UJ | 0.41 U | 0.37 U | | 2.1 UJ | 0.39 UJ | 4.3 UJ | 48 UJ | 34 UJ | 2 UJ | 2.2 UJ | 2.2 U | 4.5 UJ | 48 UJ | 2.6 UJ |
| Benzo(a)anthracene | 0.15 | 2.1 | **7.1 J** | **10.0** | **17** | **8** | **0.12** | 0.0074 U | **0.64** | **0.13** | **0.048** | | **0.55** | **1.9** | **5.3** | **33** | **130** | **0.37** | **0.37** | **0.0144** | **0.071** | 0.19 U | 0.01 U |
| Benzo(a)pyrene | 0.015 | 0.21 | **3.9 J** | **8.1** | **12** | **5.3** | **0.13** | 0.0074 U | **0.74** | **0.14** | **0.05** | | **0.43** | **1.3** | **3.5** | **22** | **84** | **0.41** | **0.35** | **0.12** | **0.2** | 0.19 U | 0.01 U |
| Benzo(b)fluoranthene | 0.15 | 2.1 | **4.7 J** | **10.0** | **13** | **6.5** | **0.089** | 0.0074 U | **0.85** | **0.11** | **0.044** | | **0.64** | **1.4** | **3.7** | **20** | **90** | **0.32** | **0.22** | **0.11** | **0.14** | **0.19** | 0.01 U |
| Benzo(g,h,i)perylene | NA | NA | **2.1 J** | **5.7** | **5.1** | **2.1** | **0.061** | 0.0074 U | **0.62** | **0.099** | **0.024** | | **0.26** | **0.44** | **1.9** | **11** | **53** | **0.34** | **0.13** | **0.071** | 0.018 U | 0.19 U | 0.01 U |
| Benzo(k)fluoranthene | 1.5 | 21 | **4.7 J** | **9.4** | **9.1** | **3.6** | **0.12** | 0.0074 U | **0.77** | **0.13** | **0.045** | | **0.19** | **1** | **2.9** | **21** | **66** | **0.32** | **0.3** | **0.032** | **0.2** | 0.19 U | 0.01 U |
| Benzyl alcohol | 6,100 | 62,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| Bis(2-chloroethoxy)methane | 180 | 1,800 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Bis(2-Chloroethyl)ether | 0.21 | 1 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Bis(2-chloroisopropyl)ether | 4.6 | 22 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Bis(2-ethylhexyl)phthalate | 35 | 120 | **3.8 J** | **17.0** | **6.1** | **3.5** | 0.037 U | 0.037 U | **0.56** | **0.07** | **0.076** | | 2.1 U | **0.28** | 0.43 U | 4.8 U | **11** | 0.2 U | 0.22 U | **0.59** | 0.45 U | **5.2** | **0.42** |
| bis-2-Ethylhexyladipate | 410 | 1,400 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | **0.17** | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 UJ | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Butylbenzylphthalate | 260 | 910 | 3.1 UJ | 3.0 U | **3.3** | **0.48** | 0.037 U | 0.037 U | **0.87** | **0.079** | 0.037 U | | 0.042 U | **0.18** | 0.43 U | 4.8 U | 3.4 UJ | **0.49** | 0.22 U | 0.22 U | 0.45 U | **9** | **1.4** |
| Carbazole | NA | NA | **3.1 J** | 3.0 U | **3.1** | **2.2** | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 0.042 U | **0.5** | 0.43 U | **12** | **23** | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Chrysene | 15 | 210 | **8.4 J** | **14.0** | **18** | **8.3** | **0.13** | 0.0074 U | **0.9** | **0.13** | **0.054** | | **0.62** | **2** | **5.2** | **34** | **130** | **0.4** | **0.36** | **0.0432** | **0.26** | 0.19 U | **0.011** |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 2.1 UJ | **1.3 J** | **1.8** | **0.78** | **0.018** | 0.0074 U | **0.19** | **0.021** | 0.0075 U | | **0.091** | **0.15** | **0.7** | **2.9** | **18** | **0.058** | **0.05** | 0.0088 U | 0.018 U | 0.19 U | 0.01 U |
| Dibenzofuran | 78 | 1,000 | 3.1 UJ | 3.0 U | **1.1** | **0.38** | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | **0.11** | 0.43 U | 4.8 U | **7.8** | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Diethylphthalate | 49,000 | 490,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Dimethylphthalate | NA | NA | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 21 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Di-n-butylphthalate | 6,100 | 62,000 | 3.1 UJ | 3.0 U | | | | | | | | | | | | | | | | | | | |
| Di-n-octylphthalate | NA | NA | 3.1 UJ | 3.0 U | | | | | | | | | | | | | | | | | | | |
| Fluoranthene | 2,300 | 22,000 | **25.0 J** | **25.0** | | | | | | | | | | | | | | | | | | | |
| Fluorene | 2,300 | 22,000 | **1.7 J** | 3.0 U | | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 0.3 | 1.1 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Hexachlorobutadiene | 6.2 | 22 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Hexachlorocyclopentadiene | 370 | 3,700 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 UJ | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 UJ | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Hexachloroethane | 35 | 120 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | **2.4 J** | **7.1** | **5** | **2.2** | **0.058** | 0.0074 U | **0.54** | **0.086** | **0.02** | | **0.22** | **0.47** | **1.9** | **11** | **52** | **0.26** | **0.13** | 0.0088 U | 0.018 U | 0.19 U | 0.01 U |
| Isophorone | 510 | 1,800 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| Naphthalene | 3.6 | 18 | 3.1 UJ | 3.0 U | **0.78** | **0.086** | 0.0073 U | 0.0074 U | **0.015** | **0.0081** | 0.0075 U | | 2.1 U | **0.023** | **0.016** | **1.4** | **2.2** | 0.0081 U | 0.0087 U | **0.018** | **0.027** | **0.43** | **0.041** |
| Nitrobenzene | 4.8 | 24 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| N-Nitrosodimethylamine | 0.0023 | 0.034 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |
| N-Nitrosodiphenylamine | 99 | 350 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | **0.31** |
| Pentachlorophenol | 0.89 | 2.7 | 3.1 UJ | 3.0 U | 2.2 U | 1.1 U | 0.18 U | 0.19 U | 0.85 U | 0.2 U | 0.19 U | | 2.1 U | 0.2 U | 2.1 U | 24 U | 17 U | 1 U | 1.1 U | 1.1 UJ | 2.3 U | 24 U | 1.3 U |
| Phenanthrene | NA | NA | **13.0 J** | **6.5** | **19** | **11** | **0.04** | 0.0074 U | **0.52** | **0.073** | **0.016** | | **0.66** | **3.1** | **5.7** | **59** | **130** | **0.14** | **0.058** | **0.22** | **0.14** | **0.97** | **0.14** |
| Phenol | 18,000 | 180,000 | 3.1 UJ | 3.0 U | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 UJ | 0.45 U | 4.8 U | 0.26 U |
| Pyrene | 1,700 | 17,000 | **22.0 J** | 3.0 U | **39** | **18** | **0.17** | 0.0074 U | **1.1** | **0.22** | **0.084** | | **1** | **4.2** | **10** | **67** | **340** | **0.69** | **0.5** | **0.22** | **0.63** | **0.46** | **0.032** |
| Pyridine | 78 | 1,000 | | | 0.44 U | 0.22 U | 0.037 U | 0.037 U | 0.17 U | 0.041 U | 0.037 U | | 2.1 U | 0.039 U | 0.43 U | 4.8 U | 3.4 U | 0.2 U | 0.22 U | 0.22 U | 0.45 U | 4.8 U | 0.26 U |

**Table B-4 Comprehensive Analytical Data for SVOCs in Soil (Page 2 of 4)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-09-0953 | 09-09-0954 | 09-09-0956 | 09-09-0957 | 09-10-1047 | 10-03-0001 | 10-03-0002 | 10-03-0003 | 10-03-0004 | 10-03-0005 | 10-03-0006 | 10-03-0007 | 10-03-0008 | 10-03-0009 | 10-03-0010 | 10-03-0011 | 11-06-0006 | 11-06-0007 | 11-06-0008 | 11-06-0009 | 11-06-0010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SW01SB08 | SW01SB04 | SW02SS | SW02SB02 | TP01 | MW04SB07 | MW03SB05 | MW02SB05 | MW02SB07 | MW01SB03 | MW01SB06 | MW01SB12 | SB01SB05 | SB01SB14 | SB02SB04 | SB02SB06 | P201SB04 | P201SB08 | P201SB12 | P202SB04 | P202SB08 |
| Sample Depth | | | 8' BGS | 4' BGS | Surface | 2' BGS | 6' BGS | 7' BGS | 5' BGS | 5' BGS | 7' BGS | 3' BGS | 6' BGS | 12' BGS | 5' BGS | 14' BGS | 4' BGS | 6' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS |
| Sample Collection Event | | | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Oct-09 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 22 | 99 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1,2-Dichlorobenzene | 1,900 | 9,800 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1,2-Dinitrobenzene | 6.1 | 62 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1,2-Diphenylhydrazine | 0.61 | 2.2 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1,3-Dichlorobenzene | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1,3-Dinitrobenzene | 6.1 | 62 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1,4-Dichlorobenzene | 2.4 | 12 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1,4-Dinitrobenzene | 6.1 | 62 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 1-Methylnaphthalene | 22 | 99 | 0.0078 U | 0.0074 U | 0.01 U | 0.011 U | **0.066 J** | 0.0091 U | 0.01 U | 0.0087 U | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | **0.070** | **0.013** | 0.0081 U | 0.0093 U | 0.011 U | **0.025** | 0.0097 U |
| 2,3,4,6-Tetrachlorophenol | 1,800 | 18,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2,3,5,6-Tetrachlorophenol | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2,3-Dichloroaniline | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2,4,5-Trichlorophenol | 6,100 | 62,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2,4,6-Trichlorophenol | 44 | 160 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2,4-Dichlorophenol | 180 | 1,800 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2,4-Dimethylphenol | 1,200 | 12,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.4 U | 0.46 U | 0.53 U | 0.44 U | 0.49 U |
| 2,4-Dinitrophenol | 120 | 1,200 | | | | | 11 UJ | 0.23 U | 0.18 UJ | 0.22 UJ | 0.31 UJ | 0.2 UJ | 0.22 UJ | 0.26 UJ | 0.22 UJ | 0.22 UJ | 0.24 UJ | 0.25 UJ | 0.2 UJL | 0.23 UJL | 0.26 UJL | 0.22 UJL | 0.24 UJL |
| 2,4-Dinitrotoluene | 1.6 | 5.5 | | | | | 2.2 UJ | 0.046 UJ | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2,6-Dinitrotoluene | 61 | 620 | | | | | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2-Chloronaphthalene | 6,300 | 82,000 | | | | | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2-Chlorophenol | 390 | 5,100 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2-Methylnaphthalene | 310 | 4,100 | 0.0078 U | **0.0095** | 0.01 U | 0.011 U | **0.097 J** | 0.0091 U | 0.0072 U | 0.0087 U | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | **0.097** | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | **0.053** | 0.0097 U |
| 2-Methylphenol | 3,100 | 31,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2-Nitroaniline | 610 | 6000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 2-Nitrophenol | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 3 & 4-Methylphenol | 3,100 | 31,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 3,3'-Dichlorobenzidine | 1.1 | 3.8 | 0.39 U | 1.9 U | 0.52 U | 0.54 U | 22 UJ | 0.46 U | 0.36 U | 0.43 U | 0.62 U | 0.41 U | 0.44 U | 0.51 U | 0.44 U | 0.44 U | 0.48 U | 0.51 U | 0.4 U | 0.46 U | 0.53 U | 0.44 U | 0.49 U |
| 3-Nitroaniline | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 4,6-Dinitro-2-methylphenol | 4.9 | 49 | 0.19 U | 0.93 U | 0.26 U | 0.27 U | 11 UJ | 0.23 U | 0.18 U | 0.22 U | 0.31 U | 0.2 U | 0.22 U | 0.26 U | 0.22 U | 0.22 U | 0.24 U | 0.25 U | 0.2 U | 0.23 U | 0.26 U | 0.22 U | 0.24 U |
| 4-Bromophenyl-phenyl ether | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 4-Chloro-3-methylphenol | 6,100 | 62,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 4-Chloroaniline | 2.4 | 8.6 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 4-Chlorophenyl-phenylether | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 4-Nitroaniline | 24 | 86 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| 4-Nitrophenol | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Acenaphthene | 3,400 | 33,000 | 0.0078 U | **0.0093** | 0.01 U | 0.011 U | **0.18 J** | 0.0091 U | 0.0072 U | 0.0087 U | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | **0.016** | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Acenaphthylene | NA | NA | **0.011** | **0.11** | 0.01 U | **0.013** | **0.061 J** | 0.0091 U | 0.0072 U | **0.011** | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Aniline | 85 | 300 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Anthracene | 17,000 | 170,000 | **0.048** | **0.94** | **0.01** | **0.029** | **0.53 J** | 0.0091 U | 0.0072 U | **0.023** | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Benzidine | 0.0005 | 0.0075 | 0.39 U | 1.9 U | 0.52 U | 0.54 U | 22 UJ | 0.46 U | 0.36 U | 0.43 U | 0.62 U | 0.41 U | 0.44 U | 0.51 U | 0.44 U | 0.44 U | 0.48 U | 0.51 U | 0.4 U | 0.46 U | 0.53 U | 0.44 U | 0.49 U |
| Benzo(a)anthracene | 0.15 | 2.1 | **0.24** | **2.5** | **0.077** | **0.13** | **2.5 J** | 0.0091 U | **0.0072** | **0.093** | **0.015** | **0.0097** | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | **0.013** | 0.0097 U |
| Benzo(a)pyrene | 0.015 | 0.21 | **0.26** | **2.8** | **0.088** | **0.17** | **1.2 J** | 0.0091 U | 0.0072 U | **0.094** | **0.016** | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | **0.01** | 0.0097 U |
| Benzo(b)fluoranthene | 0.15 | 2.1 | **0.15** | **1.7** | **0.067** | **0.12** | **2.6 J** | 0.0091 U | 0.0072 U | **0.055** | 0.012 U | **0.0098** | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Benzo(g,h,i)perylene | NA | NA | **0.12** | **1.2** | **0.063** | **0.12** | **0.57 J** | 0.0091 U | 0.0072 U | **0.051** | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Benzo(k)fluoranthene | 1.5 | 21 | **0.23** | **2.4** | **0.072** | **0.11** | **0.86 J** | 0.0091 U | 0.0072 U | **0.071** | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Benzyl alcohol | 6,100 | 62,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Bis(2-chloroethoxy)methane | 180 | 1,800 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Bis(2-Chloroethyl)ether | 0.21 | 1 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Bis(2-chloroisopropyl)ether | 4.6 | 22 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Bis(2-ethylhexyl)phthalate | 35 | 120 | 0.039 U | 0.19 U | **0.33** | 0.054 U | **12 J** | 0.046 U | **2.5** | 0.043 U | 0.062 U | **0.14** | **0.11** | 0.051 U | 0.044 U | **0.047** | **0.32** | **0.15** | **0.054** | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| bis-2-Ethylhexyladipate | 410 | 1,400 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Butylbenzylphthalate | 260 | 910 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | **3.6 J** | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | **1.4 J** | **0.72 J** | 0.4 U | 0.46 U | 0.53 U | 0.44 U | 0.49 U |
| Carbazole | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Chrysene | 15 | 210 | **0.25** | **2.6** | **0.082** | **0.14** | **2.8 J** | 0.0091 U | **0.0075** | **0.090** | **0.015** | **0.012** | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | **0.014** | 0.0097 U |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | **0.037** | **0.29** | **0.013** | **0.022** | **0.18 J** | 0.0091 U | 0.0072 U | **0.015** | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Dibenzofuran | 78 | 1,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Diethylphthalate | 49,000 | 490,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.2 U | 0.23 U | 0.26 U | 0.22 U | 0.24 U |
| Dimethylphthalate | NA | NA | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Di-n-butylphthalate | 6,100 | 62,000 | | | | | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.4 U | 0.46 U | 0.53 U | 0.44 U | 0.49 U |
| Di-n-octylphthalate | NA | NA | | | | | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Fluoranthene | 2,300 | 22,000 | | | | | **7.8 J** | 0.0091 U | **0.010** | **0.15** | **0.013** | **0.016** | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | **0.021** | 0.0097 U |
| Fluorene | 2,300 | 22,000 | | | | | **0.13 J** | 0.0091 U | 0.0072 U | 0.0087 U | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | **0.017** | **0.013** | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Hexachlorobenzene | 0.3 | 1.1 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Hexachlorobutadiene | 6.2 | 22 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Hexachlorocyclopentadiene | 370 | 3,700 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 UJ | 0.036 UJ | 0.043 UJ | 0.062 UJ | 0.041 UJ | 0.044 UJ | 0.051 UJ | 0.044 UJ | 0.044 UJ | 0.048 UJ | 0.051 UJ | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Hexachloroethane | 35 | 120 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | **0.11** | **1.1** | **0.054** | **0.1** | **0.51 J** | 0.0091 U | 0.0072 U | **0.048** | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | 0.0089 U | 0.0097 U |
| Isophorone | 510 | 1,800 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Naphthalene | 3.6 | 18 | 0.0078 U | **0.036** | 0.01 U | 0.011 U | **0.053 J** | 0.0091 U | 0.0072 U | 0.0087 U | 0.012 U | 0.0081 U | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | **0.012** | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | **0.029** | 0.0097 U |
| Nitrobenzene | 4.8 | 24 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| N-Nitrosodimethylamine | 0.0023 | 0.034 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| N-Nitrosodiphenylamine | 99 | 350 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | **0.070** | **0.054** | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Pentachlorophenol | 0.89 | 2.7 | 0.19 U | 0.93 U | 0.26 U | 0.27 U | 11 UJ | 0.23 U | 0.18 U | 0.22 U | 0.31 U | 0.2 U | 0.22 U | 0.26 U | 0.22 U | 0.22 U | 0.24 U | 0.25 U | 0.2 U | 0.23 U | 0.26 U | 0.22 U | 0.24 U |
| Phenanthrene | NA | NA | **0.091** | **0.82** | **0.029** | **0.035** | **0.96 J** | 0.0091 U | 0.0072 U | **0.055** | 0.012 U | **0.011** | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | **0.061** | **0.034** | 0.0081 U | 0.0093 U | 0.011 U | **0.013** | 0.0097 U |
| Phenol | 18,000 | 180,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.046 U | 0.036 U | 0.043 U | 0.062 U | 0.041 U | 0.044 U | 0.051 U | 0.044 U | 0.044 U | 0.048 U | 0.051 U | 0.04 U | 0.046 U | 0.053 U | 0.044 U | 0.049 U |
| Pyrene | 1,700 | 17,000 | **0.34** | **5.6** | **0.12** | **0.12** | **7.6 J** | 0.0091 U | **0.013** | **0.16** | **0.017** | **0.018** | 0.0089 U | 0.01 U | 0.0089 U | 0.0089 U | 0.0097 U | 0.01 U | 0.0081 U | 0.0093 U | 0.011 U | **0.021** | 0.0097 U |
| Pyridine | 78 | 1,000 | 0.039 U | 0.19 U | 0.052 U | 0.054 U | 2.2 UJ | 0.46 U | 0.36 U | 0.43 U | 0.62 U | 0.41 U | 0.44 U | 0.51 U | 0.44 U | 0.44 U | 0.48 U | 0.51 U | 0.4 U | 0.46 U | 0.53 U | 0.44 U | 0.49 U |

**Table B-4 Comprehensive Analytical Data for SVOCs in Soil (Page 3 of 4)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0011 | 11-06-0012 | 11-06-0013 | 11-06-0014 | 11-06-0015 | 11-06-0016 | 11-06-0017 | 11-06-0018 | 11-06-0019 | 11-06-0022 | 11-06-0023 | 11-06-0024 | 11-06-0025 | 11-06-0026 | 11-06-0027 | 11-06-0028 | 11-06-0029 | 11-06-0030 | 11-06-0031 | 11-06-0032 | 11-06-0033 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P202SB12 | P203SB04 | P204SB04 | P204SB08 | P204SB12 | P205SB04 | P205SB08 | P206SB04 | P206SB08 | P207SB04 | P208SB04 | P209SB04 | P210SB04 | P211SB04 | P212SB04 | P213SB04 | P214SB04 | P214SB08 | P215SB04 | P215SB08 | P215SB12 |
| Sample Depth | | | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 12' BGS |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 22 | 99 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1,2-Dichlorobenzene | 1,900 | 9,800 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1,2-Dinitrobenzene | 6.1 | 62 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1,2-Diphenylhydrazine | 0.61 | 2.2 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1,3-Dichlorobenzene | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1,3-Dinitrobenzene | 6.1 | 62 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1,4-Dichlorobenzene | 2.4 | 12 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1,4-Dinitrobenzene | 6.1 | 62 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 1-Methylnaphthalene | 22 | 99 | 0.01 U | 0.0084 U | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | 0.0087 U | 0.0082 U | 0.0078 U | 0.0083 U | 0.0083 U | 0.0081 U | 0.0088 U | **0.012** | 0.0095 U | 0.0099 U | 0.01 U | 0.01 U |
| 2,3,4,6-Tetrachlorophenol | 1,800 | 18,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2,3,5,6-Tetrachlorophenol | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2,3-Dichloroaniline | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2,4,5-Trichlorophenol | 6,100 | 62,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2,4,6-Trichlorophenol | 44 | 160 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2,4-Dichlorophenol | 180 | 1,800 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2,4-Dimethylphenol | 1,200 | 12,000 | 0.5 U | 0.42 U | 0.4 U | 0.44 U | 0.49 U | 0.41 U | 0.54 U | 0.42 U | 0.48 U | 0.43 U | 0.41 U | 0.39 U | 0.42 U | 0.41 U | 0.4 U | 0.44 U | 0.44 U | 0.47 U | 0.49 U | 0.51 U | 0.5 U |
| 2,4-Dinitrophenol | 120 | 1,200 | 0.25 U | 0.21 U | 0.2 U | 0.22 UJL | 0.25 U | 0.21 U | 0.27 U | 0.21 U | 0.24 U | 0.22 U | 0.2 U | 0.19 U | 0.21 U | 0.21 U | 0.2 U | 0.22 U | 0.22 U | 0.24 U | 0.25 U | 0.25 U | 0.25 U |
| 2,4-Dinitrotoluene | 1.6 | 5.5 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2,6-Dinitrotoluene | 61 | 620 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2-Chloronaphthalene | 6,300 | 82,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2-Chlorophenol | 390 | 5,100 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2-Methylnaphthalene | 310 | 4,100 | 0.01 U | 0.0084 U | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | 0.0087 U | 0.0082 U | 0.0094 | 0.0083 U | 0.0083 U | 0.0081 U | 0.0088 U | **0.012** | 0.0095 U | 0.0099 U | 0.01 U | 0.01 U |
| 2-Methylphenol | 3,100 | 31,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2-Nitroaniline | 610 | 6000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 2-Nitrophenol | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 3 & 4-Methylphenol | 3,100 | 31,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 3,3'-Dichlorobenzidine | 1.1 | 3.8 | 0.5 U | 0.42 U | 0.4 U | 0.44 U | 0.49 U | 0.41 U | 0.54 U | 0.42 U | 0.48 U | 0.43 U | 0.41 U | 0.39 U | 0.42 U | 0.41 U | 0.4 U | 0.44 U | 0.44 UJL | 0.47 UJL | 0.49 UJL | 0.51 UJL | 0.5 UJL |
| 3-Nitroaniline | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 4,6-Dinitro-2-methylphenol | 4.9 | 49 | 0.25 U | 0.21 U | 0.2 U | 0.22 U | 0.25 U | 0.21 U | 0.27 U | 0.21 U | 0.24 U | 0.22 U | 0.2 U | 0.19 U | 0.21 U | 0.21 U | 0.2 U | 0.22 U | 0.22 U | 0.24 U | 0.25 U | 0.25 U | 0.25 U |
| 4-Bromophenyl-phenyl ether | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 4-Chloro-3-methylphenol | 6,100 | 62,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 4-Chloroaniline | 2.4 | 8.6 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 4-Chlorophenyl-phenylether | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 4-Nitroaniline | 24 | 86 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| 4-Nitrophenol | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Acenaphthene | 3,400 | 33,000 | 0.01 U | 0.0084 U | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | 0.0087 U | 0.0082 U | **0.026** | 0.0083 U | 0.0083 U | 0.0081 U | 0.0088 U | **0.023** | 0.0095 U | 0.0099 U | 0.01 U | 0.01 U |
| Acenaphthylene | NA | NA | 0.01 U | **0.018** | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | **0.048** | **0.017** | **0.23** | **0.015** | **0.029** | **0.017** | **0.013** | 0.0087 U | **0.013** | 0.0099 U | 0.01 U | 0.01 U |
| Aniline | 85 | 300 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Anthracene | 17,000 | 170,000 | 0.01 U | **0.023** | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | **0.098** | **0.028** | **1.8** | **0.011** | **0.078** | **0.029** | **0.015** | **0.098** | **0.022** | 0.0099 U | 0.01 U | 0.01 U |
| Benzidine | 0.0005 | 0.0075 | 0.5 U | 0.42 U | 0.4 U | 0.44 U | 0.49 U | 0.41 U | 0.54 U | 0.42 U | 0.48 U | 0.43 U | 0.41 U | 0.39 U | 0.42 U | 0.41 U | 0.4 U | 0.44 U | 0.44 U | 0.47 U | 0.49 U | 0.51 U | 0.5 U |
| Benzo(a)anthracene | 0.15 | 2.1 | 0.01 U | **0.064** | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.013** | 0.0095 U | **0.47** | **0.22** | **5.3** | **0.12** | **0.28** | **0.17** | **0.11** | **0.32** | **0.16** | 0.0099 U | 0.01 U | 0.01 U |
| Benzo(a)pyrene | 0.015 | 0.21 | 0.01 U | **0.073** | **0.01** | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.027** | **0.0098** | **0.5** | **0.25** | **5.4** | **0.14** | **0.29** | **0.18** | **0.12** | **0.21** | **0.15** | 0.0099 U | 0.01 U | 0.01 U |
| Benzo(b)fluoranthene | 0.15 | 2.1 | 0.01 U | **0.094** | **0.0092** | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.021** | 0.0095 U | **0.17** | **0.25** | **5.3** | **0.14** | **0.29** | **0.19** | **0.14** | **0.28** | **0.18** | 0.0099 U | 0.01 U | 0.01 U |
| Benzo(g,h,i)perylene | NA | NA | 0.01 U | **0.075** | **0.015** | 0.0088 U | 0.0099 U | **0.0089** | 0.011 U | **0.05** | 0.0095 U | **0.34** | **0.18** | **3.4** | **0.077** | **0.18** | **0.11** | **0.077** | **0.13** | **0.077** | 0.0099 U | 0.01 U | 0.01 U |
| Benzo(k)fluoranthene | 1.5 | 21 | 0.01 U | **0.11** | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.02** | 0.0095 U | **0.57** | **0.098** | **1.4** | **0.064** | **0.13** | **0.072** | **0.048** | **0.098** | **0.06** | 0.0099 U | 0.01 U | 0.01 U |
| Benzyl alcohol | 6,100 | 62,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Bis(2-chloroethoxy)methane | 180 | 1,800 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Bis(2-Chloroethyl)ether | 0.21 | 1 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Bis(2-chloroisopropyl)ether | 4.6 | 22 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Bis(2-ethylhexyl)phthalate | 35 | 120 | 0.05 U | **0.1** | 0.04 U | **0.048** | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | **0.047** | 0.042 U | 0.041 U | **0.28** | 0.044 U | 0.044 U | **0.28** | 0.049 U | **0.12** | **0.1** |
| bis-2-Ethylhexyladipate | 410 | 1,400 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Butylbenzylphthalate | 260 | 910 | 0.5 U | 0.42 U | 0.4 U | 0.44 U | 0.49 U | 0.41 U | 0.54 U | 0.42 U | 0.48 U | 0.43 U | 0.41 U | 0.39 U | 0.42 U | 0.41 U | 0.4 U | 0.44 U | 0.44 U | 0.47 U | 0.49 U | 0.51 U | 0.5 U |
| Carbazole | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | **0.1** | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Chrysene | 15 | 210 | 0.01 U | **0.07** | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.016** | 0.0095 U | **0.47** | **0.2** | **4.7** | **0.12** | **0.27** | **0.17** | **0.11** | **0.31** | **0.16** | 0.0099 U | 0.01 U | 0.01 U |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 0.01 U | **0.033** | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | **0.071** | **0.037** | **0.53** | **0.024** | **0.042** | **0.027** | **0.021** | **0.041** | **0.026** | 0.0099 U | 0.01 U | 0.01 U |
| Dibenzofuran | 78 | 1,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | **0.05** | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Diethylphthalate | 49,000 | 490,000 | 0.25 U | 0.21 U | 0.2 U | 0.22 U | 0.25 U | 0.21 U | 0.27 U | 0.21 U | 0.24 U | 0.22 U | 0.2 U | 0.19 U | 0.21 U | 0.21 U | 0.2 U | 0.22 U | 0.22 U | 0.24 U | 0.25 U | 0.25 U | 0.25 U |
| Dimethylphthalate | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Di-n-butylphthalate | 6,100 | 62,000 | 0.5 U | 0.42 U | 0.4 U | 0.44 U | 0.49 U | 0.41 U | 0.54 U | 0.42 U | 0.48 U | 0.43 U | 0.41 U | 0.39 U | 0.42 U | 0.41 U | 0.4 U | 0.44 U | 0.44 U | 0.47 U | 0.49 U | 0.51 U | 0.5 U |
| Di-n-octylphthalate | NA | NA | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Fluoranthene | 2,300 | 22,000 | 0.01 U | **0.13** | **0.0095** | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.016** | **0.0097** | **0.84** | **0.38** | **12** | **0.16** | **0.53** | **0.3** | **0.18** | **0.77** | **0.19** | 0.0099 U | 0.01 U | 0.01 U |
| Fluorene | 2,300 | 22,000 | 0.01 U | 0.0084 U | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | **0.012** | 0.0082 U | **0.26** | 0.0083 U | 0.0083 U | 0.0081 U | 0.0088 U | **0.025** | 0.0095 U | 0.0099 U | 0.01 U | 0.01 U |
| Hexachlorobenzene | 0.3 | 1.1 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Hexachlorobutadiene | 6.2 | 22 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Hexachlorocyclopentadiene | 370 | 3,700 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Hexachloroethane | 35 | 120 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | 0.01 U | **0.068** | **0.011** | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.043** | 0.0095 U | **0.32** | **0.16** | **2.9** | **0.085** | **0.18** | **0.11** | **0.077** | **0.13** | **0.072** | 0.0099 U | 0.01 U | 0.01 U |
| Isophorone | 510 | 1,800 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Naphthalene | 3.6 | 18 | 0.01 U | 0.0084 U | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | **0.0093** | 0.0082 U | **0.041** | 0.0083 U | 0.0083 U | 0.0081 U | 0.0088 U | 0.0087 U | 0.0095 U | 0.0099 U | 0.01 U | 0.01 U |
| Nitrobenzene | 4.8 | 24 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| N-Nitrosodimethylamine | 0.0023 | 0.034 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| N-Nitrosodiphenylamine | 99 | 350 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Pentachlorophenol | 0.89 | 2.7 | 0.25 U | 0.21 U | 0.2 U | 0.22 U | 0.25 U | 0.21 U | 0.27 U | 0.21 U | 0.24 U | 0.22 U | 0.2 U | 0.19 U | 0.21 U | 0.21 U | 0.2 U | 0.22 U | 0.22 UJL | 0.24 UJL | 0.25 UJL | 0.25 UJL | 0.25 UJL |
| Phenanthrene | NA | NA | 0.01 U | **0.074** | 0.008 U | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | 0.0085 U | 0.0095 U | **0.26** | **0.068** | **5** | **0.025** | **0.13** | **0.059** | **0.046** | **0.3** | **0.054** | 0.0099 U | 0.01 U | 0.01 U |
| Phenol | 18,000 | 180,000 | 0.05 U | 0.042 U | 0.04 U | 0.044 U | 0.049 U | 0.041 U | 0.054 U | 0.042 U | 0.048 U | 0.043 U | 0.041 U | 0.039 U | 0.042 U | 0.041 U | 0.04 U | 0.044 U | 0.044 U | 0.047 U | 0.049 U | 0.051 U | 0.05 U |
| Pyrene | 1,700 | 17,000 | 0.01 U | **0.13** | **0.012** | 0.0088 U | 0.0099 U | 0.0083 U | 0.011 U | **0.022** | **0.012** | **0.77** | **0.37** | **8.8** | **0.17** | **0.51** | **0.27** | **0.17** | **0.75** | **0.19** | 0.0099 U | 0.01 U | 0.01 U |
| Pyridine | 78 | 1,000 | 0.5 U | 0.42 U | 0.4 U | 0.44 U | 0.49 U | 0.41 U | 0.54 U | 0.42 U | 0.48 U | 0.43 U | 0.41 U | 0.39 U | 0.42 U | 0.41 U | 0.4 U | 0.44 U | 0.44 U | 0.47 U | 0.49 U | 0.51 U | 0.5 U |

**Table B-4 Comprehensive Analytical Data for SVOCs in Soil (Page 4 of 4)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 11-06-0034 | 11-06-0035 | 11-06-0036 | 11-06-0037 | 11-06-0038 | 11-06-0039 | 11-06-0040 | 11-06-0041 | 11-06-0042 | 11-06-0043 | 11-06-0044 | 11-06-0047 | 11-06-0048 | 11-06-0049 | 11-06-0050 | 11-06-0051 | 11-06-0057 | 11-06-0059 | 11-06-0060 | 12-04-0001 | 12-04-0002 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P216SB04 | P216SB08 | P216SB12 | P217SB04 | P217SB08 | P218SB04 | P218SB08 | P218SB12 | P219SB04 | P219SB08 | P219SB12 | P220SB04 | P221SB04 | P221SB08 | P222SB04 | P222SB08 | P223SB04 | P224SB04 | P225SB04 | SW03SS | SW04SS |
| Sample Depth | | | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 8' BGS | 12' BGS | 4' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 4' BGS | 4' BGS | Surface | Surface |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Apr-12 | Apr-12 |
| **SVOCs (mg/kg)** | | | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 22 | 99 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1,2-Dichlorobenzene | 1,900 | 9,800 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1,2-Dinitrobenzene | 6.1 | 62 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1,2-Diphenylhydrazine | 0.61 | 2.2 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1,3-Dichlorobenzene | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1,3-Dinitrobenzene | 6.1 | 62 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1,4-Dichlorobenzene | 2.4 | 12 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1,4-Dinitrobenzene | 6.1 | 62 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 1-Methylnaphthalene | 22 | 99 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.11** | **0.013** | 0.011 U | **3** | 0.0095 U | **0.13** | 0.01 U | 0.011 U | 0.0078 U | | | | |
| 2,3,4,6-Tetrachlorophenol | 1,800 | 18,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2,3,5,6-Tetrachlorophenol | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 2,3-Dichloroaniline | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| 2,4,5-Trichlorophenol | 6,100 | 62,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2,4,6-Trichlorophenol | 44 | 160 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2,4-Dichlorophenol | 180 | 1,800 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | **0.1** | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2,4-Dimethylphenol | 1,200 | 12,000 | 0.52 U | 0.49 U | 0.49 U | 0.47 U | 0.47 U | 0.52 U | 0.45 U | 0.47 U | 0.47 U | 0.49 U | 0.53 U | 0.51 U | 0.47 U | 0.52 U | 0.52 U | 0.54 U | 0.39 U | | | 0.444 U | 0.419 U |
| 2,4-Dinitrophenol | 120 | 1,200 | 0.26 U | 0.25 U | 0.25 U | 0.23 U | 0.23 U | 0.26 U | 0.23 U | 0.23 U | 0.23 U | 0.24 U | 0.26 U | 0.25 U | 0.24 U | 0.26 U | 0.26 U | 0.27 U | 0.2 U | | | 0.888 U | 0.837 U |
| 2,4-Dinitrotoluene | 1.6 | 5.5 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2,6-Dinitrotoluene | 61 | 620 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2-Chloronaphthalene | 6,300 | 82,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.0444 U | 0.0419 U |
| 2-Chlorophenol | 390 | 5,100 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2-Methylnaphthalene | 310 | 4,100 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.034** | 0.0098 U | 0.011 U | **1.9** | 0.0095 U | **0.035** | 0.01 U | 0.011 U | 0.0078 U | | | 0.0444 U | 0.0419 U |
| 2-Methylphenol | 3,100 | 31,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2-Nitroaniline | 610 | 6000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 2-Nitrophenol | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 3 & 4-Methylphenol | 3,100 | 31,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 3,3'-Dichlorobenzidine | 1.1 | 3.8 | 0.52 UJL | 0.49 UJL | 0.49 UJL | 0.47 UJL | 0.47 UJL | 0.52 UJL | 0.45 UJL | 0.47 UJL | 0.47 UJL | 0.49 U | 0.53 U | 0.51 U | 0.47 U | 0.52 U | 0.52 U | 0.54 U | 0.39 U | | | 0.444 U | 0.419 U |
| 3-Nitroaniline | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 4,6-Dinitro-2-methylphenol | 4.9 | 49 | 0.26 U | 0.25 U | 0.25 U | 0.23 U | 0.23 U | 0.26 U | 0.23 U | 0.23 U | 0.23 U | 0.24 U | 0.26 U | 0.25 U | 0.24 U | 0.26 U | 0.26 U | 0.27 U | 0.2 U | | | 0.444 U | 0.419 U |
| 4-Bromophenyl-phenyl ether | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 4-Chloro-3-methylphenol | 6,100 | 62,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | **0.089** | 0.039 U | | | 0.444 U | 0.419 U |
| 4-Chloroaniline | 2.4 | 8.6 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 4-Chlorophenyl-phenylether | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 4-Nitroaniline | 24 | 86 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| 4-Nitrophenol | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Acenaphthene | 3,400 | 33,000 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.031** | 0.0098 U | 0.011 U | **0.4** | 0.0095 U | **0.029** | 0.01 U | 0.011 U | 0.0078 U | | | 0.0444 U | 0.0419 U |
| Acenaphthylene | NA | NA | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.015** | 0.0098 U | 0.011 U | **0.13** | 0.0095 U | **0.025** | 0.01 U | 0.011 U | 0.0078 U | | | 0.0444 U | **0.0176 JQ** |
| Aniline | 85 | 300 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| Anthracene | 17,000 | 170,000 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.011** | 0.0098 U | 0.011 U | **0.42** | 0.0095 U | **0.04** | 0.01 U | 0.011 U | 0.0078 U | | | 0.0444 U | **0.023 JQ** |
| Benzidine | 0.0005 | 0.0075 | 0.52 U | 0.49 U | 0.49 U | 0.47 U | 0.47 U | 0.52 U | 0.45 U | 0.47 U | 0.47 U | 0.49 U | 0.53 U | 0.51 U | 0.47 U | 0.52 U | 0.52 U | 0.54 U | 0.39 U | | | | |
| Benzo(a)anthracene | 0.15 | 2.1 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.013** | 0.0098 U | 0.011 U | **0.046** | 0.0095 U | **0.025** | 0.01 U | 0.011 U | **0.04** | | | **0.0511** | **0.205** |
| Benzo(a)pyrene | 0.015 | 0.21 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | 0.0094 U | 0.0098 U | 0.011 U | **0.057** | 0.0095 U | 0.01 U | 0.01 U | 0.011 U | **0.045** | | | **0.0684** | **0.228 JL** |
| Benzo(b)fluoranthene | 0.15 | 2.1 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.014** | 0.0098 U | 0.011 U | **0.071** | 0.0095 U | **0.015** | 0.01 U | 0.011 U | **0.072** | | | **0.131** | **0.349 JL** |
| Benzo(g,h,i)perylene | NA | NA | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | 0.0094 U | 0.0098 U | 0.011 U | **0.051** | 0.0095 U | 0.01 U | 0.01 U | 0.011 U | **0.051** | | | **0.048** | **0.118 JL** |
| Benzo(k)fluoranthene | 1.5 | 21 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | 0.0094 U | 0.0098 U | 0.011 U | **0.04** | 0.0095 U | 0.01 U | 0.01 U | 0.011 U | **0.042** | | | **0.0333 JQ** | **0.117 JL** |
| Benzyl alcohol | 6,100 | 62,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| Bis(2-chloroethoxy)methane | 180 | 1,800 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Bis(2-Chloroethyl)ether | 0.21 | 1 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Bis(2-chloroisopropyl)ether | 4.6 | 22 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Bis(2-ethylhexyl)phthalate | 35 | 120 | 0.052 U | **0.058** | **0.13** | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | **0.11** | **0.53** | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| bis-2-Ethylhexyladipate | 410 | 1,400 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| Butylbenzylphthalate | 260 | 910 | 0.52 U | 0.49 U | 0.49 U | 0.47 U | 0.47 U | 0.52 U | 0.45 U | 0.47 U | 0.47 U | 0.49 U | 0.53 U | 0.51 U | 0.47 U | 0.52 U | 0.52 U | 0.54 U | 0.39 U | | | **0.156 JQ** | 0.419 U |
| Carbazole | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.0444 U | 0.0419 U |
| Chrysene | 15 | 210 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.035** | **0.0098** | 0.011 U | **0.061** | 0.0095 U | **0.048** | 0.01 U | 0.011 U | **0.041** | | | **0.0533** | **0.222** |
| Dibenzo(a,h)anthracene | 0.015 | 0.21 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | 0.0094 U | 0.0098 U | 0.011 U | 0.01 U | 0.0095 U | 0.01 U | 0.01 U | 0.011 U | **0.0092** | | | 0.0444 U | 0.0419 U |
| Dibenzofuran | 78 | 1,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Diethylphthalate | 49,000 | 490,000 | 0.26 U | 0.25 U | 0.25 U | 0.23 U | 0.23 U | 0.26 U | 0.23 U | 0.23 U | 0.23 U | 0.24 U | 0.26 U | 0.25 U | 0.24 U | 0.26 U | 0.26 U | 0.27 U | 0.2 U | | | 0.444 U | 0.419 U |
| Dimethylphthalate | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Di-n-butylphthalate | 6,100 | 62,000 | 0.52 U | 0.49 U | 0.49 U | 0.47 U | 0.47 U | 0.52 U | 0.45 U | 0.47 U | 0.47 U | 0.49 U | 0.53 U | 0.51 U | 0.47 U | 0.52 U | 0.52 U | 0.54 U | 0.39 U | | | 0.444 U | 0.419 U |
| Di-n-octylphthalate | NA | NA | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Fluoranthene | 2,300 | 22,000 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.018** | 0.0098 U | 0.011 U | **0.068** | 0.0095 U | **0.035** | 0.01 U | 0.011 U | **0.06** | | | **0.0719** | **0.268** |
| Fluorene | 2,300 | 22,000 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.056** | **0.016** | 0.011 U | **0.58** | 0.0095 U | **0.092** | 0.01 U | 0.011 U | 0.0078 U | | | 0.0444 U | 0.0419 U |
| Hexachlorobenzene | 0.3 | 1.1 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Hexachlorobutadiene | 6.2 | 22 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Hexachlorocyclopentadiene | 370 | 3,700 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Hexachloroethane | 35 | 120 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Indeno(1,2,3-cd)pyrene | 0.15 | 2.1 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | 0.0094 U | 0.0098 U | 0.011 U | **0.029** | 0.0095 U | 0.01 U | 0.01 U | 0.011 U | **0.04** | | | **0.0351 JQ** | **0.108 JL** |
| Isophorone | 510 | 1,800 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Naphthalene | 3.6 | 18 | 0.01 U | 0.0099 U | 0.0099 U | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | 0.0094 U | 0.0098 U | 0.011 U | **0.19** | 0.0095 U | 0.01 U | 0.01 U | 0.011 U | 0.0078 U | | | 0.0444 U | 0.0419 U |
| Nitrobenzene | 4.8 | 24 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| N-Nitrosodimethylamine | 0.0023 | 0.034 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| N-Nitroso-di-n-propylamine | 0.069 | 0.25 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| N-Nitrosodiphenylamine | 99 | 350 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | | |
| Pentachlorophenol | 0.89 | 2.7 | 0.26 UJL | 0.25 UJL | 0.25 UJL | 0.23 UJL | 0.23 UJL | 0.26 UJL | 0.23 UJL | 0.23 UJL | 0.23 UJL | 0.24 U | 0.26 U | 0.25 U | 0.24 U | 0.26 U | 0.26 U | 0.27 U | 0.2 U | | | 0.444 U | 0.419 U |
| Phenanthrene | NA | NA | 0.01 U | 0.0099 U | **0.018** | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.16** | **0.027** | 0.011 U | **1.3** | 0.0095 U | **0.19** | 0.01 U | 0.011 U | **0.011** | | | **0.0209 JQ** | **0.0841** |
| Phenol | 18,000 | 180,000 | 0.052 U | 0.049 U | 0.049 U | 0.047 U | 0.047 U | 0.052 U | 0.045 U | 0.047 U | 0.047 U | 0.049 U | 0.053 U | 0.051 U | 0.047 U | 0.052 U | 0.052 U | 0.054 U | 0.039 U | | | 0.444 U | 0.419 U |
| Pyrene | 1,700 | 17,000 | 0.01 U | 0.0099 U | **0.013** | 0.0093 U | 0.0093 U | 0.01 U | 0.0091 U | 0.0093 U | **0.035** | **0.014** | 0.011 U | **0.22** | 0.0095 U | **0.057** | 0.01 U | 0.011 U | **0.056** | | | **0.0861** | **0.439 JK** |
| Pyridine | 78 | 1,000 | 0.52 U | 0.49 U | 0.49 U | 0.47 U | 0.47 U | 0.52 U | 0.45 U | 0.47 U | 0.47 U | 0.49 U | 0.53 U | 0.51 U | 0.47 U | 0.52 U | 0.52 U | 0.54 U | 0.39 U | | | | |

**Table B-5 Comprehensive Analytical Data for Pesticides in Soil (Page 1 of 1)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-05-0702 | 09-05-0703 | 09-09-0908 | 09-09-0909 | 09-09-0912 | 09-09-0913 | 09-09-0915 | 09-09-0916 | 9090917 | 9090919 | 09-09-0920 | 09-09-0921 | 09-09-0924 | 09-09-0928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 | SA07SB04 | SA07SB08 | SA04SB04 | SA04SB08 | SA04SS | SA01SB04 | SA01SB08 | SA01SS | SA03SB04 | SA03SB08 | SA06SB04 | SA02SB04 |
| Sample Depth | | | Surface | Surface | 4' BGS | 8' BGS | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | Surface | 4' BGS | 8' BGS | 4' BGS | 4' BGS |
| Sample Collection Event | | | May-09 | May-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **Pesticides (µg/kg)** | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 2,000 | 7,200 | **49** | **25 J** | **84 J** | 14 UJ | 11 UJ | 11 UJ | 10 UJ | 12 UJ | 11 U | 10 UJ | 13 U | 12 U | 13 UJ | 12 UJ |
| 4,4'-DDE | 1,400 | 5,100 | **290** | **300 J** | **160 J** | 14 UJ | 11 UJ | 11 UJ | **52 J** | **31 J** | **29** | **77 J** | **19** | 12 U | 13 UJ | 12 UJ |
| 4,4'-DDT | 1700 | 7,000 | **190 J** | **380 J** | 13 U | 14 UJ | 11 UJ | 11 UJ | **72 J** | 12 UJ | 11 U | **89 J** | **60 J** | 12 UJ | 13 UJ | **24 J** |
| Aldrin | 29 | 100 | 16 U | 16 U | 6.7 UJ | 6.8 UJ | 5.5 UJ | 5.6 UJ | 5.1 UJ | 6.1 U | 5.6 U | 5.2 UJ | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| alpha-BHC | 77 | 270 | 16 U | 16 U | 6.7 UJ | 6.8 UJ | 5.5 UJ | 5.6 U | 5.1 U | 6.1 UJ | 5.6 U | 5.2 U | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| alpha-Chlordane | NA | NA | 16 U | 16 U | **44 J** | 14 UJ | 11 UJ | 11 UJ | 10 UJ | 12 UJ | 11 U | 10 UJ | 13 UJ | 12 UJ | 13 UJ | 12 UJ |
| beta-BHC | 270 | 960 | 16 U | 16 U | **280 J** | 6.8 UJ | 5.5 UJ | 5.6 U | **9.6** | 6.1 U | 5.6 U | 5.2 U | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| delta-BHC | NA | NA | 16 U | 16 U | 6.7 UJ | 6.8 UJ | 5.5 UJ | 5.6 UJ | 5.1 UJ | 6.1 UJ | 5.6 U | 5.2 UJ | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| Dieldrin | 30 | 110 | **29 J** | 33 U | **100 J** | 14 UJ | 11 UJ | 11 UJ | **51** | 12 UJ | 11 U | **22 J** | 13 UJ | 12 UJ | 13 UJ | 12 UJ |
| Endosulfan I | NA | NA | 16 U | 16 U | 6.7 UJ | 6.8 UJ | 5.5 UJ | 5.6 UJ | 5.1 UJ | 6.1 UJ | 5.6 UJ | 5.2 UJ | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| Endosulfan II | NA | NA | **53** | **84 J** | 13 UJ | 14 UJ | 11 UJ | 11 UJ | 10 UJ | 12 UJ | 11 U | 10 UJ | 13 UJ | 12 UJ | 13 UJ | 12 UJ |
| Endosulfan sulfate | NA | NA | 32 U | 33 U | 13 UJ | 14 UJ | 11 UJ | 11 UJ | 10 UJ | 12 UJ | 11 U | 10 UJ | 13 UJ | 12 U | 13 UJ | 12 UJ |
| Endrin | 18,000 | 180,000 | **27 J** | 33 U | 13 UJ | 14 UJ | 11 UJ | 11 UJ | 10 UJ | 12 UJ | 11 U | 10 UJ | **48 J** | 12 U | 13 UJ | 12 UJ |
| Endrin aldehyde | NA | NA | 32 U | 33 U | **140 J** | 14 UJ | 11 UJ | 11 UJ | **68 J** | 12 UJ | 11 U | **77 J** | 13 U | 12 UJ | 13 UJ | 12 UJ |
| Endrin ketone | NA | NA | 32 U | **30 J** | 30 UJ | 14 UJ | 11 UJ | 11 UJ | 10 UJ | 12 UJ | 11 U | 10 UJ | 13 U | 12 U | 13 UJ | 12 UJ |
| gamma-BHC | 520 | 2,100 | 16 U | **16 J** | **110 J** | 6.8 UJ | 5.5 UJ | 5.6 U | 5.1 U | 6.1 U | 5.6 U | 5.2 U | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| gamma-Chlordane | NA | NA | **29 J** | **74 J** | 13 UJ | 14 UJ | 11 UJ | 11 UJ | **26 J** | 12 UJ | 11 U | 10 UJ | 13 U | 12 U | 13 UJ | 12 UJ |
| Heptachlor | 110 | 380 | 16 U | 16 U | 6.7 UJ | 6.8 UJ | 5.5 UJ | 5.6 U | 5.1 U | 6.1 U | 5.6 U | 5.2 U | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| Heptachlor epoxide | 53 | 190 | **35 J** | **50 J** | 6.7 UJ | 6.8 UJ | 5.5 UJ | 5.6 UJ | 5.1 UJ | 6.1 UJ | 5.6 U | 5.2 UJ | 6.3 U | 5.9 U | 6.4 UJ | 6.1 UJ |
| Methoxychlor | 310,000 | 3,100,000 | 160 U | 160 U | **86 J** | 14 UJ | 11 UJ | 11 UJ | **26 J** | 12 UJ | 11 U | 10 UJ | 13 U | 12 U | 13 UJ | 12 UJ |
| Toxaphene | 440 | 1,600 | 2,000 U | 2,100 U | 67 UJ | 68 UJ | 55 UJ | 56 U | 51 UJ | 61 U | 56 U | 52 U | 63 U | 59 U | 64 UJ | 61 UJ |

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-09-0929 | 09-09-0932 | 09-09-0933 | 09-09-0936 | 09-09-0937 | 09-09-0953 | 09-09-0954 | 09-09-0956 | 09-09-0957 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | SA02SB08 | SA05SB04 | SA05SB08 | SH01SB04 | SH01SB08 | SW01SB08 | SW01SB04 | SW02SS | SW02SB02 |
| Sample Depth | | | 8' BGS | 4' BGS | 8' BGS | 4' BGS | 8' BGS | 8' BGS | 4' BGS | Surface | 2' BGS |
| Sample Collection Event | | | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 | Sep-09 |
| **Pesticides (µg/kg)** | | | | | | | | | | | |
| 4,4'-DDD | 2,000 | 7,200 | 13 UJ | 13 UJ | 14 UJ | **26 J** | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| 4,4'-DDE | 1,400 | 5,100 | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | **45 J** | 16 UJ |
| 4,4'-DDT | 1700 | 7,000 | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 UJ | 11 UJ | 16 UJ | 16 UJ |
| Aldrin | 29 | 100 | 6.5 UJ | 6.6 UJ | 6.8 UJ | 7.1 UJ | 7.8 UJ | 5.8 U | 5.6 UJ | 7.8 UJ | 8.1 UJ |
| alpha-BHC | 77 | 270 | 6.5 UJ | 6.6 UJ | 6.8 UJ | 7.1 UJ | 7.8 UJ | 5.8 U | 5.6 U | 7.8 UJ | 8.1 UJ |
| alpha-Chlordane | NA | NA | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| beta-BHC | 270 | 960 | 6.5 UJ | 6.6 UJ | 6.8 UJ | 7.1 UJ | 7.8 UJ | 5.8 U | 5.6 U | 7.8 UJ | 8.1 UJ |
| delta-BHC | NA | NA | 6.5 UJ | 6.6 UJ | 6.8 UJ | **54 J** | 7.8 UJ | 5.8 U | 5.6 UJ | 7.8 UJ | 8.1 UJ |
| Dieldrin | 30 | 110 | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 UJ | 11 UJ | 16 UJ | 16 UJ |
| Endosulfan I | NA | NA | 6.5 UJ | 6.6 UJ | 6.8 UJ | 7.1 UJ | 7.8 UJ | 5.8 U | 5.6 UJ | 7.8 UJ | 8.1 UJ |
| Endosulfan II | NA | NA | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| Endosulfan sulfate | NA | NA | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 U | 16 UJ | 16 UJ |
| Endrin | 18,000 | 180,000 | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| Endrin aldehyde | NA | NA | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| Endrin ketone | NA | NA | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| gamma-BHC | 520 | 2,100 | 6.5 UJ | 6.6 UJ | 6.8 UJ | 7.1 UJ | 7.8 UJ | 5.8 U | 5.6 U | 7.8 UJ | 8.1 UJ |
| gamma-Chlordane | NA | NA | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| Heptachlor | 110 | 380 | 6.5 UJ | 6.6 UJ | 6.8 UJ | 7.1 UJ | 7.8 UJ | 5.8 U | 5.6 U | 7.8 UJ | 8.1 UJ |
| Heptachlor epoxide | 53 | 190 | 6.5 UJ | 6.6 UJ | 6.8 UJ | **24 J** | 7.8 UJ | 5.8 U | 5.6 UJ | 7.8 UJ | 8.1 UJ |
| Methoxychlor | 310,000 | 3,100,000 | 13 UJ | 13 UJ | 14 UJ | 14 UJ | 16 UJ | 12 U | 11 UJ | 16 UJ | 16 UJ |
| Toxaphene | 440 | 1,600 | 65 UJ | 66 UJ | 68 UJ | 71 UJ | 78 UJ | 58 U | 56 U | 78 UJ | 81 UJ |

Note: No other samples were submitted for pesticide analysis as part of the removal site evaluation.

**Table B-6 Comprehensive Analytical Data for VOCs in Soil (Page 1 of 1)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-05-0702 | 09-05-0703 |
|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 |
| Sample Depth | | | Surface | Surface |
| Sample Collection Event | | | May-09 | May-09 |
| **VOCs (µg/kg)** | | | | |
| 1,1,1,2-Tetrachloroethane | 1,900 | 9,300 | 4.6 UJ | 5.6 U |
| 1,1,1-Trichloroethane | 8,700,000 | 38,000,000 | 4.6 UJ | 5.6 U |
| 1,1,2,2-Tetrachloroethane | 560 | 2,800 | 4.6 UJ | 5.6 U |
| 1,1,2-Trichloroethane | 1,100 | 5,300 | 4.6 UJ | 5.6 U |
| 1,1-Dichloroethane | 3,300 | 17,000 | 4.6 UJ | 5.6 U |
| 1,1-Dichloroethene | 240,000 | 1,100,000 | 4.6 UJ | 5.6 U |
| 1,1-Dichloropropene | NA | NA | 4.6 UJ | 5.6 U |
| 1,2,3-Trichlorobenzene | NA | NA | 4.6 UJ | 5.6 U |
| 1,2,3-Trichloropropane | 5 | 95 | 4.6 UJ | 5.6 U |
| 1,2,4-Trichlorobenzene | 22,000 | 99,000 | 4.6 UJ | 5.6 U |
| 1,2,4-Trimethylbenzene | 62,000 | 260,000 | 4.6 UJ | **2 J** |
| 1,2-Dibromo-3-chloropropane | 5.4 | 69 | 4.6 UJ | 5.6 U |
| 1,2-Dibromoethane | 34 | 170 | 4.6 UJ | 5.6 U |
| 1,2-Dichlorobenzene | 1,900,000 | 9,800,000 | 4.6 UJ | 5.6 U |
| 1,2-Dichloroethane | 430 | 2,200 | 4.6 UJ | 5.6 U |
| 1,2-Dichloropropane | 940 | 4,700 | 4.6 UJ | 5.6 U |
| 1,3,5-Trimethylbenzene | 780,000 | 10,000,000 | 4.6 UJ | 5.6 U |
| 1,3-Dichlorobenzene | NA | NA | 4.6 UJ | 5.6 U |
| 1,3-Dichloropropane | 1,600,000 | 20,000,000 | 4.6 UJ | 5.6 U |
| 1,4-Dichlorobenzene | 2,400 | 12,000 | 4.6 UJ | 5.6 U |
| 2,2-Dichloropropane | NA | NA | 4.6 UJ | 5.6 U |
| 2-Butanone | 28,000,000 | 200,000,000 | **3.5 J** | **43** |
| 2-Chlorotoluene | 1,600,000 | 20,000,000 | 4.6 UJ | 5.6 U |
| 2-Hexanone | 210,000 | 1,400,000 | 15 UJ | **6.6 J** |
| 4-Chlorotoluene | 1,600,000 | 20,000,000 | 4.6 UJ | 5.6 U |
| 4-Isopropyltoluene | NA | NA | 4.6 UJ | 5.6 U |
| 4-Methyl-2-pentanone | 5,300,000 | 53,000,000 | **31 J** | **44** |
| Acetone | 61,000,000 | 630,000,000 | **130 J** | **230** |
| Benzene | 1,100 | 5,400 | 4.6 UJ | 5.6 U |
| Bromobenzene | 300,000 | 1,800,000 | 4.6 UJ | 5.6 U |
| Bromochloromethane | 160,000 | 680,000 | 4.6 UJ | 5.6 U |
| Bromodichloromethane | 270 | 1,400 | 4.6 UJ | 5.6 U |
| Bromoform | 62,000 | 220,000 | 4.6 UJ | 5.6 U |
| Bromomethane | 7,300 | 32,000 | 4.6 UJ | 5.6 UJ |
| Carbon disulfide | 820,000 | 3,700,000 | 4.6 UJ | 5.6 U |
| Carbon tetrachloride | 610 | 3,000 | 4.6 UJ | 5.6 U |
| Chlorobenzene | 290,000 | 1,400,000 | 4.6 UJ | 5.6 U |
| Chloroethane | 15,000,000 | 61,000,000 | 4.6 UJ | 5.6 UJ |
| Chloroform | 290 | 1,500 | 4.6 UJ | 5.6 U |
| Chloromethane | 120,000 | 500,000 | 4.6 UJ | 5.6 U |
| cis-1,2-Dichloroethene | 160,000 | 2,000,000 | 4.6 UJ | 5.6 U |
| cis-1,3-Dichloropropene | NA | NA | 4.6 UJ | 5.6 U |
| Dibromochloromethane | 680 | 3,300 | 4.6 UJ | 5.6 U |
| Dibromomethane | 25,000 | 110,000 | 4.6 UJ | 5.6 U |
| Dichlorodifluoromethane | 94,000 | 400,000 | 4.6 UJ | 5.6 U |
| Ethylbenzene | 5,400 | 27,000 | 4.6 UJ | 5.6 U |
| Hexachlorobutadiene | 6,200 | 22,000 | 4.6 UJ | 5.6 U |
| Isopropylbenzene | 2,100,000 | 11,000,000 | 4.6 UJ | 5.6 U |
| m,p-Xylene | NA | NA | 9.2 UJ | **2.9 J** |
| Methyl tert-butyl ether | 43,000 | 220,000 | 4.6 UJ | 5.6 U |
| Methylene chloride | 11,000 | 53,000 | **7.0 J** | **7.2** |
| Naphthalene | 3,600 | 18,000 | **1.8 J** | **1.9 J** |
| n-Butylbenzene | 3,900,000 | 51,000,000 | 4.6 UJ | 5.6 U |
| n-Propylbenzene | 3,400,000 | 21,000,000 | 4.6 UJ | 5.6 U |
| o-Xylene | 690,000 | 3,000,000 | 4.6 UJ | 5.6 U |
| sec-Butylbenzene | NA | NA | 4.6 UJ | 5.6 U |
| Styrene | 6,300,000 | 36,000,000 | 4.6 UJ | 5.6 U |
| tert-Butylbenzene | NA | NA | 4.6 UJ | 5.6 U |
| Tetrachloroethene | 550 | 2,600 | 4.6 UJ | 5.6 U |
| Toluene | 5,000,000 | 45,000,000 | 4.6 UJ | **1.9 J** |
| trans-1,2-Dichloroethene | 150,000 | 690,000 | 4.6 UJ | 5.6 U |
| trans-1,3-Dichloropropene | NA | NA | 4.6 UJ | 5.6 U |
| Trichloroethene | 2,800 | 14,000 | 4.6 UJ | 5.6 U |
| Trichlorofluoromethane | 790,000 | 3,400,000 | 4.6 UJ | **6.3** |
| Vinyl chloride | 60 | 1,700 | 4.6 UJ | 5.6 U |

Note: No other samples were submitted for VOC analysis as part of the removal site evaluation.

**Table B-7 Comprehensive Analytical Data for Dioxins in Soil (Page 1 of 1)**

| EPA Sample ID | EPA RSL - Residential Soil | EPA RSL - Industrial Soil | 09-05-0702 | 09-05-0703 |
|---|---|---|---|---|
| Sample Location | | | SS02 | SS03 |
| Sample Depth | | | Surface | Surface |
| Sample Collection Event | | | May-09 | May-09 |
| **Dioxin (ng/kg)** | | | | |
| 2,3,7,8-TCDD | 4.5 | 18 | 2.7 U | 3.3 U |
| 1,2,3,7,8-PeCDD | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,4,7,8-HxCDD | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,6,7,8-HxCDD | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,7,8,9-HxCDD | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,4,6,7,8-HpCDD | NA | NA | 6.8 U | **1.1 J** |
| OCDD | NA | NA | **8.1 J** | **14 J** |
| 2,3,7,8-TCDF | NA | NA | 2.7 U | 3.3 U |
| 1,2,3,7,8-PeCDF | NA | NA | 6.8 U | 8.2 U |
| 2,3,4,7,8-PeCDF | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,4,7,8-HxCDF | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,6,7,8-HxCDF | NA | NA | 6.8 U | 8.2 U |
| 2,3,4,6,7,8-HxCDF | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,7,8,9-HxCDF | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,4,6,7,8-HpCDF | NA | NA | 6.8 U | 8.2 U |
| 1,2,3,4,7,8,9-HpCDF | NA | NA | 6.8 U | 8.2 U |
| OCDF | NA | NA | 14 U | 16 U |

Note: No other samples were submitted for dioxin analysis as part of the removal site evaluation.

**Key for Appendix B Tables**

Note:

= Greater than or equal to EPA RSL industrial screening criteria for soil, or for TPH the value is greater than or equal to Washington MTCA cleanup levels for soil at unrestricted and industrial properties.

= Greater than or equal to EPA RSL residential, but less than RSL industrial, screening criteria in soil.

= Not analyzed.

Key:

| | |
|---|---|
| BGS | = Below ground surface. |
| EPA | = Environmental Protection Agency. |
| J | = The analyte was positively identified; the associated numerical value is the approximate concentration. |
| JK | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias. |
| JL | = The analyte was positively identified; the associated numerical value is the approximate concentration with a low bias. |
| JQ | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias and falls between the method detection limit and the minimum, or practical, quantitation limit. |
| MTCA | = Model Toxics Control Act. |
| mg/kg | = Milligrams per kilogram (parts per million). |
| µg/kg | = Micrograms per kilogram (parts per billion). |
| PCBs | = Polychlorinated biphenyls. |
| RSL | = Regional screening levels for chemical contaminants at Superfund sites. |
| SVOCs | = Semivolatile organic hydrocarbons. |
| TPH | = Total petroleum hydrocarbons. |
| U | = The analyte was analyzed for, but not detected above the reported sample quantitation limit. |
| UJ | = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |

# C Comprehensive Water Data Tables

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**Table C-1 Comprehensive Analytical Data for Metals in Water (Page 1 of 1)**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 09-05-0705 | 09-05-0706 | 09-10-1021 | 09-10-1022 | 09-10-1023 | 09-10-1024 | 10-03-0012 | 10-03-0013 | 10-03-0014 | 10-03-0015 | 10-10-0001 | 10-10-0002 | 10-10-0003 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | GW01 | GW02 | SW01 | SW02 | SW03 | SW04 | MW04GW15 | MW02GW20 | MW01GW20 | MW03GW15 | MW01 | MW02 | MW03 |
| Sample Details | | | Domestic Well | Domestic Well | Surface Water | Surface Water | Surface Water | Surface Water | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | May-09 | May-09 | Oct-09 | Oct-09 | Oct-09 | Oct-09 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Oct-10 | Oct-10 | Oct-10 |
| **Metals (µg/L)** | | | | | | | | | | | | | | | |
| Aluminum | 16,000 | NA | 54.5 U | 54.6 U | 110 UJ | **120** | 110 U | 110 U | 56 U | 56 U | **1,300** | 56 U | **940** | **130** | 56 U |
| Antimony (Metallic) | 6 | 6 | 3 U | 3 U | 5.6 UJ | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U |
| Arsenic (Inorganic) | 0.045 | 10 | 1.3 U | 1.3 U | 3.3 UJ | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U |
| Barium | 2,900 | 2,000 | **25.1 J** | **26 J** | 28 UJ | 28 U | 28 U | 28 U | 28 U | 28 U | **51** | 28 U | **33** | 28 U | 28 U |
| Beryllium & Compounds | 16 | 4 | 0.51 U | 0.51 U | 11 UJ | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| Cadmium (Water) | 6.9 | 5 | 1.1 U | 1.1 U | 4.4 UJ | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U |
| Calcium | NA | NA | **17,700** | **18,700** | **9,600 J** | **10,000** | **9,900** | **10,000** | **17,000** | **21,000** | **31,000** | **16,000** | **21,000** | **20,000** | **17,000** |
| Chromium (Total) | NA | 100 | 0.31 U | 0.31 U | 11 UJ | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| Chromium (VI) | 0.031 | NA | | | | | | | | | | | | | |
| Cobalt | 4.7 | NA | 0.36 UJ | 0.36 UJ | 11 UJ | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| Copper | 620 | 1,300 | **31** | 6.5 U | 11 UJ | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| Iron | 11,000 | NA | **845** | **210** | **120 J** | **190** | **82** | **110** | **88** | **160** | **2,900** | **59** | **1,800 J** | **260 J** | 56 UJ |
| Lead & Compounds | NA | 15 | **6.1 J** | 1.8 U | 1.1 UJ | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | **1.5** | 1.1 U | 1.1 U |
| Magnesium | NA | NA | **7,440 J** | **7,790 J** | **3,700 J** | **3,900** | **3,800** | **3,900** | **6,600** | **8,300** | **12,000** | **6,100** | **8,000** | **7,800** | **6,500** |
| Manganese (Non-Diet) | 320 | NA | **8.8 J** | **7.3 J** | 11 UJ | 11 U | 11 U | 11 U | **45** | **34** | **91** | 11 U | **42** | **20** | 11 U |
| Mercury (Elemental) | 0.63 | 2 | 0.072 UJ | 0.072 UJ | 0.5 UJ | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Nickel (Soluble Salts) | 300 | NA | 1.2 U | 1.2 U | 22 UJ | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U |
| Potassium | NA | NA | **3,990 J** | **4,430 J** | **2,800 J** | **2,900** | **2,800** | **2,700** | **3,800** | **4,100** | **6,200** | **3,300** | **4,700** | **4,200** | **3,700** |
| Selenium | 78 | 50 | **0.89 J** | 0.55 UJ | 5.6 UJ | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U |
| Silver | 71 | NA | 1.2 U | 0.77 U | 11 UJ | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| Sodium | NA | NA | **6,360** | **7,600** | **4,200 J** | **4,600** | **4,300** | **4,300** | **12,000** | **9,300** | **28,000** | **5,900** | **9,700** | **7,900** | **6,000** |
| Thallium (Soluble Salts) | 0.16 | 2 | 5.9 UJ | 5.9 UJ | 5.6 UJ | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U |
| Vanadium & Compounds | 78 | NA | **6.4 J** | **7.6 J** | 11 UJ | 11 U | 11 U | 11 U | 11 U | 11 U | **14** | 11 U | **12** | 11 U | 11 U |
| Zinc & Compounds | 4,700 | NA | **82.4** | **81.4** | 56 UJ | 56 U | 56 U | 56 U | 56 U | 56 U | 56 U | 56 U | 56 U | 56 U | 56 U |

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 10-10-0004 | 11-06-0001 | 11-06-0002 | 11-06-0003 | 11-06-0004 | 11-06-0005 | 11-06-0020 | 11-06-0021 | 11-06-0052 | 11-06-0053 | 11-06-0055 | 11-06-0056 | 11-06-0058 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW04 | MW01 | MW02 | MW03 | MW04 | P202GW20 | P207GW08 | P208GW08 | P217GW12 | P222GW12 | P221GW12 | P214GW12 | P220GW09 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Oct-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **Metals (µg/L)** | | | | | | | | | | | | | | | |
| Aluminum | 16,000 | NA | 56 U | **140** | 110 U | 110 U | **270** | **2,400** | 110 U | **8,400** | **3,100** | **7,200** | **1,000** | **6,400** | **29,000** |
| Antimony (Metallic) | 6 | 6 | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U |
| Arsenic (Inorganic) | 0.045 | 10 | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 3.3 U | 11 U | 8.3 U | 3.3 U | **6.1** |
| Barium | 2,900 | 2,000 | 28 U | **33** | **34** | 28 U | **31** | **92** | **28** | **82** | **97** | **250** | **190** | **120** | **360** |
| Beryllium & Compounds | 16 | 4 | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| Cadmium (Water) | 6.9 | 5 | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U | 4.4 U |
| Calcium | NA | NA | **15,000** | **20,000** | **22,000** | **16,000** | **21,000** | **37,000** | **20,000** | **22,000** | **48,000** | **93,000** | **130,000** | **37,000** | **32,000** |
| Chromium (Total) | NA | 100 | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | **14** | **15** | **31** | **36** |
| Chromium (VI) | 0.031 | NA | | | | | | | | | | | | | |
| Cobalt | 4.7 | NA | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | **16** | **12** | **29** |
| Copper | 620 | 1,300 | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | **41** | 11 U | **13** | **45** | **22** | **180** |
| Iron | 11,000 | NA | **94 J** | **250** | **190** | 56 U | **520** | **5,200** | **190** | **13,000** | **7,600 JK** | **19,000 JK** | **7,100 JK** | **24,000 JK** | **68,000 JK** |
| Lead & Compounds | NA | 15 | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.1 U | **2.9** | **42** | 1.1 U | **9.4** | **380** | **7.3** | **170** |
| Magnesium | NA | NA | **5,700** | **8,500** | **9,600** | **6,500** | **8,600** | **16,000** | **8,400** | **9,200** | **22,000** | **43,000** | **63,000** | **17,000** | **12,000** |
| Manganese (Non-Diet) | 320 | NA | 11 U | 11 U | 11 U | 11 U | **11** | **210** | 11 U | **190** | **480** | **2,500** | **4,500** | **880** | **2,300** |
| Mercury (Elemental) | 0.63 | 2 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U |
| Nickel (Soluble Salts) | 300 | NA | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | 22 U | **36** | **24** | 22 U | **33** |
| Potassium | NA | NA | **3,900** | **4,400** | **4,500** | **3,700** | **4,600** | **7,100** | **4,400** | **5,400** | **7,500** | **13,000** | **9,100** | **6,200** | **13,000** |
| Selenium | 78 | 50 | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 22 U | 8.3 U | 5.6 U | 5.6 U |
| Silver | 71 | NA | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U | 11 U |
| Sodium | NA | NA | **6,700** | **7,900** | **8,800** | **6,000** | **8,300** | **59,000** | **7,800** | **8,300** | **53,000** | **150,000** | **30,000** | **16,000** | **10,000** |
| Thallium (Soluble Salts) | 0.16 | 2 | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U | 5.6 U |
| Vanadium & Compounds | 78 | NA | 11 U | 11 U | 11 U | 11 U | **12** | **22** | 11 U | **45** | **34** | **53** | **150** | **97** | **300** |
| Zinc & Compounds | 4,700 | NA | 56 U | 56 U | 56 U | 56 U | 56 U | 56 U | 56 U | **100** | 56 U | **230** | 56 U | **100** | **1,100** |

**Table C-2 Comprehensive Analytical Data for PCBs in Water (Page 1 of 1)**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 09-05-0705 | 09-05-0706 | 09-10-1021 | 09-10-1022 | 09-10-1023 | 09-10-1024 | 10-03-0012 | 10-03-0013 | 10-03-0014 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | GW01 | GW02 | SW01 | SW02 | SW03 | SW04 | MW04GW15 | MW02GW20 | MW01GW20 |
| Sample Details | | | Domestic Well | Domestic Well | Surface Water | Surface Water | Surface Water | Surface Water | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | May-09 | May-09 | Oct-09 | Oct-09 | Oct-09 | Oct-09 | Mar-10 | Mar-10 | Mar-10 |
| **PCBs (µg/L)** | | | | | | | | | | | |
| Aroclor-1016 | 0.96 | NA | **0.48 J** | 0.48 UJ | 0.048 U | 0.048 U | 0.048 U | 0.048 U | 0.047 U | 0.047 U | 0.048 U |
| Aroclor-1221 | 0.0043 | NA | 0.48 U | 0.48 U | 0.048 U | 0.048 U | 0.048 U | 0.048 U | 0.047 U | 0.047 U | 0.048 U |
| Aroclor-1232 | 0.0043 | NA | 0.48 U | 0.48 U | 0.048 U | 0.048 U | 0.048 U | 0.048 U | 0.047 U | 0.047 U | 0.048 U |
| Aroclor-1242 | 0.034 | NA | 0.48 U | 0.48 U | 0.048 U | 0.048 U | 0.048 U | 0.048 U | 0.047 U | **0.088** | 0.048 U |
| Aroclor-1248 | 0.034 | NA | 0.48 U | 0.48 U | 0.048 U | 0.048 U | 0.048 U | 0.048 U | 0.047 U | 0.047 U | 0.048 U |
| Aroclor-1254 | 0.034 | NA | 0.48 U | 0.48 U | 0.048 U | 0.048 U | 0.048 U | 0.048 U | 0.047 U | 0.047 U | 0.048 U |
| Aroclor-1260 | 0.034 | NA | 0.48 U | 0.48 UJ | 0.048 U | 0.048 U | 0.048 U | 0.048 U | 0.047 U | 0.047 U | 0.048 U |

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 10-03-0015 | 10-10-0001 | 10-10-0002 | 10-10-0003 | 10-10-0004 | 11-06-0001 | 11-06-0002 | 11-06-0003 | 11-06-0004 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW03GW15 | MW01 | MW02 | MW03 | MW04 | MW01 | MW02 | MW03 | MW04 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Mar-10 | Oct-10 | Oct-10 | Oct-10 | Oct-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **PCBs (µg/L)** | | | | | | | | | | | |
| Aroclor-1016 | 0.96 | NA | 0.047 U | 0.051 U | 0.052 U | 0.051 U | 0.051 U | 0.05 U | 0.048 U | 0.049 U | 0.05 U |
| Aroclor-1221 | 0.0043 | NA | 0.047 U | 0.051 U | 0.052 U | 0.051 U | 0.051 U | 0.05 U | 0.048 U | 0.049 U | 0.05 U |
| Aroclor-1232 | 0.0043 | NA | 0.047 U | 0.051 U | 0.052 U | 0.051 U | 0.051 U | 0.05 U | 0.048 U | 0.049 U | 0.05 U |
| Aroclor-1242 | 0.034 | NA | 0.047 U | 0.051 U | 0.052 U | 0.051 U | 0.051 U | 0.05 U | 0.048 U | 0.049 U | 0.05 U |
| Aroclor-1248 | 0.034 | NA | 0.047 U | 0.051 U | 0.052 U | 0.051 U | 0.051 U | 0.05 U | 0.048 U | 0.049 U | 0.05 U |
| Aroclor-1254 | 0.034 | NA | 0.047 U | 0.051 U | 0.052 U | 0.051 U | 0.051 U | 0.05 U | 0.048 U | 0.049 U | 0.05 U |
| Aroclor-1260 | 0.034 | NA | 0.047 U | 0.051 U | 0.052 U | 0.051 U | 0.051 U | 0.05 U | 0.048 U | 0.049 U | 0.05 U |

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 11-06-0005 | 11-06-0020 | 11-06-0021 | 11-06-0052 | 11-06-0053 | 11-06-0055 | 11-06-0056 | 11-06-0058 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P202GW20 | P207GW08 | P208GW08 | P217GW12 | P222GW12 | P221GW12 | P214GW12 | P220GW09 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **PCBs (µg/L)** | | | | | | | | | | |
| Aroclor-1016 | 0.96 | NA | 0.048 U | 0.048 U | 0.049 U | 0.049 U | 0.51 U | 200 U | 0.049 U | 0.05 U |
| Aroclor-1221 | 0.0043 | NA | 0.048 U | 0.048 U | 0.049 U | 0.049 U | 0.51 U | 200 U | 0.049 U | 0.05 U |
| Aroclor-1232 | 0.0043 | NA | 0.048 U | 0.048 U | 0.049 U | 0.049 U | 0.51 U | 200 U | 0.049 U | 0.05 U |
| Aroclor-1242 | 0.034 | NA | 0.048 U | 0.048 U | **0.28** | 0.049 U | 0.51 U | **1,500** | 0.049 U | 0.05 U |
| Aroclor-1248 | 0.034 | NA | 0.048 U | 0.048 U | 0.049 U | 0.049 U | 0.51 U | 200 U | 0.049 U | 0.05 U |
| Aroclor-1254 | 0.034 | NA | 0.048 U | 0.048 U | 0.049 U | 0.049 U | **0.64 JK** | 200 U | 0.049 U | 0.05 U |
| Aroclor-1260 | 0.034 | NA | 0.048 U | 0.048 U | **0.091 JK** | 0.049 U | 0.051 U | 200 U | 0.049 U | 0.05 U |

**Table C-3 Comprehensive Analytical Data for TPH in Water (Page 1 of 1)**

| EPA Sample ID | MTCA Groundwater | Federal Drinking Water MCL | 09-05-0705 | 09-05-0706 | 09-10-1021 | 09-10-1022 | 09-10-1023 | 09-10-1024 | 10-03-0012 | 10-03-0013 | 10-03-0014 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | GW01 | GW02 | SW01 | SW02 | SW03 | SW04 | MW04GW15 | MW02GW20 | MW01GW20 |
| Sample Details | | | Domestic Well | Domestic Well | Surface Water | Surface Water | Surface Water | Surface Water | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | May-09 | May-09 | Oct-09 | Oct-09 | Oct-09 | Oct-09 | Mar-10 | Mar-10 | Mar-10 |
| **TPH (mg/L)** | | | | | | | | | | | |
| Diesel Range Organics | 0.5 | NA | 0.077 U | 0.078 U | 0.24 U | 0.25 U | 0.24 U | 0.25 U | | | |
| Oil Range Organics | 0.5 | NA | 0.38 U | 0.39 U | 0.39 U | 0.4 U | 0.39 U | 0.4 U | | | |
| Gasoline Range Organics | 0.8 | NA | | | | | | | | | |

| EPA Sample ID | MTCA Groundwater | Federal Drinking Water MCL | 10-03-0015 | 10-10-0001 | 10-10-0002 | 10-10-0003 | 10-10-0004 | 11-06-0001 | 11-06-0002 | 11-06-0003 | 11-06-0004 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | MW03GW15 | MW01 | MW02 | MW03 | MW04 | MW01 | MW02 | MW03 | MW04 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Mar-10 | Oct-10 | Oct-10 | Oct-10 | Oct-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **TPH (mg/L)** | | | | | | | | | | | |
| Diesel Range Organics | 0.5 | NA | | 0.28 U | 0.27 U | 0.24 U | 0.27 U | 0.25 U | 0.24 U | 0.25 U | 0.25 U |
| Oil Range Organics | 0.5 | NA | | 0.44 U | 0.44 U | 0.38 U | 0.43 U | 0.4 U | 0.38 U | 0.4 U | 0.4 U |
| Gasoline Range Organics | 0.8 | NA | | 0.1 U | 0.1 U | 0.1 U | 0.1 U | | | | |

| EPA Sample ID | MTCA Groundwater | Federal Drinking Water MCL | 11-06-0005 | 11-06-0020 | 11-06-0021 | 11-06-0052 | 11-06-0053 | 11-06-0055 | 11-06-0056 | 11-06-0058 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P202GW20 | P207GW08 | P208GW08 | P217GW12 | P222GW12 | P221GW12 | P214GW12 | P220GW09 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **TPH (mg/L)** | | | | | | | | | | |
| Diesel Range Organics | 0.5 | NA | 0.26 U | 0.24 U | 0.26 U | 0.24 U | **0.45 JH** | **2,000** | 0.24 U | **2.4** |
| Oil Range Organics | 0.5 | NA | **0.77** | 0.39 U | 0.41 U | 0.39 U | 0.41 U | **3,600** | 0.39 U | 0.54 U |
| Gasoline Range Organics | 0.8 | NA | | | | | | | | |

**Table C-4 Comprehensive Analytical Data for SVOCs in Water (Page 1 of 2)**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 09-05-0705 | 09-05-0706 | 09-10-1021 | 09-10-1022 | 09-10-1023 | 09-10-1024 | 10-03-0012 | 10-03-0013 | 10-03-0014 | 10-03-0015 | 10-10-0001 | 10-10-0002 | 10-10-0003 | 10-10-0004 | 11-06-0001 | 11-06-0002 | 11-06-0003 | 11-06-0004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | GW01 | GW02 | SW01 | SW02 | SW03 | SW04 | MW04GW15 | MW02GW20 | MW01GW20 | MW03GW15 | MW01 | MW02 | MW03 | MW04 | MW01 | MW02 | MW03 | MW04 |
| Sample Details | | | Domestic Well | Domestic Well | Surface Water | Surface Water | Surface Water | Surface Water | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | May-09 | May-09 | Oct-09 | Oct-09 | Oct-09 | Oct-09 | Mar-10 | Mar-10 | Mar-10 | Mar-10 | Oct-10 | Oct-10 | Oct-10 | Oct-10 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **SVOCs (µg/L)** | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.99 | 70 | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1,2-Dichlorobenzene | 280 | 600 | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1,2-Dinitrobenzene | 1.5 | NA | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1,2-Diphenylhydrazine | 0.067 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1,3-Dichlorobenzene | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1,3-Dinitrobenzene | 1.5 | NA | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1,4-Dichlorobenzene | 0.42 | 75 | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1,4-Dinitrobenzene | 1.5 | NA | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 1-Methylnaphthalene | 0.97 | NA | | | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| 2,3,4,6-Tetrachlorophenol | 170 | NA | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,3,5,6-Tetrachlorophenol | NA | NA | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,3-Dichloroaniline | NA | NA | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,4,5-Trichlorophenol | 890 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,4,6-Trichlorophenol | 3.5 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,4-Dichlorophenol | 35 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,4-Dimethylphenol | 270 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 UJ | 0.94 UJ | 0.95 UJ | 0.94 UJ | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,4-Dinitrophenol | 30 | NA | 9.9 UJ | 9.6 U | 9.8 U | 9.8 U | 9.6 U | 9.6 U | 9.4 U | 9.4 U | 9.5 U | 9.4 U | 12 U | 11 U | 10 U | 11 U | 5 U | 4.8 U | 4.9 U | 5.1 U |
| 2,4-Dinitrotoluene | 0.2 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2,6-Dinitrotoluene | 15 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2-Chloronaphthalene | 550 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2-Chlorophenol | 71 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2-Methylnaphthalene | 27 | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| 2-Methylphenol (o-Cresol) | 720 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2-Nitroaniline | 150 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 2-Nitrophenol | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 3 & 4-Methylphenol (m,p-Cresol) | 720 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 3,3'-Dichlorobenzidine | 0.11 | NA | 5 U | 4.8 U | 9.8 U | 9.8 U | 9.6 U | 9.6 U | 9.4 U | 9.4 U | 9.5 U | 9.4 U | 12 U | 11 U | 10 U | 11 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 3-Nitroaniline | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 4,6-Dinitro-2-methylphenol | 1.2 | NA | 5 U | 4.8 U | 4.9 U | 4.9 U | 4.8 U | 4.8 U | 4.7 U | 4.7 U | 4.8 U | 4.7 U | 5.8 U | 5.3 U | 5.1 U | 5.3 U | 5 U | 4.8 U | 4.9 U | 5.1 U |
| 4-Bromophenyl-phenylether | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 4-Chloro-3-methylphenol | 1,100 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 4-Chloroaniline | 0.32 | NA | 5 U | 4.8 U | 9.8 U | 9.8 U | 9.6 U | 9.6 U | 9.4 U | 9.4 U | 9.5 U | 9.4 U | 12 U | 11 U | 10 U | 11 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 4-Chlorophenyl-phenylether | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 4-Nitroaniline | 3.3 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| 4-Nitrophenol | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Acenaphthene | 400 | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Acenaphthylene | NA | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Aniline | 12 | NA | | | 4.9 U | 4.9 U | 4.8 U | 4.8 U | 4.7 U | 4.7 U | 4.8 U | 4.7 U | 5.8 U | 5.3 U | 5.1 U | 5.3 U | 5 U | 4.8 U | 4.9 U | 5.1 U |
| Anthracene | 1,300 | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Benzidine | 0.000092 | NA | | | 9.8 U | 9.8 U | 9.6 U | 9.6 U | 9.4 U | 9.4 U | 9.5 U | 9.4 U | 12 U | 11 U | 10 U | 11 U | 5 U | 4.8 U | 4.9 U | 5.1 U |
| Benzo[a]anthracene | 0.029 | NA | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.018** | **0.01** | 0.01 U |
| Benzo[a]pyrene | 0.0029 | 0.2 | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.017** | 0.0098 U | 0.01 U |
| Benzo[b]fluoranthene | 0.029 | NA | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.016** | 0.0098 U | 0.01 U |
| Benzo[g,h,i]perylene | NA | NA | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.015** | 0.0098 U | 0.01 U |
| Benzo[k]fluoranthene | 0.29 | NA | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.016** | 0.0098 U | 0.01 U |
| Benzyl alcohol | 1,500 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| bis(2-Chloroethoxy)methane | 47 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| bis(2-Chloroethyl)ether | 0.012 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| bis(2-Chloroisopropyl)ether | 0.31 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| bis(2-Ethylhexyl)phthalate | 0.071 | 6 | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | **6.5** | 0.94 U | **3.2** | **20** | **5.2** | 1.1 U | **350** | **10** | **5.3** | **7.8** |
| bis-2-Ethylhexyladipate | 56 | 400 | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Butylbenzylphthalate | 14 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Carbazole | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Chrysene | 2.9 | NA | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.017** | 0.0098 U | 0.01 U |
| Dibenz[a,h]anthracene | 0.0029 | NA | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.017** | 0.0098 U | 0.01 U |
| Dibenzofuran | 15 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Diethylphthalate | 11,000 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Dimethylphthalate | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Di-n-butylphthalate | 670 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Di-n-octylphthalate | NA | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Fluoranthene | 630 | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Fluorene | 220 | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Hexachlorobenzene | 0.042 | 1 | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Hexachlorobutadiene | 0.26 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Hexachlorocyclopentadiene | 22 | 50 | | | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 UJ | 0.94 UJ | 0.95 UJ | 0.94 UJ | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Hexachloroethane | 0.79 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Indeno[1,2,3-cd]pyrene | 0.029 | NA | 5 U | 4.8 U | 0.0098 U | 0.0098 U | 0.0096 U | 0.0096 U | 0.0094 U | 0.0094 U | 0.0095 U | 0.0094 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | **0.016** | 0.0098 U | 0.01 U |
| Isophorone | 67 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Naphthalene | 0.14 | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Nitrobenzene | 0.12 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| n-Nitrosodimethylamine | 0.00042 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| n-Nitroso-di-n-propylamine | 0.0093 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| n-Nitrosodiphenylamine | 10 | NA | 5 U | 4.8 U | 9.8 U | 9.8 U | 9.6 U | 9.6 U | 9.4 U | 9.4 U | 9.5 U | 9.4 U | 12 U | 11 U | 10 U | 11 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Pentachlorophenol | 0.17 | 1 | 5 U | 4.8 U | 4.9 U | 4.9 U | 4.8 U | 4.8 U | 4.7 U | 4.7 U | 4.8 U | 4.7 U | 5.8 U | 5.3 U | 5.1 U | 5.3 U | 5 U | 4.8 U | 4.9 U | 5.1 U |
| Phenanthrene | NA | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Phenol | 4,500 | NA | 5 U | 4.8 U | 0.98 U | 0.98 U | 0.96 U | 0.96 U | 0.94 U | 0.94 U | 0.95 U | 0.94 U | 1.2 U | 1.1 U | 1 U | 1.1 U | 1 U | 0.96 U | 0.98 U | 1 U |
| Pyrene | 87 | NA | 5 U | 4.8 U | 0.098 U | 0.098 U | 0.096 U | 0.096 U | 0.094 U | 0.094 U | 0.095 U | 0.094 U | 0.12 U | 0.11 U | 0.1 U | 0.11 U | 0.1 U | 0.096 U | 0.098 U | 0.1 U |
| Pyridine | 15 | NA | | | 9.8 U | 9.8 U | 9.6 U | 9.6 U | 9.4 U | 9.4 U | 9.5 U | 9.4 U | 12 U | 11 U | 10 U | 11 U | 1 U | 0.96 U | 0.98 U | 1 U |

**Table C-4 Comprehensive Analytical Data for SVOCs in Water (Page 2 of 2)**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 11-06-0005 | 11-06-0020 | 11-06-0021 | 11-06-0052 | 11-06-0053 | 11-06-0055 | 11-06-0056 | 11-06-0058 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | P202GW20 | P207GW08 | P208GW08 | P217GW12 | P222GW12 | P221GW12 | P214GW12 | P220GW09 |
| Sample Details | | | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 | Jun-11 |
| **SVOCs (µg/L)** | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 0.99 | 70 | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1,2-Dichlorobenzene | 280 | 600 | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1,2-Dinitrobenzene | 1.5 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1,2-Diphenylhydrazine | 0.067 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1,3-Dichlorobenzene | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1,3-Dinitrobenzene | 1.5 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1,4-Dichlorobenzene | 0.42 | 75 | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1,4-Dinitrobenzene | 1.5 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 1-Methylnaphthalene | 0.97 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **270** | 0.1 U | **21** |
| 2,3,4,6-Tetrachlorophenol | 170 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,3,5,6-Tetrachlorophenol | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,3-Dichloroaniline | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,4,5-Trichlorophenol | 890 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,4,6-Trichlorophenol | 3.5 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,4-Dichlorophenol | 35 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,4-Dimethylphenol | 270 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,4-Dinitrophenol | 30 | NA | 5.1 U | 4.9 U | 5 U | 4.8 U | 120 U | 1,000 UJL | 5 U | 5 U |
| 2,4-Dinitrotoluene | 0.2 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2,6-Dinitrotoluene | 15 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2-Chloronaphthalene | 550 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2-Chlorophenol | 71 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2-Methylnaphthalene | 27 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **210** | 0.1 U | **8.1** |
| 2-Methylphenol (o-Cresol) | 720 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2-Nitroaniline | 150 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 2-Nitrophenol | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 3 & 4-Methylphenol (m,p-Cresol) | 720 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 3,3'-Dichlorobenzidine | 0.11 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 3-Nitroaniline | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 4,6-Dinitro-2-methylphenol | 1.2 | NA | 5.1 U | 4.9 U | 5 U | 4.8 U | 120 U | 1,000 U | 5 U | 5 U |
| 4-Bromophenyl-phenylether | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 4-Chloro-3-methylphenol | 1,100 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | **120** | 210 U | 1 U | 0.99 U |
| 4-Chloroaniline | 0.32 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 4-Chlorophenyl-phenylether | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 4-Nitroaniline | 3.3 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| 4-Nitrophenol | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Acenaphthene | 400 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **31** | 0.1 U | **2** |
| Acenaphthylene | NA | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | 21 U | 0.1 U | **0.29** |
| Aniline | 12 | NA | 5.1 U | 4.9 U | 5 U | 4.8 U | 120 U | 1,000 U | 5 U | 5 U |
| Anthracene | 1,300 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **54** | 0.1 U | **0.33** |
| Benzidine | 0.000092 | NA | 5.1 U | 4.9 U | 5 U | 4.8 U | 120 U | 1,000 U | 5 U | 5 U |
| Benzo[a]anthracene | 0.029 | NA | **0.014** | **0.011** | **0.012** | 0.0096 U | 0.24 U | 21 U | **0.015** | 0.0099 U |
| Benzo[a]pyrene | 0.0029 | 0.2 | 0.01 U | 0.0097 U | **0.018** | 0.0096 U | **0.32** | **14** | **0.012** | 0.0099 U |
| Benzo[b]fluoranthene | 0.029 | NA | **0.01** | 0.0097 U | **0.024** | 0.0096 U | **0.31** | **9.6** | **0.011** | 0.0099 U |
| Benzo[g,h,i]perylene | NA | NA | 0.01 U | 0.0097 U | **0.022** | 0.0096 U | **0.27** | **17** | 0.01 U | 0.0099 U |
| Benzo[k]fluoranthene | 0.29 | NA | 0.01 U | 0.0097 U | **0.019** | 0.0096 U | 24 U | **26** | 0.01 U | 0.0099 U |
| Benzyl alcohol | 1,500 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| bis(2-Chloroethoxy)methane | 47 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| bis(2-Chloroethyl)ether | 0.012 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| bis(2-Chloroisopropyl)ether | 0.31 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| bis(2-Ethylhexyl)phthalate | 0.071 | 6 | **240** | **1.5** | 0.99 U | **770** | **51** | **80,000** | **24** | **200** |
| bis-2-Ethylhexyladipate | 56 | 400 | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Butylbenzylphthalate | 14 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | **600** | 1 U | 0.99 U |
| Carbazole | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Chrysene | 2.9 | NA | **0.01** | 0.0097 U | **0.022** | 0.0096 U | 0.24 U | 2.1 U | **0.013** | **0.044** |
| Dibenz[a,h]anthracene | 0.0029 | NA | 0.01 U | 0.0097 U | 0.0099 U | 0.0096 U | 0.24 U | 2.1 U | 0.01 U | 0.0099 U |
| Dibenzofuran | 15 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Diethylphthalate | 11,000 | NA | **1** | 0.97 U | **2.2** | 0.96 U | 24 U | 210 U | 1 U | **28** |
| Dimethylphthalate | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Di-n-butylphthalate | 670 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Di-n-octylphthalate | NA | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Fluoranthene | 630 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | 21 U | 0.1 U | 0.099 U |
| Fluorene | 220 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | 21 U | 0.1 U | **3** |
| Hexachlorobenzene | 0.042 | 1 | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Hexachlorobutadiene | 0.26 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Hexachlorocyclopentadiene | 22 | 50 | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Hexachloroethane | 0.79 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Indeno[1,2,3-cd]pyrene | 0.029 | NA | 0.01 U | 0.0097 U | **0.019** | 0.0096 U | **0.27** | **4.1** | 0.01 U | 0.0099 U |
| Isophorone | 67 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Naphthalene | 0.14 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **30** | 0.1 U | **0.52** |
| Nitrobenzene | 0.12 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| n-Nitrosodimethylamine | 0.00042 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| n-Nitroso-di-n-propylamine | 0.0093 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| n-Nitrosodiphenylamine | 10 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Pentachlorophenol | 0.17 | 1 | 5.1 U | 4.9 U | 5 U | 4.8 U | 120 U | 1,000 U | 5 U | 5 U |
| Phenanthrene | NA | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | **40** | 0.1 U | **3.4** |
| Phenol | 4,500 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |
| Pyrene | 87 | NA | 0.1 U | 0.097 U | 0.099 U | 0.096 U | 2.4 U | 21 U | 0.1 U | **0.18** |
| Pyridine | 15 | NA | 1 U | 0.97 U | 0.99 U | 0.96 U | 24 U | 210 U | 1 U | 0.99 U |

**Table C-5 Comprehensive Analytical Data for Pesticides in Water (Page 1 of 1)**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 09-05-0705 | 09-05-0706 | 09-10-1021 | 09-10-1022 | 09-10-1023 | 09-10-1024 |
|---|---|---|---|---|---|---|---|---|
| Sample Location | | | GW01 | GW02 | SW01 | SW02 | SW03 | SW04 |
| Sample Details | | | Domestic Well | Domestic Well | Surface Water | Surface Water | Surface Water | Surface Water |
| Sample Collection Event | | | May-09 | May-09 | Oct-09 | Oct-09 | Oct-09 | Oct-09 |
| **Pesticides (µg/L)** | | | | | | | | |
| 4,4'-DDD | 0.28 | NA | 0.077 U | 0.077 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| 4,4'-DDE | 0.2 | NA | 0.077 U | 0.077 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| 4,4'-DDT | 0.2 | NA | 0.077 U | 0.077 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| Aldrin | 0.00021 | NA | 0.038 UJ | 0.038 UJ | 0.0049 UJ | 0.0048 U | 0.0048 U | 0.0048 U |
| alpha-BHC | 0.0062 | NA | 0.038 U | 0.038 U | 0.0049 UJ | 0.0048 UJ | 0.0048 UJ | 0.0048 UJ |
| alpha-Chlordane | NA | NA | 0.038 U | 0.038 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| beta-BHC | 0.022 | NA | 0.038 U | 0.038 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| delta-BHC | NA | NA | 0.038 U | 0.038 U | 0.0049 UJ | 0.0048 UJ | 0.0048 UJ | 0.0048 UJ |
| Dieldrin | 0.0015 | NA | 0.077 U | 0.077 U | 0.0049 UJ | 0.0048 UJ | 0.0048 UJ | 0.0048 UJ |
| Endosulfan I | NA | NA | 0.038 U | 0.038 U | 0.0049 UJ | 0.0048 UJ | 0.0048 UJ | 0.0048 UJ |
| Endosulfan II | NA | NA | 0.077 U | 0.077 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| Endosulfan sulfate | NA | NA | 0.077 U | 0.077 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| Endrin | 1.7 | 2 | 0.077 U | 0.077 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| Endrin aldehyde | NA | NA | 0.077 U | 0.077 U | 0.02 U | 0.019 U | 0.019 U | 0.019 U |
| Endrin ketone | NA | NA | 0.077 U | 0.077 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| gamma-BHC | 0.036 | 0.2 | 0.038 U | 0.038 U | 0.0049 UJ | 0.0048 UJ | 0.0048 UJ | 0.0048 UJ |
| gamma-Chlordane | NA | NA | 0.038 U | 0.038 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| Heptachlor | 0.0018 | 0.4 | 0.038 U | 0.038 U | 0.0049 UJ | 0.0048 UJ | 0.0048 UJ | 0.0048 UJ |
| Heptachlor epoxide | 0.0033 | 0.2 | 0.038 U | 0.038 U | 0.0049 U | 0.0048 U | 0.0048 U | 0.0048 U |
| Methoxychlor | 27 | 40 | 0.38 U | 0.38 U | 0.0098 UJ | 0.0097 UJ | 0.0097 UJ | 0.0096 UJ |
| Toxaphene | 0.013 | 3 | 4.8 U | 4.8 U | 0.049 U | 0.048 U | 0.048 U | 0.048 U |

Note: No other samples were submitted for pesticide analysis as part of the removal site evaluation.

**Table C-6 Comprehensive Analytical Data for VOCs in Water (Page 1 of 1)**

| EPA Sample ID | EPA RSL - Tapwater | Federal Drinking Water MCL | 09-05-0705 | 09-05-0706 | 09-10-1021 | 09-10-1022 | 09-10-1023 | 09-10-1024 | 10-10-0001 | 10-10-0002 | 10-10-0003 | 10-10-0004 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Location | | | GW01 | GW02 | SW01 | SW02 | SW03 | SW04 | MW01 | MW02 | MW03 | MW04 |
| Sample Details | | | Domestic Well | Domestic Well | Surface Water | Surface Water | Surface Water | Surface Water | Groundwater | Groundwater | Groundwater | Groundwater |
| Sample Collection Event | | | May-09 | May-09 | Oct-09 | Oct-09 | Oct-09 | Oct-09 | Oct-10 | Oct-10 | Oct-10 | Oct-10 |
| **VOCs (µg/L)** | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.5 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,1,1-Trichloroethane | 7,500 | 200 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,1,2,2-Tetrachloroethane | 0.066 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,1,2-Trichloroethane | 0.24 | 5 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,1-Dichloroethane | 2.4 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,1-Dichloroethene | 260 | 7 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,1-Dichloropropene | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,2,3-Trichlorobenzene | 5.2 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 UJ | 0.2 UJ | 0.2 UJ | 0.2 UJ |
| 1,2,3-Trichloropropane | 0.00065 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,2,4-Trichlorobenzene | 0.99 | 70 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 UJ | 0.2 UJ | 0.2 UJ | 0.2 UJ |
| 1,2,4-Trimethylbenzene | 15 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,2-Dibromo-3-chloropropane | 0.00032 | 0.2 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 UJ | 1 UJ | 1 UJ |
| 1,2-Dibromoethane | 0.0065 | 0.05 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,2-Dichlorobenzene | 280 | 600 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,2-Dichloroethane | 0.15 | 5 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,2-Dichloropropane | 0.38 | 5 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,3,5-Trimethylbenzene | 87 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,3-Dichlorobenzene | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,3-Dichloropropane | 290 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 1,4-Dichlorobenzene | 0.42 | 75 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 2,2-Dichloropropane | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 2-Butanone | 4,900 | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 UJ | 5 UJ | 5 UJ | 5 UJ |
| 2-Chloroethyl Vinyl Ether | NA | NA | | | 1 U | 1 U | 1 U | 1 U | 1 R | 1 R | 1 R | 1 R |
| 2-Chlorotoluene | 180 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 2-Hexanone | 34 | NA | 5 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| 4-Chlorotoluene | 190 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 4-Isopropyltoluene | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| 4-Methyl-2-pentanone | 1,000 | NA | 5 U | 5 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Acetone | 12,000 | NA | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U | 5 U |
| Benzene | 0.39 | 5 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Bromobenzene | 54 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Bromochloromethane | 83 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Bromodichloromethane | 0.12 | 80 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Bromoform | 7.9 | 80 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Bromomethane | 7 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Carbon Disulfide | 720 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Carbon Tetrachloride | 0.39 | 5 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Chlorobenzene | 72 | 100 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Chloroethane | 21,000 | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Chloroform | 0.19 | 80 | **0.31 J** | **0.19 J** | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Chloromethane | 190 | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| (cis) 1,2-Dichloroethene | 28 | 70 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| (cis) 1,3-Dichloropropene | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Dibromochloromethane | 0.15 | 80 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Dibromomethane | 7.9 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Dichlorodifluoromethane | 190 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Ethylbenzene | 1.3 | 700 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Hexachlorobutadiene | 0.26 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Iodomethane | NA | NA | | | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Isopropylbenzene | 390 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| m,p-Xylene | 190 | NA | 2 U | 2 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U | 0.4 U |
| Methyl t-Butyl Ether | 12 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Methylene Chloride | 9.9 | 5 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| Naphthalene | 0.14 | NA | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 UJ | 1 UJ | 1 UJ | 1 UJ |
| n-Butylbenzene | 780 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| n-Propylbenzene | 530 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| o-Xylene | 190 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| sec-Butylbenzene | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Styrene | 1,100 | 100 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| tert-Butylbenzene | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Tetrachloroethene | 9.7 | 5 | **0.6 J** | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | **0.25** | **0.36** | 0.2 U |
| Toluene | 860 | 1,000 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| (trans) 1,2-Dichloroethene | 86 | 100 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| (trans) 1,3-Dichloropropene | NA | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Trichloroethene | 0.44 | 5 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Trichlorofluoromethane | 1,100 | NA | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |
| Vinyl Acetate | 410 | NA | | | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U | 2 U |
| Vinyl Chloride | 0.015 | 2 | 1 U | 1 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U | 0.2 U |

Note: No other samples were submitted for VOC analysis as part of the removal site evaluation.

**Key for Appendix C Tables**

Note:

= Greater than or equal to values of EPA RSL tapwater, Federal MCL, and/or Washington State MTCA groundwater.

= Not analyzed.

Key:

| | |
|---|---|
| EPA | = Environmental Protection Agency. |
| IDW | = Investigation derived waste. |
| J | = The analyte was identified; the associated numerical result is an estimate. |
| JH | = The analyte was positively identified; the assoicated numerical value is the approximate concentration with a high bias. |
| JK | = The analyte was positively identified; the associated numerical value is the approximate concentration with an unknown direction of bias. |
| MCL | = Federal Maximum Contaminant Level drinking water standards. |
| MTCA | = Model Toxics Control Act. |
| mg/L | = Milligrams per liter (parts per million). |
| µg/L | = Micrograms per liter (parts per billion). |
| NA | = Not applicable. |
| R | = The sample results are rejected due to serious deficiencies; the presence or absence of the analyte cannot be verified. |
| RSL | = Regional Screening Levels for Chemical Contaminants at Superfund Sites. |
| U | = The analyte was analyzed for, but not detected above the reported sample quantitation limit. |
| UJ | = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |

# D May 2009 Data Memoranda

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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: June 23, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 11 solid and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 6010, 6020, and 7471) were performed by Pace Laboratories, Inc., Seattle, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09050702 | 09050703 | 09050704 | 09050720 | 09050721 |
| 09050722 | 09050723 | 09050724 | 09050725 | 09050726 |
| 09050727 | 09050705 | 09050706 | | |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

All liquid samples were preserved to a pH < 2. The samples were maintained at 4°C (± 2°C). The samples were collected on May 21, 2009, and were analyzed by June 11, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Satisfactory.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110% except calcium with low recoveries in several calibrations (associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]) and antimony, barium, beryllium, magnesium, manganese, selenium, sodium, and thallium with high recoveries in one or more calibrations (associated positive results were qualified as estimated quantities (J). All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Satisfactory.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. Associated sample results were qualified as not detected (U) if the sample result was less than five times the positive blank concentration. Associated sample results were qualified as estimated quantities (J or UJ) if the sample

result was less than five times the absolute value of the negative blank concentration.

**4. ICP Interference Check Sample: Satisfactory.**

An Interference Check Sample (ICS) was analyzed at the beginning and end of each sequence or at least twice every 8 hours, whichever was more frequent. All ICS (solution AB) results were within QC limits of 80% - 120% recovery silver in the water analysis (high recovery). Positive sample results associated with the high recovery outlier were qualified as estimated quantities (J).

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. ICP Serial Dilution: Satisfactory.**

A serial dilution analysis was performed per matrix per concentration or per sample delivery group, whichever was more frequent. All serial dilution results were within QC limits except antimony and zinc. Associated sample results were qualified as estimated quantities (J or UJ).

**8. Matrix Spike Analysis: Satisfactory.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits except magnesium (low recovery) in sample 09050705. Sample results associated with the low recovery outliers were qualified as estimated quantities (J or UJ).

**9. Duplicate Analysis: Acceptable.**

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**10. Serial Dilution Analysis: Satisfactory.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits except antimony, cadmium, iron, nickel, selenium, zinc, copper, and magnesium in the soil analysis. Associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**11. Laboratory Control Sample Analysis: Satisfactory.**

A Laboratory Control Sample (LCS) was analyzed per SDG per matrix. All LCS results were within the established control limits except magnesium, selenium, and thallium (low recoveries) in the soil LCS. Sample results associated with the low recovery outliers were qualified as estimated quantities (J or UJ).

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National

Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-002

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 80.6

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 23900 | | | P | R036760 |
| 7440-36-0 | Antimony | 4.7 | J | EN | P | R036760 |
| 7440-38-2 | Arsenic | 5.5 | U | | P | R036760 |
| 7440-39-3 | Barium | 253 | | | P | R036760 |
| 7440-41-7 | Beryllium | 0.32 | | *N | P | R036760 |
| 7440-43-9 | Cadmium | 10.7 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 6330 | | | P | R036760 |
| 7440-47-3 | Chromium | 41.6 | | *N | P | R036760 |
| 7440-48-4 | Cobalt | 10.9 | J | | P | R036760 |
| 7440-50-8 | Copper | 1730 | J | E | P | R036697 |
| 7439-89-6 | Iron | 36800 | J | E | P | R036760 |
| 7439-92-1 | Lead | 1140 | | | P | R036760 |
| 7439-95-4 | Magnesium | 3280 | J | ~~E~~ MW | P | R036697 |
| 7439-96-5 | Manganese | 483 | J | | P | R036760 |
| 7440-02-0 | Nickel | 48.7 | J | E*N | P | R036760 |
| 7440-09-7 | Potassium | 1920 | | | P | R036760 |
| 7782-49-2 | Selenium | 1.8 | J | ~~E*N~~ MW | P | R036760 |
| 7440-22-4 | Silver | 6.3 | J | *N | P | R036760 |
| 7440-23-5 | Sodium | 282 | J | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.30 | UJ | ~~N~~ MW | P | R036760 |
| 7440-62-2 | Vanadium | 80.6 | | | P | R036760 |
| 7440-66-6 | Zinc | 5300 | J | E | P | R036760 |

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-003

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 77.8

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 38800 | | | P | R036760 |
| 7440-36-0 | Antimony | 4.7 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 5.4 | U | | P | R036760 |
| 7440-39-3 | Barium | 387 | | | P | R036760 |
| 7440-41-7 | Beryllium | 0.33 | | *N | P | R036760 |
| 7440-43-9 | Cadmium | 16.5 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 9140 | | | P | R036760 |
| 7440-47-3 | Chromium | 71.6 | | *N | P | R036760 |
| 7440-48-4 | Cobalt | 15.7 | J | | P | R036760 |
| 7440-50-8 | Copper | 2420 | J | E | P | R036697 |
| 7439-89-6 | Iron | 49500 | J | E | P | R036760 |
| 7439-92-1 | Lead | 1250 | | | P | R036760 |
| 7439-95-4 | Magnesium | 4540 | J | ~~E~~ MW | P | R036697 |
| 7439-96-5 | Manganese | 613 | J | | P | R036760 |
| 7440-02-0 | Nickel | 86.1 | J | E~~N~~ | P | R036760 |
| 7440-09-7 | Potassium | 1370 | | | P | R036760 |
| 7782-49-2 | Selenium | 1.5 | J | ~~EN~~ MW | P | R036760 |
| 7440-22-4 | Silver | 2.0 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 370 | | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.30 | UJ | ~~N~~ MW | P | R036760 |
| 7440-62-2 | Vanadium | 74.0 | | | P | R036760 |
| 7440-66-6 | Zinc | 4350 | J | E | P | R036760 |

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0704

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-004

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 83

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 10300 | | | P | R036760 |
| 7440-36-0 | Antimony | 5.1 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 7.5 | J | | P | R036760 |
| 7440-39-3 | Barium | 132 | | | P | R036760 |
| 7440-41-7 | Beryllium | 0.41 | | *N | P | R036760 |
| 7440-43-9 | Cadmium | 4.1 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 5560 | | | P | R036760 |
| 7440-47-3 | Chromium | 8.9 | | *N | P | R036760 |
| 7440-48-4 | Cobalt | 11.6 | J | | P | R036760 |
| 7440-50-8 | Copper | 32.4 | J | E | P | R036697 |
| 7439-89-6 | Iron | 31500 | J | E | P | R036760 |
| 7439-92-1 | Lead | 6930 | | | P | R036760 |
| 7439-95-4 | Magnesium | 3680 | J | ~~E~~ Mu | P | R036697 |
| 7439-96-5 | Manganese | 392 | J | | P | R036760 |
| 7440-02-0 | Nickel | 9.6 | J | E*N | P | R036760 |
| 7440-09-7 | Potassium | 3750 | | | P | R036760 |
| 7782-49-2 | Selenium | 0.61 | J | ~~EN~~ M | P | R036760 |
| 7440-22-4 | Silver | 0.035 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 309 | | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.29 | UJ | ~~N~~ M | P | R036760 |
| 7440-62-2 | Vanadium | 96.9 | | | P | R036760 |
| 7440-66-6 | Zinc | 74.3 | J | E | P | R036760 |

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-016

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 27.1 | | | P | R036760 |
| 7440-36-0 | Antimony | 0.33 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 0.18 | U | | P | R036760 |
| 7440-39-3 | Barium | 0.32 | J | | P | R036760 |
| 7440-41-7 | Beryllium | 0.025 | U | *N | P | R036760 |
| 7440-43-9 | Cadmium | 0.38 | UJ | EN | P | R036760 |
| 7440-70-2 | Calcium | 1190 | | | P | R036768 |
| 7440-47-3 | Chromium | 0.46 | U MW | *N | P | R036760 |
| 7440-48-4 | Cobalt | 0.34 | U | | P | R036760 |
| 7440-50-8 | Copper | 1.8 | J | E | P | R036697 |
| 7439-89-6 | Iron | 3060 | J | E | P | R036760 |
| 7439-92-1 | Lead | 2.7 | J | | P | R036760 |
| 7439-95-4 | Magnesium | 55.0 | J | ~~E~~ MW | P | R036768 |
| 7439-96-5 | Manganese | 17.4 | J | | P | R036760 |
| 7440-02-0 | Nickel | 0.43 | J | E*N | P | R036760 |
| 7440-09-7 | Potassium | 10.3 | UJ | | P | R036760 |
| 7782-49-2 | Selenium | 0.15 | UJ | ~~E*N~~ MW | P | R036760 |
| 7440-22-4 | Silver | 0.042 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 6.1 | U | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.24 | UJ | ~~*N~~ MW | P | R036760 |
| 7440-62-2 | Vanadium | 0.28 | J | | P | R036760 |
| 7440-66-6 | Zinc | 45.1 | J | E MW | P | R036760 |

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-017

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 1.6 | U | | P | R036760 |
| 7440-36-0 | Antimony | 0.28 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 0.18 | U | | P | R036760 |
| 7440-39-3 | Barium | 0.082 | U | | P | R036760 |
| 7440-41-7 | Beryllium | 0.025 | U | *N | P | R036760 |
| 7440-43-9 | Cadmium | 0.047 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 21.6 | U/mw | | P | R036768 |
| 7440-47-3 | Chromium | 0.060 | U/mw | *N | P | R036760 |
| 7440-48-4 | Cobalt | 0.034 | U | | P | R036760 |
| 7440-50-8 | Copper | 0.10 | U/mw | E | P | R036697 |
| 7439-89-6 | Iron | 2.1 | U/mw | E | P | R036760 |
| 7439-92-1 | Lead | 0.11 | U | | P | R036760 |
| 7439-95-4 | Magnesium | 4.3 | J | ~~E~~ mw | P | R036768 |
| 7439-96-5 | Manganese | 0.24 | UJ | | P | R036760 |
| 7440-02-0 | Nickel | 0.041 | UJ | E*N | P | R036760 |
| 7440-09-7 | Potassium | 13.5 | UJ | | P | R036760 |
| 7782-49-2 | Selenium | 0.15 | UJ | ~~EN~~ mw | P | R036760 |
| 7440-22-4 | Silver | 0.020 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 6.0 | U | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.24 | UJ | ~~N~~ mw | P | R036760 |
| 7440-62-2 | Vanadium | 0.021 | U | | P | R036760 |
| 7440-66-6 | Zinc | 0.39 | U/mw | ~~E~~ N/A | P | R036760 |

MW 6-23-09

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SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-018

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 443 | | | P | R036760 |
| 7440-36-0 | Antimony | 1.4 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 2.1 | | | P | R036760 |
| 7440-39-3 | Barium | 150 | | | P | R036760 |
| 7440-41-7 | Beryllium | 0.047 | J | *N | P | R036760 |
| 7440-43-9 | Cadmium | 3.7 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 1330 | J | | P | R036697 |
| 7440-47-3 | Chromium | 15.8 | | *N | P | R036760 |
| 7440-48-4 | Cobalt | 6.5 | | | P | R036760 |
| 7440-50-8 | Copper | 109 | J | E | P | R036697 |
| 7439-89-6 | Iron | 3560 | J | E | P | R036760 |
| 7439-92-1 | Lead | 176 | | | P | R036760 |
| 7439-95-4 | Magnesium | 478 | J | *Mn | P | R036697 |
| 7439-96-5 | Manganese | 28.0 | J | | P | R036760 |
| 7440-02-0 | Nickel | 29.7 | J | E*N | P | R036760 |
| 7440-09-7 | Potassium | 82.4 | J | | P | R036760 |
| 7782-49-2 | Selenium | 2.6 | J | E*Mn | P | R036760 |
| 7440-22-4 | Silver | 0.43 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 1580 | | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.23 | UJ | *Mn | P | R036760 |
| 7440-62-2 | Vanadium | 26.2 | | | P | R036760 |
| 7440-66-6 | Zinc | 756 | J | E | P | R036760 |

MW

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-019

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 279 | | | P | R036760 |
| 7440-36-0 | Antimony | 0.19 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 2.4 | | | P | R036760 |
| 7440-39-3 | Barium | 138 | | | P | R036760 |
| 7440-41-7 | Beryllium | 0.046 | J | *N | P | R036760 |
| 7440-43-9 | Cadmium | 0.68 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 1050 | J | | P | R036697 |
| 7440-47-3 | Chromium | 11.9 | | *N | P | R036760 |
| 7440-48-4 | Cobalt | 5.3 | | | P | R036760 |
| 7440-50-8 | Copper | 62.8 | J | E | P | R036697 |
| 7439-89-6 | Iron | 1910 | J | E | P | R036760 |
| 7439-92-1 | Lead | 148 | | | P | R036760 |
| 7439-95-4 | Magnesium | 332 | J | ~~E~~ MW | P | R036697 |
| 7439-96-5 | Manganese | 15.7 | J | | P | R036760 |
| 7440-02-0 | Nickel | 37.8 | J | E*N | P | R036760 |
| 7440-09-7 | Potassium | 114 | J | | P | R036760 |
| 7782-49-2 | Selenium | 3.7 | J | ~~E*~~ MW | P | R036760 |
| 7440-22-4 | Silver | 0.17 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 3170 | | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.23 | UJ | ~~N~~ MW | P | R036760 |
| 7440-62-2 | Vanadium | 36.5 | | | P | R036760 |
| 7440-66-6 | Zinc | 154 | J | E MW | P | R036760 |

MW 62309

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-020

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 198 | | | P | R036760 |
| 7440-36-0 | Antimony | 0.24 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 1.3 | | | P | R036760 |
| 7440-39-3 | Barium | 25.5 | | | P | R036760 |
| 7440-41-7 | Beryllium | 0.025 | U | *N | P | R036760 |
| 7440-43-9 | Cadmium | 0.59 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 359 | J | | P | R036697 |
| 7440-47-3 | Chromium | 4.0 | | *N | P | R036760 |
| 7440-48-4 | Cobalt | 1.7 | J | | P | R036760 |
| 7440-50-8 | Copper | 13.5 | J | E | P | R036697 |
| 7439-89-6 | Iron | 388 | J | E | P | R036760 |
| 7439-92-1 | Lead | 67.5 | | | P | R036760 |
| 7439-95-4 | Magnesium | 0.22 | UJ | E | P | R036768 |
| 7439-96-5 | Manganese | 4.7 | J | | P | R036760 |
| 7440-02-0 | Nickel | 21.2 | J | E*N | P | R036760 |
| 7440-09-7 | Potassium | 30.3 | J | | P | R036760 |
| 7782-49-2 | Selenium | 1.7 | J | ~~EN~~ | P | R036760 |
| 7440-22-4 | Silver | 0.15 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 370 | | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.24 | UJ | N | P | R036760 |
| 7440-62-2 | Vanadium | 16.4 | | | P | R036760 |
| 7440-66-6 | Zinc | 128 | J | E | P | R036760 |

MW 6-23-09

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-021

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 2.6 | U MW | | P | R036760 |
| 7440-36-0 | Antimony | 0.26 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 0.86 | J | | P | R036760 |
| 7440-39-3 | Barium | 0.078 | U | | P | R036760 |
| 7440-41-7 | Beryllium | 0.024 | U | *N | P | R036760 |
| 7440-43-9 | Cadmium | 0.049 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 968 | | | P | R036768 |
| 7440-47-3 | Chromium | 0.044 | UJ | *N | P | R036760 |
| 7440-48-4 | Cobalt | 0.032 | U | | P | R036760 |
| 7440-50-8 | Copper | 0.076 | U MW | E | P | R036697 |
| 7439-89-6 | Iron | 3.1 | U MW | E | P | R036760 |
| 7439-92-1 | Lead | 0.11 | U | | P | R036760 |
| 7439-95-4 | Magnesium | 0.20 | UJ | ~~E~~ MW | P | R036768 |
| 7439-96-5 | Manganese | 0.13 | UJ | | P | R036760 |
| 7440-02-0 | Nickel | 0.039 | UJ | E*N | P | R036760 |
| 7440-09-7 | Potassium | 0.81 | UJ | | P | R036760 |
| 7782-49-2 | Selenium | 2.2 | J | ~~E*N~~ MW | P | R036760 |
| 7440-22-4 | Silver | 0.074 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 21.7 | J | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.23 | UJ | ~~*~~ MW | P | R036760 |
| 7440-62-2 | Vanadium | 0.020 | U | | P | R036760 |
| 7440-66-6 | Zinc | 305 | J | ~~E~~ MW | P | R036760 |

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-022

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 4.7 | U | | P | R036760 |
| 7440-36-0 | Antimony | 0.22 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 0.31 | J | | P | R036760 |
| 7440-39-3 | Barium | 1.2 | J | | P | R036760 |
| 7440-41-7 | Beryllium | 0.025 | U | *N | P | R036760 |
| 7440-43-9 | Cadmium | 0.050 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 1.3 | U | | P | R036768 |
| 7440-47-3 | Chromium | 0.053 | UJ | *N | P | R036760 |
| 7440-48-4 | Cobalt | 0.034 | U | | P | R036760 |
| 7440-50-8 | Copper | 0.25 | U | E | P | R036697 |
| 7439-89-6 | Iron | 12.6 | U | E | P | R036760 |
| 7439-92-1 | Lead | 0.26 | U | | P | R036760 |
| 7439-95-4 | Magnesium | 0.21 | U | E | P | R036768 |
| 7439-96-5 | Manganese | 0.19 | UJ | | P | R036760 |
| 7440-02-0 | Nickel | 0.041 | UJ | E*N | P | R036760 |
| 7440-09-7 | Potassium | 2.9 | UJ | | P | R036760 |
| 7782-49-2 | Selenium | 0.83 | J | E*N | P | R036760 |
| 7440-22-4 | Silver | 0.083 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 20.4 | J | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.24 | UJ | N | P | R036760 |
| 7440-62-2 | Vanadium | 0.032 | J | | P | R036760 |
| 7440-66-6 | Zinc | 471 | J | E | P | R036760 |

MW 6-23-09

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-023

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 77.1 | | | P | R036760 |
| 7440-36-0 | Antimony | 0.45 | UJ | EN | P | R036760 |
| 7440-38-2 | Arsenic | 0.72 | J | | P | R036760 |
| 7440-39-3 | Barium | 12.8 | | | P | R036760 |
| 7440-41-7 | Beryllium | 0.025 | U | *N | P | R036760 |
| 7440-43-9 | Cadmium | 0.95 | J | EN | P | R036760 |
| 7440-70-2 | Calcium | 364 | | | P | R036768 |
| 7440-47-3 | Chromium | 0.78 | | *N | P | R036760 |
| 7440-48-4 | Cobalt | 0.16 | J | | P | R036760 |
| 7440-50-8 | Copper | 68.3 | J | E | P | R036697 |
| 7439-89-6 | Iron | 225 | J | E | P | R036760 |
| 7439-92-1 | Lead | 51.5 | | | P | R036760 |
| 7439-95-4 | Magnesium | 79.1 | J | ~~E~~ MW | P | R036768 |
| 7439-96-5 | Manganese | 4.3 | J | | P | R036760 |
| 7440-02-0 | Nickel | 1.1 | J | E*N | P | R036760 |
| 7440-09-7 | Potassium | 44.1 | J | | P | R036760 |
| 7782-49-2 | Selenium | 1.6 | J | ~~E*N~~ MW | P | R036760 |
| 7440-22-4 | Silver | 0.25 | UJ | *N | P | R036760 |
| 7440-23-5 | Sodium | 38.5 | J | *N | P | R036760 |
| 7440-28-0 | Thallium | 0.24 | UJ | ~~N~~ MW | P | R036760 |
| 7440-62-2 | Vanadium | 0.33 | J | | P | R036760 |
| 7440-66-6 | Zinc | 470 | J | ~~E~~ MW | P | R036760 |

MW 6-23-09

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Water

Lab Sample ID: S10HD01-024

Level (low/med): LOW

Date Received: 05/22/2009

% Solids:

Concentration Units : ug/L

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 54.5 | U | | P | R036760 |
| 7440-36-0 | Antimony | 3.0 | U | | P | R036760 |
| 7440-38-2 | Arsenic | 1.3 | U | | P | R036760 |
| 7440-39-3 | Barium | 25.1 | J | | P | R036760 |
| 7440-41-7 | Beryllium | 0.51 | U | | P | R036760 |
| 7440-43-9 | Cadmium | 1.1 | U | | P | R036760 |
| 7440-70-2 | Calcium | 17700 | | | P | R036760 |
| 7440-47-3 | Chromium | 0.31 | U | | P | R036760 |
| 7440-48-4 | Cobalt | 0.36 | UJ | | P | R036760 |
| 7440-50-8 | Copper | 31.0 | | | P | R036697 |
| 7439-89-6 | Iron | 845 | | | P | R036760 |
| 7439-92-1 | Lead | 6.1 | J | | P | R036760 |
| 7439-95-4 | Magnesium | 7440 | J | | P | R036697 |
| 7439-96-5 | Manganese | 8.8 | J | | P | R036760 |
| 7440-02-0 | Nickel | 1.2 | U | | P | R036760 |
| 7440-09-7 | Potassium | 3990 | J | | P | R036760 |
| 7782-49-2 | Selenium | 0.89 | J | | P | R036760 |
| 7440-22-4 | Silver | 1.2 | U | | P | R036760 |
| 7440-23-5 | Sodium | 6360 | | | P | R036760 |
| 7440-28-0 | Thallium | 5.9 | UJ | | P | R036760 |
| 7440-62-2 | Vanadium | 6.4 | J | | P | R036760 |
| 7440-66-6 | Zinc | 82.4 | | | P | R036760 |

MW 6-23-09

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Water

Lab Sample ID: S10HD01-025

Level (low/med): LOW

Date Received: 05/22/2009

% Solids:

Concentration Units : ug/L

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7429-90-5 | Aluminum | 54.6 | U ~~J~~ MW | | P | R036760 |
| 7440-36-0 | Antimony | 3.0 | U | | P | R036760 |
| 7440-38-2 | Arsenic | 1.3 | U | | P | R036760 |
| 7440-39-3 | Barium | 26.0 | J | | P | R036760 |
| 7440-41-7 | Beryllium | 0.51 | U | | P | R036760 |
| 7440-43-9 | Cadmium | 1.1 | U | | P | R036760 |
| 7440-70-2 | Calcium | 18700 | | | P | R036760 |
| 7440-47-3 | Chromium | 0.31 | U | | P | R036760 |
| 7440-48-4 | Cobalt | 0.36 | U J | | P | R036760 |
| 7440-50-8 | Copper | 6.5 | U ~~J~~ MW | | P | R036697 |
| 7439-89-6 | Iron | 210 | | | P | R036760 |
| 7439-92-1 | Lead | 1.8 | U | | P | R036760 |
| 7439-95-4 | Magnesium | 7790 | J | ~~N~~ MW | P | R036697 |
| 7439-96-5 | Manganese | 7.3 | J | ~~E~~ MW | P | R036760 |
| 7440-02-0 | Nickel | 1.2 | U | | P | R036760 |
| 7440-09-7 | Potassium | 4430 | J | | P | R036760 |
| 7782-49-2 | Selenium | 0.55 | U J | | P | R036760 |
| 7440-22-4 | Silver | 0.77 | U MW | | P | R036760 |
| 7440-23-5 | Sodium | 7600 | | | P | R036760 |
| 7440-28-0 | Thallium | 5.9 | U J | | P | R036760 |
| 7440-62-2 | Vanadium | 7.6 | J | | P | R036760 |
| 7440-66-6 | Zinc | 81.4 | | | P | R036760 |

MW 6-23-09

Comment

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**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: June 25, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 11 solid and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Mercury analyses (EPA Methods 7470 and 7471) were performed by Pace Laboratories, Inc., Seattle, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09050702 | 09050703 | 09050704 | 09050720 | 09050721 |
| 09050722 | 09050723 | 09050724 | 09050725 | 09050726 |
| 09050727 | 09050705 | 09050706 | | |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

All liquid samples were preserved to a pH < 2. The samples were maintained at 4°C (± 2°C). The samples were collected on May 21, 2009, and were analyzed by June 11, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

The initial calibration correlation coefficient was > 0.995. No results were greater than 110% of the highest calibration standard. All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Satisfactory.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. Associated sample results were qualified as not detected (U) if the sample result was less than five times the positive blank concentration. Associated sample results were qualified as estimated quantities (J or UJ) if the sample result was less than five times the absolute value of the negative blank concentration.

**4. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-002

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 80.6

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 1.33 | J | N | CV | R036726 |

MW 6-25-09

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-003

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 77.8

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 3.11 | J | | CV | R036718 |

MW 6-25-09

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0704

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-004

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 83

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0423 | J | | CV | R036718 |

MW
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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-016

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.00810 | J | | CV | R036703 |

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6-25-09

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Date Printed: 6/11/2009 14:05

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-017

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.00580 | UJ | | CV | R036703 |

MW
6-25-09

Comment

Date Printed: 6/11/2009 14:05

SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-018

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0342 | J | | CV | R036703 |

MW
6-25-09

Comment

Date Printed: 6/11/2009 14:05



Form I - IN

SW-846

SUM - 739

SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-019

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0498 | J | | CV | R036703 |

MW
6-25-09

Comment

Date Printed: 6/11/2009 14:05



Form I - IN

SW-846

SUM - 740

SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-020

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0481 | J | | CV | R036703 |

MW
6-25-09

Comment

Date Printed: 6/11/2009 14:05



Form I - IN

SW-846

SUM - 741

SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-021

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.00580 | UJ | | CV | R036703 |

MW 6-25-09

Comment:

Date Printed: 6/11/2009 14:05

SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-022

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.00580 | UJ | | CV | R036703 |

MW 6-25-09

Comment

Date Printed: 6/11/2009 14:05

SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Soil

Lab Sample ID: S10HD01-023

Level (low/med): LOW

Date Received: 05/22/2009

% Solids: 100

Concentration Units : mg/Kg

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0700 | J | | CV | R036703 |

MW
6-25-09

Comment

Date Printed: 6/11/2009 14:05



SUM - 744

# INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Water

Lab Sample ID: S10HD01-024

Level (low/med): LOW

Date Received: 05/22/2009

% Solids:

Concentration Units : ug/L

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0720 | UJ | | CV | R036676 |

MW
6-25-09

Comment

Date Printed: 6/11/2009 14:05

SW-846
-1-
INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services

Contract:

Lab Code: PACE

SDG No.: S10HD01

Matrix (soil/water): Water

Lab Sample ID: S10HD01-025

Level (low/med): LOW

Date Received: 05/22/2009

% Solids:

Concentration Units : ug/L

| CAS No. | Analyte | Concentration | C | Q | M | Run Seq. |
|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 0.0720 | U J | | CV | R036676 |

MW
6-25-09

Comment

Date Printed: 6/11/2009 14:05

A1016 with a low recovery associated with samples 09050701, 09050702, 09050703, and 09050704 (associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]).

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Satisfactory.**

All recoveries of the SMCs were within the established control limits except one low pesticide SMC recovery in QC samples (no action taken), two high pesticide SMCs in a QC sample (no action taken), 09050703, 09050703DL (associated positive results were qualified as estimated quantities [J]), one high recovery in PCB samples 09050701, 09050702, 09050703, 09050702DL, and 09050703DL (associated positive results were qualified as estimated quantities [J]), and two high PCB SMCs in samples 09050702MS and 09050702MSD (no action taken for these QC samples).

**8. Blank and Matrix Spikes: Satisfactory.**

Recoveries of all spiked analytes were within the appropriate control limits except aldrin with a low recovery in the water blank spike sample (associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]), and A1016 with high recoveries in sample 09050702 (associated positive results were qualified as estimated quantities [J]).

**9. Duplicates: Satisfactory.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits except in PCB sample 09050705 (A1016 and A1260 results were qualified as estimated quantities [J or UJ]).

**10. Compound Identification: Satisfactory.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036678

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 15.47 (g/mL) gm

Lab File ID: q5290931.d

% Moisture: 19.4 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 5000.0 (uL)

Date Analyzed: 05/30/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 16 | U |
| 319-85-7 | beta-BHC | 16 | U |
| 319-86-8 | delta-BHC | 16 | U |
| 58-89-9 | gamma-BHC | 16 | U |
| 76-44-8 | Heptachlor | 16 | U |
| 309-00-2 | Aldrin | 16 | U |
| 1024-57-3 | Heptachlor epoxide | ~~41~~ MW 36 | J ~~MW~~ |
| 959-98-8 | Endosulfan I | 16 | U |
| 60-57-1 | Dieldrin | 29 | J |
| 72-55-9 | 4,4'-DDE | 290 | |
| 72-20-8 | Endrin | 27 | ~~MW~~ J |
| 33213-65-9 | Endosulfan II | 53 | ~~MW~~ |
| 72-54-8 | 4,4'-DDD | 49 | ~~MW~~ |
| 1031-07-8 | Endosulfan sulfate | 32 | U |
| 50-29-3 | 4,4'-DDT | ~~210~~ MW 190 | ~~MW~~ J |
| 72-43-5 | Methoxychlor | 160 | U |
| 7421-93-4 | Endrin aldehyde | 32 | U |
| 5103-71-9 | alpha-Chlordane | 16 | U |
| 53494-70-5 | Endrin ketone | 32 | U |
| 5103-74-2 | gamma-Chlordane | ~~39~~ MW 29 | ~~MW~~ J |
| 8001-35-2 | Toxaphene | 2000 | U |

Comments:

MW 6/5-09



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Date Printed: 6/10/2009 12:36

FORM I PEST

1

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036678

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-003

Sample wt/vol: 15.58 (g/mL) gm

Lab File ID: g5290930.d

% Moisture: 22.2 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 5000.0 (uL)

Date Analyzed: 05/29/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 16 | U |
| 319-85-7 | beta-BHC | 16 | U |
| 319-86-8 | delta-BHC | 16 | U |
| 58-89-9 | gamma-BHC | 16 | U |
| 76-44-8 | Heptachlor | 16 | U |
| 309-00-2 | Aldrin | 16 | U |
| 1024-57-3 | Heptachlor epoxide | 50 | J ~~EMU~~ |
| 959-98-8 | Endosulfan I | 16 | U |
| 60-57-1 | Dieldrin | 33 | U |
| 72-55-9 | 4,4'-DDE | 300 | J |
| 72-20-8 | Endrin | 33 | U |
| 33213-65-9 | Endosulfan II | 84 | J ~~EMU~~ |
| 72-54-8 | 4,4'-DDD | 25 | ~~MEU~~ J |
| 1031-07-8 | Endosulfan sulfate | 33 | U |
| 50-29-3 | 4,4'-DDT | ~~250MW~~ 380 | J ~~EMU~~ |
| 72-43-5 | Methoxychlor | 160 | U |
| 7421-93-4 | Endrin aldehyde | 33 | U |
| 5103-71-9 | alpha-Chlordane | 16 | U |
| 53494-70-5 | Endrin ketone | 30 | J |
| 5103-74-2 | gamma-Chlordane | 74 | J ~~EMU~~ |
| 8001-35-2 | Toxaphene | 2100 | U |

Comments:

MW 6-15-09



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FORM I PEST

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: q5270911.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 360 | U |
| 319-85-7 | beta-BHC | 360 | U |
| 319-86-8 | delta-BHC | 360 | U |
| 58-89-9 | gamma-BHC | 360 | U |
| 76-44-8 | Heptachlor | 360 | U |
| 309-00-2 | Aldrin | 360 | U |
| 1024-57-3 | Heptachlor epoxide | 360 | U |
| 959-98-8 | Endosulfan I | 360 | U |
| 60-57-1 | Dieldrin | 740 | U |
| 72-55-9 | 4,4'-DDE | 740 | U |
| 72-20-8 | Endrin | 740 | U |
| 33213-65-9 | Endosulfan II | 740 | U |
| 72-54-8 | 4,4'-DDD | 740 | U |
| 1031-07-8 | Endosulfan sulfate | 740 | U |
| 50-29-3 | 4,4'-DDT | 740 | U |
| 72-43-5 | Methoxychlor | 3600 | U |
| 7421-93-4 | Endrin aldehyde | 740 | U |
| 5103-71-9 | alpha-Chlordane | 360 | U |
| 53494-70-5 | Endrin ketone | 740 | U |
| 5103-74-2 | gamma-Chlordane | 360 | U |
| 8001-35-2 | Toxaphene | 45000 | U |

Comments:

MW
6-15-09



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Date Printed: 6/10/2009 12:36

FORM I PEST

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: q5270912.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 380 | U |
| 319-85-7 | beta-BHC | 380 | U |
| 319-86-8 | delta-BHC | 380 | U |
| 58-89-9 | gamma-BHC | 380 | U |
| 76-44-8 | Heptachlor | 380 | U |
| 309-00-2 | Aldrin | 380 | U |
| 1024-57-3 | Heptachlor epoxide | 380 | U |
| 959-98-8 | Endosulfan I | 380 | U |
| 60-57-1 | Dieldrin | 770 | U |
| 72-55-9 | 4,4'-DDE | 770 | U |
| 72-20-8 | Endrin | 770 | U |
| 33213-65-9 | Endosulfan II | 770 | U |
| 72-54-8 | 4,4'-DDD | 770 | U |
| 1031-07-8 | Endosulfan sulfate | 770 | U |
| 50-29-3 | 4,4'-DDT | 770 | UJ |
| 72-43-5 | Methoxychlor | 3800 | U |
| 7421-93-4 | Endrin aldehyde | 770 | U |
| 5103-71-9 | alpha-Chlordane | 380 | U |
| 53494-70-5 | Endrin ketone | 770 | U |
| 5103-74-2 | gamma-Chlordane | 380 | U |
| 8001-35-2 | Toxaphene | 48000 | U |

Comments:

MW
6-15-09



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Date Printed: 6/10/2009 12:36

FORM I PEST

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 0.20 (g/mL) gm

Lab File ID: g5270926.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 400 | U |
| 319-85-7 | beta-BHC | 400 | U |
| 319-86-8 | delta-BHC | 400 | U |
| 58-89-9 | gamma-BHC | 400 | U |
| 76-44-8 | Heptachlor | 400 | U |
| 309-00-2 | Aldrin | 400 | U |
| 1024-57-3 | Heptachlor epoxide | 400 | U |
| 959-98-8 | Endosulfan I | 400 | U |
| 60-57-1 | Dieldrin | 810 | U |
| 72-55-9 | 4,4'-DDE | 810 | U |
| 72-20-8 | Endrin | 810 | U |
| 33213-65-9 | Endosulfan II | 810 | U |
| 72-54-8 | 4,4'-DDD | 810 | U |
| 1031-07-8 | Endosulfan sulfate | 810 | U |
| 50-29-3 | 4,4'-DDT | 810 | U |
| 72-43-5 | Methoxychlor | 4000 | U |
| 7421-93-4 | Endrin aldehyde | 810 | U |
| 5103-71-9 | alpha-Chlordane | 400 | U |
| 53494-70-5 | Endrin ketone | 810 | U |
| 5103-74-2 | gamma-Chlordane | 400 | U |
| 8001-35-2 | Toxaphene | 50000 | U |

Comments:

MW
6-15-09



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Date Printed: 6/10/2009 12:36

FORM I PEST

1

PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: g5270927.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0 (uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 380 | U |
| 319-85-7 | beta-BHC | 380 | U |
| 319-86-8 | delta-BHC | 380 | U |
| 58-89-9 | gamma-BHC | 380 | U |
| 76-44-8 | Heptachlor | 380 | U |
| 309-00-2 | Aldrin | 380 | U |
| 1024-57-3 | Heptachlor epoxide | 380 | U |
| 959-98-8 | Endosulfan I | 380 | U |
| 60-57-1 | Dieldrin | 770 | U |
| 72-55-9 | 4,4'-DDE | 770 | U |
| 72-20-8 | Endrin | 770 | U |
| 33213-65-9 | Endosulfan II | 770 | U |
| 72-54-8 | 4,4'-DDD | 770 | U |
| 1031-07-8 | Endosulfan sulfate | 770 | U |
| 50-29-3 | 4,4'-DDT | 770 | U |
| 72-43-5 | Methoxychlor | 3800 | U |
| 7421-93-4 | Endrin aldehyde | 770 | U |
| 5103-71-9 | alpha-Chlordane | 380 | U |
| 53494-70-5 | Endrin ketone | 950 | J ~~EMW~~ |
| 5103-74-2 | gamma-Chlordane | 380 | U |
| 8001-35-2 | Toxaphene | 48000 | U |

Comments:

MW 6/5/09



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Date Printed: 6/10/2009 12:36

FORM I PEST

PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: q5270928.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0 (uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 360 | U |
| 319-85-7 | beta-BHC | 360 | U |
| 319-86-8 | delta-BHC | 360 | U |
| 58-89-9 | gamma-BHC | 360 | U |
| 76-44-8 | Heptachlor | 360 | U |
| 309-00-2 | Aldrin | 360 | U |
| 1024-57-3 | Heptachlor epoxide | 360 | U |
| 959-98-8 | Endosulfan I | 360 | U |
| 60-57-1 | Dieldrin | 740 | U |
| 72-55-9 | 4,4'-DDE | 680 | ~~MPJ~~ |
| 72-20-8 | Endrin | 710 | J |
| 33213-65-9 | Endosulfan II | 740 | U |
| 72-54-8 | 4,4'-DDD | 740 | U |
| 1031-07-8 | Endosulfan sulfate | 740 | U |
| 50-29-3 | 4,4'-DDT | 590 | ~~MPJ~~ |
| 72-43-5 | Methoxychlor | 3600 | U |
| 7421-93-4 | Endrin aldehyde | 740 | U |
| 5103-71-9 | alpha-Chlordane | 360 | U |
| 53494-70-5 | Endrin ketone | 740 | U |
| 5103-74-2 | gamma-Chlordane | 360 | U |
| 8001-35-2 | Toxaphene | 45000 | U |

Comments:

MW
6-15-09



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Date Printed: 6/10/2009 12:36

FORM I PEST

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: q5270913.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 380 | U |
| 319-85-7 | beta-BHC | 380 | U |
| 319-86-8 | delta-BHC | 380 | U |
| 58-89-9 | gamma-BHC | 380 | U |
| 76-44-8 | Heptachlor | 380 | U |
| 309-00-2 | Aldrin | 380 | U |
| 1024-57-3 | Heptachlor epoxide | 380 | U |
| 959-98-8 | Endosulfan I | 380 | U |
| 60-57-1 | Dieldrin | 770 | U |
| 72-55-9 | 4,4'-DDE | 770 | U |
| 72-20-8 | Endrin | 770 | U |
| 33213-65-9 | Endosulfan II | 770 | U |
| 72-54-8 | 4,4'-DDD | 770 | U |
| 1031-07-8 | Endosulfan sulfate | 770 | U |
| 50-29-3 | 4,4'-DDT | 770 | UJ |
| 72-43-5 | Methoxychlor | 3800 | U |
| 7421-93-4 | Endrin aldehyde | 770 | U |
| 5103-71-9 | alpha-Chlordane | 380 | U |
| 53494-70-5 | Endrin ketone | 770 | U |
| 5103-74-2 | gamma-Chlordane | 380 | U |
| 8001-35-2 | Toxaphene | 48000 | U |

Comments:

MW
6/5-09



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FORM I PEST

PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-022

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: q5270917.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 380 | U |
| 319-85-7 | beta-BHC | 380 | U |
| 319-86-8 | delta-BHC | 380 | U |
| 58-89-9 | gamma-BHC | 380 | U |
| 76-44-8 | Heptachlor | 380 | U |
| 309-00-2 | Aldrin | 380 | U |
| 1024-57-3 | Heptachlor epoxide | 380 | U |
| 959-98-8 | Endosulfan I | 380 | U |
| 60-57-1 | Dieldrin | 770 | U |
| 72-55-9 | 4,4'-DDE | 770 | U |
| 72-20-8 | Endrin | 770 | U |
| 33213-65-9 | Endosulfan II | 770 | U |
| 72-54-8 | 4,4'-DDD | 770 | U |
| 1031-07-8 | Endosulfan sulfate | 770 | U |
| 50-29-3 | 4,4'-DDT | 770 | U |
| 72-43-5 | Methoxychlor | 3800 | U |
| 7421-93-4 | Endrin aldehyde | 770 | U |
| 5103-71-9 | alpha-Chlordane | 380 | U |
| 53494-70-5 | Endrin ketone | 770 | U |
| 5103-74-2 | gamma-Chlordane | 380 | U |
| 8001-35-2 | Toxaphene | 48000 | U |

Comments:

MW 6/15/09



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FORM I PEST

PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036654

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: g5270925.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 380 | U |
| 319-85-7 | beta-BHC | 1000 | J |
| 319-86-8 | delta-BHC | 380 | U |
| 58-89-9 | gamma-BHC | 380 | U |
| 76-44-8 | Heptachlor | 380 | U |
| 309-00-2 | Aldrin | 380 | U |
| 1024-57-3 | Heptachlor epoxide | 590 | J ~~EMH~~ |
| 959-98-8 | Endosulfan I | 380 | U |
| 60-57-1 | Dieldrin | 770 | U |
| 72-55-9 | 4,4'-DDE | 690 | J ~~MW~~ |
| 72-20-8 | Endrin | 770 | U |
| 33213-65-9 | Endosulfan II | 740 | J |
| 72-54-8 | 4,4'-DDD | 770 | U |
| 1031-07-8 | Endosulfan sulfate | 770 | U |
| 50-29-3 | 4,4'-DDT | 1100 | J |
| 72-43-5 | Methoxychlor | 3800 | U |
| 7421-93-4 | Endrin aldehyde | 770 | U |
| 5103-71-9 | alpha-Chlordane | 380 | U |
| 53494-70-5 | Endrin ketone | 770 | U |
| 5103-74-2 | gamma-Chlordane | 380 | U |
| 8001-35-2 | Toxaphene | 48000 | U |

Comments:

MW 6/5-09



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FORM I PEST

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036675

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: g6090908.d

% Moisture: _____ Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) SPE

Date Extracted: 05/27/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 06/09/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 0.038 | U |
| 319-85-7 | beta-BHC | 0.038 | U |
| 319-86-8 | delta-BHC | 0.038 | U |
| 58-89-9 | gamma-BHC | 0.038 | U |
| 76-44-8 | Heptachlor | 0.038 | U |
| 309-00-2 | Aldrin | 0.038 | U J |
| 1024-57-3 | Heptachlor epoxide | 0.038 | U |
| 959-98-8 | Endosulfan I | 0.038 | U |
| 60-57-1 | Dieldrin | 0.077 | U |
| 72-55-9 | 4,4'-DDE | 0.077 | U |
| 72-20-8 | Endrin | 0.077 | U |
| 33213-65-9 | Endosulfan II | 0.077 | U |
| 72-54-8 | 4,4'-DDD | 0.077 | U |
| 1031-07-8 | Endosulfan sulfate | 0.077 | U |
| 50-29-3 | 4,4'-DDT | 0.077 | U |
| 72-43-5 | Methoxychlor | 0.38 | U |
| 53494-70-5 | Endrin ketone | 0.077 | U |
| 7421-93-4 | Endrin aldehyde | 0.077 | U |
| 5103-71-9 | alpha-Chlordane | 0.038 | U |
| 5103-74-2 | gamma-Chlordane | 0.038 | U |
| 8001-35-2 | Toxaphene | 4.8 | U |

Comments:

MW 6-15-09

# PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036675

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: g6090907.d

% Moisture: _____ Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) SPE

Date Extracted: 05/27/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 06/09/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 319-84-6 | alpha-BHC | 0.038 | U |
| 319-85-7 | beta-BHC | 0.038 | U |
| 319-86-8 | delta-BHC | 0.038 | U |
| 58-89-9 | gamma-BHC | 0.038 | U |
| 76-44-8 | Heptachlor | 0.038 | U |
| 309-00-2 | Aldrin | 0.038 | U J |
| 1024-57-3 | Heptachlor epoxide | 0.038 | U |
| 959-98-8 | Endosulfan I | 0.038 | U |
| 60-57-1 | Dieldrin | 0.077 | U |
| 72-55-9 | 4,4'-DDE | 0.077 | U |
| 72-20-8 | Endrin | 0.077 | U |
| 33213-65-9 | Endosulfan II | 0.077 | U |
| 72-54-8 | 4,4'-DDD | 0.077 | U |
| 1031-07-8 | Endosulfan sulfate | 0.077 | U |
| 50-29-3 | 4,4'-DDT | 0.077 | U |
| 72-43-5 | Methoxychlor | 0.38 | U |
| 53494-70-5 | Endrin ketone | 0.077 | U |
| 7421-93-4 | Endrin aldehyde | 0.077 | U |
| 5103-71-9 | alpha-Chlordane | 0.038 | U |
| 5103-74-2 | gamma-Chlordane | 0.038 | U |
| 8001-35-2 | Toxaphene | 4.8 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0701

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036686

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-001

Sample wt/vol: 15.09 (g/mL) gm

Lab File ID: g5290928.d

% Moisture: 11.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 5000.0 (uL)

Date Analyzed: 05/29/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 19 | U |
| 11104-28-2 | Aroclor-1221 | 19 | U |
| 11141-16-5 | Aroclor-1232 | 19 | U |
| 53469-21-9 | Aroclor-1242 | 19 | U |
| 12672-29-6 | Aroclor-1248 | 19 | U |
| 11097-69-1 | Aroclor-1254 | 19 | U |
| 11096-82-5 | Aroclor-1260 | 19 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036686

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 15.47 (g/mL) gm

Lab File ID: q6030917.d

% Moisture: 19.4 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 5000.0 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 200 | U |
| 11104-28-2 | Aroclor-1221 | 200 | U |
| 11141-16-5 | Aroclor-1232 | 200 | U |
| 53469-21-9 | Aroclor-1242 | 200 | U |
| 12672-29-6 | Aroclor-1248 | ~~18000~~ 16,000 | J ~~EPA~~ |
| 11097-69-1 | Aroclor-1254 | ~~7900~~ 5,700 | J ~~EP~~ |
| 11096-82-5 | Aroclor-1260 | ~~2200~~ 2,300 | J |

Comments:

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FORM I ARO

# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036686

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-003

Sample wt/vol: 15.58 (g/mL) gm

Lab File ID: q6030916.d

% Moisture: 22.2 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 5000.0 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 210 | U J |
| 11104-28-2 | Aroclor-1221 | 210 | U |
| 11141-16-5 | Aroclor-1232 | 210 | U |
| 53469-21-9 | Aroclor-1242 | 210 | U |
| 12672-29-6 | Aroclor-1248 | 19000 | J ~~E~~ mw |
| 11097-69-1 | Aroclor-1254 | ~~9300~~ mw 6/08 | J ~~E~~ mw |
| 11096-82-5 | Aroclor-1260 | 210 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0704

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036686

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-004

Sample wt/vol: 15.14 (g/mL) gm

Lab File ID: g6030915.d

% Moisture: 17.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 5000.0 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 20 | U J |
| 11104-28-2 | Aroclor-1221 | 20 | U |
| 11141-16-5 | Aroclor-1232 | 20 | U |
| 53469-21-9 | Aroclor-1242 | 20 | U |
| 12672-29-6 | Aroclor-1248 | 20 | U |
| 11097-69-1 | Aroclor-1254 | ~~1400~~ mu 3,400 | J ~~EMU~~ |
| 11096-82-5 | Aroclor-1260 | ~~310~~ mu 430 | ~~EMU~~ |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0707

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-005

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: q5270934.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

MW 6/5/09

# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0708

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-006

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: g5270935.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

MW 6/5-09

# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0709

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-007

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: q5270936.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0710

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-008

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: g5270937.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0711

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-009

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: q5270938.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0728

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-010

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: g5270939.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0729

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-011

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: q5270940.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0730

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036656

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-012

Sample wt/vol: 1.00 (g/mL) wipe

Lab File ID: q5270941.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) CONT

Date Extracted: 05/27/2009

Concentrated Extract Volume: 25000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/wi | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 2.4 | U |
| 11104-28-2 | Aroclor-1221 | 2.4 | U |
| 11141-16-5 | Aroclor-1232 | 2.4 | U |
| 53469-21-9 | Aroclor-1242 | 2.4 | U |
| 12672-29-6 | Aroclor-1248 | 2.4 | U |
| 11097-69-1 | Aroclor-1254 | 2.4 | U |
| 11096-82-5 | Aroclor-1260 | 2.4 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0714

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-013

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: q5270908.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 4.7 | U |
| 11104-28-2 | Aroclor-1221 | 4.7 | U |
| 11141-16-5 | Aroclor-1232 | 4.7 | U |
| 53469-21-9 | Aroclor-1242 | 4.7 | U |
| 12672-29-6 | Aroclor-1248 | 4.7 | U |
| 11097-69-1 | Aroclor-1254 | 4.7 | U |
| 11096-82-5 | Aroclor-1260 | 4.7 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0715

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-014

Sample wt/vol: 0.20 (g/mL) gm

Lab File ID: q5270909.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.2 | U |
| 11104-28-2 | Aroclor-1221 | 5.2 | U |
| 11141-16-5 | Aroclor-1232 | 5.2 | U |
| 53469-21-9 | Aroclor-1242 | 5.2 | U |
| 12672-29-6 | Aroclor-1248 | 5.2 | U |
| 11097-69-1 | Aroclor-1254 | 5.2 | U |
| 11096-82-5 | Aroclor-1260 | 5.2 | U |

Comments:

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6-15-09

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0716

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-015

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: q5270910.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.0 | U |
| 11104-28-2 | Aroclor-1221 | 5.0 | U |
| 11141-16-5 | Aroclor-1232 | 5.0 | U |
| 53469-21-9 | Aroclor-1242 | 5.0 | U |
| 12672-29-6 | Aroclor-1248 | 5.0 | U |
| 11097-69-1 | Aroclor-1254 | 5.0 | U |
| 11096-82-5 | Aroclor-1260 | 5.0 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: q5270911.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 4.7 | U |
| 11104-28-2 | Aroclor-1221 | 4.7 | U |
| 11141-16-5 | Aroclor-1232 | 4.7 | U |
| 53469-21-9 | Aroclor-1242 | 4.7 | U |
| 12672-29-6 | Aroclor-1248 | 4.7 | U |
| 11097-69-1 | Aroclor-1254 | 4.7 | U |
| 11096-82-5 | Aroclor-1260 | 4.7 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: q5270912.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.0 | U |
| 11104-28-2 | Aroclor-1221 | 5.0 | U |
| 11141-16-5 | Aroclor-1232 | 5.0 | U |
| 53469-21-9 | Aroclor-1242 | 5.0 | U |
| 12672-29-6 | Aroclor-1248 | 5.0 | U |
| 11097-69-1 | Aroclor-1254 | 5.0 | U |
| 11096-82-5 | Aroclor-1260 | 5.0 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 0.20 (g/mL) gm

Lab File ID: q5270926.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.2 | U |
| 11104-28-2 | Aroclor-1221 | 5.2 | U |
| 11141-16-5 | Aroclor-1232 | 5.2 | U |
| 53469-21-9 | Aroclor-1242 | 5.2 | U |
| 12672-29-6 | Aroclor-1248 | 5.2 | U |
| 11097-69-1 | Aroclor-1254 | 5.2 | U |
| 11096-82-5 | Aroclor-1260 | 5.2 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: g5270927.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.0 | U |
| 11104-28-2 | Aroclor-1221 | 5.0 | U |
| 11141-16-5 | Aroclor-1232 | 5.0 | U |
| 53469-21-9 | Aroclor-1242 | 5.0 | U |
| 12672-29-6 | Aroclor-1248 | 5.0 | U |
| 11097-69-1 | Aroclor-1254 | 5.0 | U |
| 11096-82-5 | Aroclor-1260 | 5.0 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: q5270928.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.0 | U |
| 11104-28-2 | Aroclor-1221 | 5.0 | U |
| 11141-16-5 | Aroclor-1232 | 5.0 | U |
| 53469-21-9 | Aroclor-1242 | 5.0 | U |
| 12672-29-6 | Aroclor-1248 | 5.0 | U |
| 11097-69-1 | Aroclor-1254 | 5.0 | U |
| 11096-82-5 | Aroclor-1260 | 5.0 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: q5270913.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 4.7 | U |
| 11104-28-2 | Aroclor-1221 | 4.7 | U |
| 11141-16-5 | Aroclor-1232 | 4.7 | U |
| 53469-21-9 | Aroclor-1242 | 4.7 | U |
| 12672-29-6 | Aroclor-1248 | 4.7 | U |
| 11097-69-1 | Aroclor-1254 | 4.7 | U |
| 11096-82-5 | Aroclor-1260 | 4.7 | U |

Comments:

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6/5-09

# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-022

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: g5270917.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.0 | U J |
| 11104-28-2 | Aroclor-1221 | 5.0 | U |
| 11141-16-5 | Aroclor-1232 | 5.0 | U |
| 53469-21-9 | Aroclor-1242 | 5.0 | U |
| 12672-29-6 | Aroclor-1248 | 5.0 | U |
| 11097-69-1 | Aroclor-1254 | 5.0 | U |
| 11096-82-5 | Aroclor-1260 | 5.0 | U J |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: q5270925.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/28/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.0 | U |
| 11104-28-2 | Aroclor-1221 | 5.0 | U |
| 11141-16-5 | Aroclor-1232 | 5.0 | U |
| 53469-21-9 | Aroclor-1242 | 64 | |
| 12672-29-6 | Aroclor-1248 | 5.0 | U |
| 11097-69-1 | Aroclor-1254 | 25 | J |
| 11096-82-5 | Aroclor-1260 | 5.0 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036677

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: g5310938.d

% Moisture: _____ Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) SEPF

Date Extracted: 05/27/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 06/01/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 0.48 | UJ |
| ~~12674-11-2~~ | ~~Aroclor-1016~~ | ~~0.48~~ | ~~U~~ MW |
| 11104-28-2 | Aroclor-1221 | 0.48 | U |
| 11141-16-5 | Aroclor-1232 | 0.48 | U |
| ~~11141-16-5~~ | ~~Aroclor-1232~~ | ~~0.48~~ | ~~U~~ MW |
| 53469-21-9 | Aroclor-1242 | 0.48 | U |
| ~~53469-21-9~~ | ~~Aroclor-1242~~ | ~~0.48~~ | ~~U~~ MW |
| 12672-29-6 | Aroclor-1248 | 0.48 | U |
| ~~12672-29-6~~ | ~~Aroclor-1248~~ | ~~0.48~~ | ~~U~~ MW |
| 11097-69-1 | Aroclor-1254 | 0.48 | U |
| 11096-82-5 | Aroclor-1260 | 0.48 | UJ |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036677

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: q5310937.d

% Moisture: _____ Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) SEPF

Date Extracted: 05/27/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 06/01/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 0.48 | U |
| ~~12674-11-2~~ | ~~Aroclor-1016~~ | ~~0.48~~ | ~~U~~ MW |
| 11104-28-2 | Aroclor-1221 | 0.48 | U |
| 11141-16-5 | Aroclor-1232 | 0.48 | U |
| ~~11141-16-5~~ | ~~Aroclor-1232~~ | ~~0.48~~ | ~~U~~ MW |
| 53469-21-9 | Aroclor-1242 | 0.48 | U |
| ~~53469-21-9~~ | ~~Aroclor-1242~~ | ~~0.48~~ | ~~U~~ MW |
| 12672-29-6 | Aroclor-1248 | 0.48 | U |
| ~~12672-29-6~~ | ~~Aroclor-1248~~ | ~~0.48~~ | ~~U~~ MW |
| 11097-69-1 | Aroclor-1254 | 0.48 | U |
| ~~11097-69-1~~ | ~~Aroclor-1254~~ | ~~0.48~~ | ~~U~~ MW |
| 11096-82-5 | Aroclor-1260 | 0.48 | U |

Comments:

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# AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0712

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036655

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-028

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: g5270914.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000.0(uL)

Date Analyzed: 05/27/2009

Injection Volume: 0.5 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 5.0 | U |
| 11104-28-2 | Aroclor-1221 | 5.0 | U |
| 11141-16-5 | Aroclor-1232 | 5.0 | U |
| 53469-21-9 | Aroclor-1242 | 5.0 | U |
| 12672-29-6 | Aroclor-1248 | 5.0 | U |
| 11097-69-1 | Aroclor-1254 | 5.0 | U |
| 11096-82-5 | Aroclor-1260 | 5.0 | U |

Comments:

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**MEMORANDUM**

DATE: June 15, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 10 solid and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by Pace Laboratories, Inc., Seattle, Washington. The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09050702 | 09050703 | 09050720 | 09050721 | 09050722 |
| 09050723 | 09050724 | 09050725 | 09050726 | 09050727 |
| 09050705 | 09050706 | | | |

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were collected on May 21, 2009, extracted by May 29, 2009, and analyzed by May 30, 2009, therefore meeting QC criteria of less than 7 days between collection and extraction for water samples, less than 14 days between collection and extraction for soil samples, and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

**6. System Monitoring Compounds (SMC): Satisfactory.**

All recoveries of the SMCs were greater than 10% and within QC criteria except outliers in QC samples (no action was taken), one high SMC recovery in samples 09050702 and 09050703 (positive results were qualified as estimated quantities (J), and one low SMC recovery in samples 09050725 and 09050727DL (associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**7. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**8. Matrix and Blank Spikes: Acceptable.**

Applicable matrix and blank spike results were within QC limits.

**9. Duplicates: Acceptable.**

Duplicate results were acceptable.

**10. Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

**11. Laboratory Contact: Not Required.**

No laboratory contact was required.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036661

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 10.42 (g/mL) gm

Lab File ID: a5280908.d

% Moisture: 19.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 4000.0 (uL)

Date Analyzed: 05/28/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 200.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 20000 | J |
| TPH-Oil | Oil Range Organics | 110000 | J |

Comments:

MW
6-15-09



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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036661

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-003

Sample wt/vol: 10.12 (g/mL) gm

Lab File ID: a5280909.d

% Moisture: 22.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) PFEX

Date Extracted: 05/26/2009

Concentrated Extract Volume: 4000.0 (uL)

Date Analyzed: 05/28/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 200.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 43000 | J |
| TPH-Oil | Oil Range Organics | 99000 | J |

Comments:

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DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 1.01 (g/mL) gm

Lab File ID: a5290926.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/29/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 14000 | |
| TPH-Oil | Oil Range Organics | 4000 | |

Comments: The hydrocarbon pattern partially resembles a mineral spirits.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 1.01 (g/mL) gm

Lab File ID: a5290920.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/29/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 500 | U |
| TPH-Oil | Oil Range Organics | 2000 | U |

Comments: The sample extract had an immiscible layer on top of the methylene chloride. The methylene chloride layer was injected with no hydrocarbons noted.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 0.10 (g/mL) gm

Lab File ID: a5290929.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/29/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 150000 | |
| TPH-Oil | Oil Range Organics | 330000 | |

Comments: The hydrocarbon pattern partially resembles a bunker C fuel.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 0.10 (g/mL) gm

Lab File ID: a5290931.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/29/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 240000 | |
| TPH-Oil | Oil Range Organics | 240000 | |

Comments: The hydrocarbon pattern partially resembles a bunker C fuel.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.10 (g/mL) gm

Lab File ID: a5300908.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/30/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 140000 | |
| TPH-Oil | Oil Range Organics | 150000 | |

Comments: The hydrocarbon pattern partially resembles a bunker C fuel.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 1.01 (g/mL) gm

Lab File ID: a5290921.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/29/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 88000 | J |

Comments: The hydrocarbon pattern does not resemble a diesel.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725-DL

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-021DL

Sample wt/vol: 1.01 (g/mL) gm

Lab File ID: a5300904.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/30/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Oil | Oil Range Organics | 950000 | |

Comments: The hydrocarbon pattern resembles a motor oil.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-022

Sample wt/vol: 1.02 (g/mL) gm

Lab File ID: a5290922.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/29/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 17000 | |

Comments: The hydrocarbon pattern does not resemble a diesel.

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726-DL

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-022DL

Sample wt/vol: 1.02 (g/mL) gm

Lab File ID: a5300905.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/30/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Oil | Oil Range Organics | 160000 | |

Comments: The hydrocarbon pattern resembles a motor oil.

MW 6/5-09



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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 1.00 (g/mL) gm

Lab File ID: a5290923.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/29/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 130000 | |

Comments: The hydrocarbon pattern does not resemble a diesel.

MW 6-15-09



NWTPH-D

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727-DL

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036669

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-023DL

Sample wt/vol: 1.00 (g/mL) gm

Lab File ID: a5300906.d

% Moisture: 0.0 Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) WASTE

Date Extracted: 05/29/2009

Concentrated Extract Volume: 10000.0(uL)

Date Analyzed: 05/30/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 100.0

GPC Cleanup: (Y/N) N pH:

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| TPH-Oil | Oil Range Organics | 880000 | J |

Comments: The hydrocarbon pattern resembles a motor oil.

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6/5-09



NWTPH-D

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# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036659

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: a5270913.d

% Moisture: _____ Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) SEPF

Date Extracted: 05/26/2009

Concentrated Extract Volume: 4000.0 (uL)

Date Analyzed: 05/27/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/L | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 0.077 | U |
| TPH-Oil | Oil Range Organics | 0.38 | U |

Comments:

MW
6-15-09

# DIESEL ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, In

Contract: N/A

SDG No.: S10HD01

Run Sequence: R036659

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 1030.0 (g/mL) mL

Lab File ID: a5270916.d

% Moisture: _____ Decanted: (Y/N) N

Date Collected: 05/21/2009

Extraction: (Type) SEPF

Date Extracted: 05/26/2009

Concentrated Extract Volume: 4000.0 (uL)

Date Analyzed: 05/27/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Sulfur Cleanup: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/L | Q |
|---|---|---|---|
| TPH-Diesel | Diesel Range Organics | 0.078 | U |
| TPH-Oil | Oil Range Organics | 0.39 | U |

Comments:

MW 6/5-09



NWTPH-D

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International Specialists in the Environment
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**MEMORANDUM**

DATE: June 22, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 11 soil and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) was performed by Pace Laboratories, Inc., Seattle, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09050702 | 09050703 | 09050704 | 09050705 | 09050706 |
| 09050720 | 09050721 | 09050722 | 09050723 | 09050724 |
| 09050725 | 09050726 | 09050727 | | |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of 4°C ± 2°C. The samples were collected on May 21, 2009, were extracted by May 28, 2009, and were analyzed by June 3, 2009, therefore meeting holding time criteria of less than 7 days between collection and extraction (14 days for soil) and less than 40 days between extraction and analysis.

**2. Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

**3. Initial Calibration: Acceptable.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30%.

**4. Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except benzoic acid in the June 2 calibration and benzoic acid and 2,4-dinitrophenol in the June 3 calibration (all with decreasing response factors). Associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**5. Blanks: Satisfactory.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank except di-n-butylphthalate (0.72 µg/L) and bis(2-ethyl)hexylphthalate (0.76 µg/L) in the water blank and di-n-butylphthalate (110 µg/kg) in the May 28 soil method blank. Associated sample results less than 5 times the blank contamination (10 times for common laboratory contaminants) were qualified as not detected (U).

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits except one low acid SMC in sample 09050703; no action was taken based on one outlier per sample per fraction.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)/Blank Spike (BS) Analysis: Satisfactory.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits except most analytes in sample 09050702 with low recoveries (all positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]) and 2,4-dinitrophenol with low recoveries in sample 09050705 (the 2,4-dinitrophenol result was qualified as an estimated quantity [UJ]).

**8. Duplicate Analysis: Satisfactory.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits except benzoic acid in sample 09050705; the associated sample quantitation limit was qualified as an estimated quantity (UJ).

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within ± 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036691

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 2.00 (g/mL) gm

Lab File ID: 060109b.b-06010938.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 19.0 Decanted: (Y/N) N

Date Extracted: 05/28/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) PFEX

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 3100 | U |
| 62-75-9 | N-Nitrosodimethylamine | 3100 | U |
| 108-95-2 | Phenol | 3100 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 3100 | U |
| 95-57-8 | 2-Chlorophenol | 3100 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 3100 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 3100 | U |
| 100-51-6 | Benzyl alcohol | 3100 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 3100 | U |
| 95-48-7 | 2-Methylphenol | 3100 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 3100 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 3100 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 3100 | U |
| 67-72-1 | Hexachloroethane | 3100 | U |
| 98-95-3 | Nitrobenzene | 3100 | U |
| 78-59-1 | Isophorone | 3100 | U |
| 88-75-5 | 2-Nitrophenol | 3100 | U |
| 105-67-9 | 2,4-Dimethylphenol | 3100 | U |
| 65-85-0 | Benzoic acid | 6200 | U |
| 111-91-1 | Bis(2-chloroethoxy)methane | 3100 | U |
| 120-83-2 | 2,4-Dichlorophenol | 3100 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 3100 | U |
| 91-20-3 | Naphthalene | 3100 | U |
| 106-47-8 | 4-Chloroaniline | 3100 | U |
| 87-68-3 | Hexachlorobutadiene | 3100 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 3100 | U |

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036691

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 2.00 (g/mL) gm

Lab File ID: 060109b.b-06010938.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 19.0 Decanted: (Y/N) N

Date Extracted: 05/28/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) PFEX

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 3100 | U J |
| 88-06-2 | 2,4,6-Trichlorophenol | 3100 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 3100 | U |
| 91-58-7 | 2-Chloronaphthalene | 3100 | U |
| 88-74-4 | 2-Nitroaniline | 3100 | U |
| 131-11-3 | Dimethylphthalate | 3100 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 3100 | U |
| 208-96-8 | Acenaphthylene | 3100 | U |
| 99-09-2 | 3-Nitroaniline | 3100 | U |
| 83-32-9 | Acenaphthene | 1600 | J |
| 51-28-5 | 2,4-Dinitrophenol | 6200 | U |
| 100-02-7 | 4-Nitrophenol | 3100 | U |
| 132-64-9 | Dibenzofuran | 3100 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 3100 | U |
| 84-66-2 | Diethylphthalate | 3100 | U |
| 86-73-7 | Fluorene | 1700 | J |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 3100 | U J |
| 100-01-6 | 4-Nitroaniline | 3100 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 3100 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 3100 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 3100 | U |
| 118-74-1 | Hexachlorobenzene | 3100 | U |
| 87-86-5 | Pentachlorophenol | 3100 | U |
| 85-01-8 | Phenanthrene | 13000 | J |
| 120-12-7 | Anthracene | 3000 | J |
| 86-74-8 | Carbazole | 3100 | U J |
| 84-74-2 | Di-n-butylphthalate | 3100 | U J |
| 206-44-0 | Fluoranthene | 25000 | J |

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FORM I SV

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036691

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 2.00 (g/mL) gm

Lab File ID: 060109b.b-06010938.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 19.0 Decanted: (Y/N) N

Date Extracted: 05/28/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) PFEX

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 22000 | J |
| 85-68-7 | Butylbenzylphthalate | 3100 | U J |
| 91-94-1 | 3,3'-Dichlorobenzidine | 3100 | U J |
| 56-55-3 | Benzo(a)anthracene | 7100 | J |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 3800 | |
| 218-01-9 | Chrysene | 8400 | |
| 117-84-0 | Di-n-octylphthalate | 3100 | U J |
| 205-99-2 | Benzo(b)fluoranthene | 4700 | J |
| 207-08-9 | Benzo(k)fluoranthene | 4700 | |
| 50-32-8 | Benzo(a)pyrene | 3900 | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 2400 | J |
| 53-70-3 | Dibenzo(a,h)anthracene | 3100 | U J |
| 191-24-2 | Benzo(g,h,i)perylene | 2100 | J |

Comments:

MW 6-22-09



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FORM I SV

1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036691

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-003

Sample wt/vol: 2.16 (g/mL) gm

Lab File ID: 060109b.b-06010941.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 22.0 Decanted: (Y/N) N

Date Extracted: 05/28/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) PFEX

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 3000 | U |
| 62-75-9 | N-Nitrosodimethylamine | 3000 | U |
| 108-95-2 | Phenol | 3000 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 3000 | U |
| 95-57-8 | 2-Chlorophenol | 3000 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 3000 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 3000 | U |
| 100-51-6 | Benzyl alcohol | 3000 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 3000 | U |
| 95-48-7 | 2-Methylphenol | 3000 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 3000 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 3000 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 3000 | U |
| 67-72-1 | Hexachloroethane | 3000 | U |
| 98-95-3 | Nitrobenzene | 3000 | U |
| 78-59-1 | Isophorone | 3000 | U |
| 88-75-5 | 2-Nitrophenol | 3000 | U |
| 105-67-9 | 2,4-Dimethylphenol | 3000 | U |
| 65-85-0 | Benzoic acid | 6000 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 3000 | U |
| 120-83-2 | 2,4-Dichlorophenol | 3000 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 3000 | U |
| 91-20-3 | Naphthalene | 3000 | U |
| 106-47-8 | 4-Chloroaniline | 3000 | U |
| 87-68-3 | Hexachlorobutadiene | 3000 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 3000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036691

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-003

Sample wt/vol: 2.16 (g/mL) gm

Lab File ID: 060109b.b-06010941.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 22.0 Decanted: (Y/N) N

Date Extracted: 05/28/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) PFEX

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 3000 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 3000 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 3000 | U |
| 91-58-7 | 2-Chloronaphthalene | 3000 | U |
| 88-74-4 | 2-Nitroaniline | 3000 | U |
| 131-11-3 | Dimethylphthalate | 3000 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 3000 | U |
| 208-96-8 | Acenaphthylene | 3000 | U |
| 99-09-2 | 3-Nitroaniline | 3000 | U |
| 83-32-9 | Acenaphthene | 3000 | U |
| 51-28-5 | 2,4-Dinitrophenol | 6000 | U |
| 100-02-7 | 4-Nitrophenol | 3000 | U |
| 132-64-9 | Dibenzofuran | 3000 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 3000 | U |
| 84-66-2 | Diethylphthalate | 3000 | U |
| 86-73-7 | Fluorene | 3000 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 3000 | U |
| 100-01-6 | 4-Nitroaniline | 3000 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 3000 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 3000 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 3000 | U |
| 118-74-1 | Hexachlorobenzene | 3000 | U |
| 87-86-5 | Pentachlorophenol | 3000 | U |
| 85-01-8 | Phenanthrene | 6500 | |
| 120-12-7 | Anthracene | 2000 | J |
| 86-74-8 | Carbazole | 3000 | U |
| 84-74-2 | Di-n-butylphthalate | 3000 | U |
| 206-44-0 | Fluoranthene | 25000 | |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036691

Matrix: (SOIL/WATER) Soil

Lab Sample ID: S10HD01-003

Sample wt/vol: 2.16 (g/mL) gm

Lab File ID: 060109b.b-06010941.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 22.0 Decanted: (Y/N) N

Date Extracted: 05/28/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) PFEX

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 3000 | U |
| 85-68-7 | Butylbenzylphthalate | 3000 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 3000 | U |
| 56-55-3 | Benzo(a)anthracene | 10000 | |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 17000 | |
| 218-01-9 | Chrysene | 14000 | |
| 117-84-0 | Di-n-octylphthalate | 3000 | U |
| 205-99-2 | Benzo(b)fluoranthene | 10000 | |
| 207-08-9 | Benzo(k)fluoranthene | 9400 | |
| 50-32-8 | Benzo(a)pyrene | 8100 | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 7100 | |
| 53-70-3 | Dibenzo(a,h)anthracene | 1300 | J |
| 191-24-2 | Benzo(g,h,i)perylene | 5700 | |

Comments:

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 0.20 (g/mL) gm

Lab File ID: 060109b.b-06010944.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 5000 | U |
| 62-75-9 | N-Nitrosodimethylamine | 5000 | U |
| 108-95-2 | Phenol | 5000 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 5000 | U |
| 95-57-8 | 2-Chlorophenol | 5000 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5000 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5000 | U |
| 100-51-6 | Benzyl alcohol | 5000 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5000 | U |
| 95-48-7 | 2-Methylphenol | 5000 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 5000 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 5000 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 5000 | U |
| 67-72-1 | Hexachloroethane | 5000 | U |
| 98-95-3 | Nitrobenzene | 5000 | U |
| 78-59-1 | Isophorone | 5000 | U |
| 88-75-5 | 2-Nitrophenol | 5000 | U |
| 105-67-9 | 2,4-Dimethylphenol | 5000 | U |
| 65-85-0 | Benzoic acid | 10000 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 5000 | U |
| 120-83-2 | 2,4-Dichlorophenol | 5000 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5000 | U |
| 91-20-3 | Naphthalene | 5000 | U |
| 106-47-8 | 4-Chloroaniline | 5000 | U |
| 87-68-3 | Hexachlorobutadiene | 5000 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 5000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 0.20 (g/mL) gm

Lab File ID: 060109b.b-06010944.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 5000 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 5000 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 5000 | U |
| 91-58-7 | 2-Chloronaphthalene | 5000 | U |
| 88-74-4 | 2-Nitroaniline | 5000 | U |
| 131-11-3 | Dimethylphthalate | 5000 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 5000 | U |
| 208-96-8 | Acenaphthylene | 5000 | U |
| 99-09-2 | 3-Nitroaniline | 5000 | U |
| 83-32-9 | Acenaphthene | 5000 | U |
| 51-28-5 | 2,4-Dinitrophenol | 5000 | U |
| 100-02-7 | 4-Nitrophenol | 5000 | U |
| 132-64-9 | Dibenzofuran | 5000 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 5000 | U |
| 84-66-2 | Diethylphthalate | 5000 | U |
| 86-73-7 | Fluorene | 5000 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5000 | U |
| 100-01-6 | 4-Nitroaniline | 5000 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 5000 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 5000 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 5000 | U |
| 118-74-1 | Hexachlorobenzene | 5000 | U |
| 87-86-5 | Pentachlorophenol | 5000 | U |
| 85-01-8 | Phenanthrene | 5000 | U |
| 120-12-7 | Anthracene | 5000 | U |
| 86-74-8 | Carbazole | 5000 | U |
| 84-74-2 | Di-n-butylphthalate | 5000 | U |
| 206-44-0 | Fluoranthene | 5000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 0.20 (g/mL) gm

Lab File ID: 060109b.b-06010944.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 5000 | U |
| 85-68-7 | Butylbenzylphthalate | 5000 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 5000 | U |
| 56-55-3 | Benzo(a)anthracene | 5000 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5000 | U |
| 218-01-9 | Chrysene | 5000 | U |
| 117-84-0 | Di-n-octylphthalate | 5000 | U |
| 205-99-2 | Benzo(b)fluoranthene | 5000 | U |
| 207-08-9 | Benzo(k)fluoranthene | 5000 | U |
| 50-32-8 | Benzo(a)pyrene | 5000 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5000 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 5000 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 5000 | U |

Comments:

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020926.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 4800 | U |
| 62-75-9 | N-Nitrosodimethylamine | 4800 | U |
| 108-95-2 | Phenol | 4800 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 4800 | U |
| 95-57-8 | 2-Chlorophenol | 4800 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 4800 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 4800 | U |
| 100-51-6 | Benzyl alcohol | 4800 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4800 | U |
| 95-48-7 | 2-Methylphenol | 4800 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 4800 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 4800 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 4800 | U |
| 67-72-1 | Hexachloroethane | 4800 | U |
| 98-95-3 | Nitrobenzene | 4800 | U |
| 78-59-1 | Isophorone | 4800 | U |
| 88-75-5 | 2-Nitrophenol | 4800 | U |
| 105-67-9 | 2,4-Dimethylphenol | 4800 | U |
| 65-85-0 | Benzoic acid | 9500 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 4800 | U |
| 120-83-2 | 2,4-Dichlorophenol | 4800 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4800 | U |
| 91-20-3 | Naphthalene | 4800 | U |
| 106-47-8 | 4-Chloroaniline | 4800 | U |
| 87-68-3 | Hexachlorobutadiene | 4800 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 4800 | U |

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020926.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 4800 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 4800 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4800 | U |
| 91-58-7 | 2-Chloronaphthalene | 4800 | U |
| 88-74-4 | 2-Nitroaniline | 4800 | U |
| 131-11-3 | Dimethylphthalate | 4800 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 4800 | U |
| 208-96-8 | Acenaphthylene | 4800 | U |
| 99-09-2 | 3-Nitroaniline | 4800 | U |
| 83-32-9 | Acenaphthene | 4800 | U |
| 51-28-5 | 2,4-Dinitrophenol | 4800 | U |
| 100-02-7 | 4-Nitrophenol | 4800 | U |
| 132-64-9 | Dibenzofuran | 4800 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 4800 | U |
| 84-66-2 | Diethylphthalate | 4800 | U |
| 86-73-7 | Fluorene | 4800 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4800 | U |
| 100-01-6 | 4-Nitroaniline | 4800 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4800 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 4800 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 4800 | U |
| 118-74-1 | Hexachlorobenzene | 4800 | U |
| 87-86-5 | Pentachlorophenol | 4800 | U |
| 85-01-8 | Phenanthrene | 4800 | U |
| 120-12-7 | Anthracene | 4800 | U |
| 86-74-8 | Carbazole | 4800 | U |
| 84-74-2 | Di-n-butylphthalate | 4800 | U |
| 206-44-0 | Fluoranthene | 4800 | U |

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020926.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 4800 | U |
| 85-68-7 | Butylbenzylphthalate | 4800 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4800 | U |
| 56-55-3 | Benzo(a)anthracene | 4800 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 4800 | U |
| 218-01-9 | Chrysene | 4800 | U |
| 117-84-0 | Di-n-octylphthalate | 4800 | U |
| 205-99-2 | Benzo(b)fluoranthene | 4800 | U |
| 207-08-9 | Benzo(k)fluoranthene | 4800 | U |
| 50-32-8 | Benzo(a)pyrene | 4800 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4800 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 4800 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 4800 | U |

Comments:

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020930.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 23000 | U |
| 62-75-9 | N-Nitrosodimethylamine | 23000 | U |
| 108-95-2 | Phenol | 23000 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 23000 | U |
| 95-57-8 | 2-Chlorophenol | 23000 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 23000 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 23000 | U |
| 100-51-6 | Benzyl alcohol | 23000 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 23000 | U |
| 95-48-7 | 2-Methylphenol | 23000 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 23000 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 23000 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 23000 | U |
| 67-72-1 | Hexachloroethane | 23000 | U |
| 98-95-3 | Nitrobenzene | 23000 | U |
| 78-59-1 | Isophorone | 23000 | U |
| 88-75-5 | 2-Nitrophenol | 23000 | U |
| 105-67-9 | 2,4-Dimethylphenol | 23000 | U |
| 65-85-0 | Benzoic acid | 45000 | UJ |
| 111-91-1 | Bis(2-chloroethoxy)methane | 23000 | U |
| 120-83-2 | 2,4-Dichlorophenol | 23000 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 23000 | U |
| 91-20-3 | Naphthalene | 23000 | U |
| 106-47-8 | 4-Chloroaniline | 23000 | U |
| 87-68-3 | Hexachlorobutadiene | 23000 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 23000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020930.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 23000 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 23000 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 23000 | U |
| 91-58-7 | 2-Chloronaphthalene | 23000 | U |
| 88-74-4 | 2-Nitroaniline | 23000 | U |
| 131-11-3 | Dimethylphthalate | 23000 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 23000 | U |
| 208-96-8 | Acenaphthylene | 23000 | U |
| 99-09-2 | 3-Nitroaniline | 23000 | U |
| 83-32-9 | Acenaphthene | 23000 | U |
| 51-28-5 | 2,4-Dinitrophenol | 23000 | U J |
| 100-02-7 | 4-Nitrophenol | 23000 | U |
| 132-64-9 | Dibenzofuran | 23000 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 23000 | U |
| 84-66-2 | Diethylphthalate | 23000 | U |
| 86-73-7 | Fluorene | 23000 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 23000 | U |
| ~~100-01-6~~ | ~~4-Nitroaniline~~ | ~~23000~~ | ~~U~~ |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 23000 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 23000 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 23000 | U |
| 118-74-1 | Hexachlorobenzene | 23000 | U |
| 87-86-5 | Pentachlorophenol | 23000 | U |
| 85-01-8 | Phenanthrene | 23000 | U |
| 120-12-7 | Anthracene | 23000 | U |
| 86-74-8 | Carbazole | 23000 | U |
| 84-74-2 | Di-n-butylphthalate | 23000 | U |
| 206-44-0 | Fluoranthene | 23000 | U |

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FORM I SV

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020930.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 23000 | U |
| 85-68-7 | Butylbenzylphthalate | 23000 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 23000 | U |
| 56-55-3 | Benzo(a)anthracene | 23000 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 23000 | U |
| 218-01-9 | Chrysene | 23000 | U |
| 117-84-0 | Di-n-octylphthalate | 23000 | U |
| 205-99-2 | Benzo(b)fluoranthene | 23000 | U |
| 207-08-9 | Benzo(k)fluoranthene | 23000 | U |
| 50-32-8 | Benzo(a)pyrene | 23000 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 23000 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 23000 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 23000 | U |

Comments:

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FORM I SV

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020931.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 23000 | U |
| 62-75-9 | N-Nitrosodimethylamine | 23000 | U |
| 108-95-2 | Phenol | 23000 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 23000 | U |
| 95-57-8 | 2-Chlorophenol | 23000 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 23000 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 23000 | U |
| 100-51-6 | Benzyl alcohol | 23000 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 23000 | U |
| 95-48-7 | 2-Methylphenol | 23000 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 23000 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 23000 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 23000 | U |
| 67-72-1 | Hexachloroethane | 23000 | U |
| 98-95-3 | Nitrobenzene | 23000 | U |
| 78-59-1 | Isophorone | 23000 | U |
| 88-75-5 | 2-Nitrophenol | 23000 | U |
| 105-67-9 | 2,4-Dimethylphenol | 23000 | U |
| 65-85-0 | Benzoic acid | 45000 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 23000 | U |
| 120-83-2 | 2,4-Dichlorophenol | 23000 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 23000 | U |
| 91-20-3 | Naphthalene | 23000 | U |
| 106-47-8 | 4-Chloroaniline | 23000 | U |
| 87-68-3 | Hexachlorobutadiene | 23000 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 23000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020931.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 23000 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 23000 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 23000 | U |
| 91-58-7 | 2-Chloronaphthalene | 23000 | U |
| 88-74-4 | 2-Nitroaniline | 23000 | U |
| 131-11-3 | Dimethylphthalate | 23000 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 23000 | U |
| 208-96-8 | Acenaphthylene | 23000 | U |
| 99-09-2 | 3-Nitroaniline | 23000 | U |
| 83-32-9 | Acenaphthene | 23000 | U |
| 51-28-5 | 2,4-Dinitrophenol | 23000 | U J |
| 100-02-7 | 4-Nitrophenol | 23000 | U |
| 132-64-9 | Dibenzofuran | 23000 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 23000 | U |
| 84-66-2 | Diethylphthalate | 23000 | U |
| 86-73-7 | Fluorene | 23000 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 23000 | U |
| 100-01-6 | 4-Nitroaniline | 23000 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 23000 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 23000 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 23000 | U |
| 118-74-1 | Hexachlorobenzene | 23000 | U |
| 87-86-5 | Pentachlorophenol | 23000 | U |
| 85-01-8 | Phenanthrene | 23000 | U |
| 120-12-7 | Anthracene | 23000 | U |
| 86-74-8 | Carbazole | 23000 | U |
| 84-74-2 | Di-n-butylphthalate | 23000 | U |
| 206-44-0 | Fluoranthene | 23000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020931.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 23000 | U |
| 85-68-7 | Butylbenzylphthalate | 23000 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 23000 | U |
| 56-55-3 | Benzo(a)anthracene | 23000 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 23000 | U |
| 218-01-9 | Chrysene | 23000 | U |
| 117-84-0 | Di-n-octylphthalate | 23000 | U |
| 205-99-2 | Benzo(b)fluoranthene | 23000 | U |
| 207-08-9 | Benzo(k)fluoranthene | 23000 | U |
| 50-32-8 | Benzo(a)pyrene | 23000 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 23000 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 23000 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 23000 | U |

Comments:

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020932.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 23000 | U |
| 62-75-9 | N-Nitrosodimethylamine | 23000 | U |
| 108-95-2 | Phenol | 23000 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 23000 | U |
| 95-57-8 | 2-Chlorophenol | 23000 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 23000 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 23000 | U |
| 100-51-6 | Benzyl alcohol | 23000 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 23000 | U |
| 95-48-7 | 2-Methylphenol | 23000 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 23000 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 23000 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 23000 | U |
| 67-72-1 | Hexachloroethane | 23000 | U |
| 98-95-3 | Nitrobenzene | 23000 | U |
| 78-59-1 | Isophorone | 23000 | U |
| 88-75-5 | 2-Nitrophenol | 23000 | U |
| 105-67-9 | 2,4-Dimethylphenol | 23000 | U |
| 65-85-0 | Benzoic acid | 45000 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 23000 | U |
| 120-83-2 | 2,4-Dichlorophenol | 23000 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 23000 | U |
| 91-20-3 | Naphthalene | 23000 | U |
| 106-47-8 | 4-Chloroaniline | 23000 | U |
| 87-68-3 | Hexachlorobutadiene | 23000 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 23000 | U |



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020932.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 23000 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 23000 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 23000 | U |
| 91-58-7 | 2-Chloronaphthalene | 23000 | U |
| 88-74-4 | 2-Nitroaniline | 23000 | U |
| 131-11-3 | Dimethylphthalate | 23000 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 23000 | U |
| 208-96-8 | Acenaphthylene | 23000 | U |
| 99-09-2 | 3-Nitroaniline | 23000 | U |
| 83-32-9 | Acenaphthene | 23000 | U |
| 51-28-5 | 2,4-Dinitrophenol | 23000 | U J |
| 100-02-7 | 4-Nitrophenol | 23000 | U |
| 132-64-9 | Dibenzofuran | 23000 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 23000 | U |
| 84-66-2 | Diethylphthalate | 23000 | U |
| 86-73-7 | Fluorene | 23000 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 23000 | U |
| 100-01-6 | 4-Nitroaniline | 23000 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 23000 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 23000 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 23000 | U |
| 118-74-1 | Hexachlorobenzene | 23000 | U |
| 87-86-5 | Pentachlorophenol | 23000 | U |
| 85-01-8 | Phenanthrene | 23000 | U |
| 120-12-7 | Anthracene | 23000 | U |
| 86-74-8 | Carbazole | 23000 | U |
| 84-74-2 | Di-n-butylphthalate | 23000 | U |
| 206-44-0 | Fluoranthene | 23000 | U |

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FORM I SV

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020932.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 23000 | U |
| 85-68-7 | Butylbenzylphthalate | 23000 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 23000 | U |
| 56-55-3 | Benzo(a)anthracene | 23000 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 23000 | U |
| 218-01-9 | Chrysene | 23000 | U |
| 117-84-0 | Di-n-octylphthalate | 23000 | U |
| 205-99-2 | Benzo(b)fluoranthene | 23000 | U |
| 207-08-9 | Benzo(k)fluoranthene | 23000 | U |
| 50-32-8 | Benzo(a)pyrene | 23000 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 23000 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 23000 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 23000 | U |

Comments:

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020927.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 4800 | U |
| 62-75-9 | N-Nitrosodimethylamine | 4800 | U |
| 108-95-2 | Phenol | 4800 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 4800 | U |
| 95-57-8 | 2-Chlorophenol | 4800 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 4800 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 4800 | U |
| 100-51-6 | Benzyl alcohol | 4800 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4800 | U |
| 95-48-7 | 2-Methylphenol | 4800 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 4800 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 4800 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 4800 | U |
| 67-72-1 | Hexachloroethane | 4800 | U |
| 98-95-3 | Nitrobenzene | 4800 | U |
| 78-59-1 | Isophorone | 4800 | U |
| 88-75-5 | 2-Nitrophenol | 4800 | U |
| 105-67-9 | 2,4-Dimethylphenol | 4800 | U |
| 65-85-0 | Benzoic acid | 9500 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 4800 | U |
| 120-83-2 | 2,4-Dichlorophenol | 4800 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4800 | U |
| 91-20-3 | Naphthalene | 4800 | U |
| 106-47-8 | 4-Chloroaniline | 4800 | U |
| 87-68-3 | Hexachlorobutadiene | 4800 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 4800 | U |

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FORM I SV

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020927.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 4800 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 4800 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4800 | U |
| 91-58-7 | 2-Chloronaphthalene | 4800 | U |
| 88-74-4 | 2-Nitroaniline | 4800 | U |
| 131-11-3 | Dimethylphthalate | 4800 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 4800 | U |
| 208-96-8 | Acenaphthylene | 4800 | U |
| 99-09-2 | 3-Nitroaniline | 4800 | U |
| 83-32-9 | Acenaphthene | 4800 | U |
| 51-28-5 | 2,4-Dinitrophenol | 4800 | U |
| 100-02-7 | 4-Nitrophenol | 4800 | U |
| 132-64-9 | Dibenzofuran | 4800 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 4800 | U |
| 84-66-2 | Diethylphthalate | 4800 | U |
| 86-73-7 | Fluorene | 4800 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4800 | U |
| 100-01-6 | 4-Nitroaniline | 4800 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4800 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 4800 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 4800 | U |
| 118-74-1 | Hexachlorobenzene | 4800 | U |
| 87-86-5 | Pentachlorophenol | 4800 | U |
| 85-01-8 | Phenanthrene | 4800 | U |
| 120-12-7 | Anthracene | 4800 | U |
| 86-74-8 | Carbazole | 4800 | U |
| 84-74-2 | Di-n-butylphthalate | 4800 | U |
| 206-44-0 | Fluoranthene | 4800 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020927.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/02/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 4800 | U |
| 85-68-7 | Butylbenzylphthalate | 4800 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4800 | U |
| 56-55-3 | Benzo(a)anthracene | 4800 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 4800 | U |
| 218-01-9 | Chrysene | 4800 | U |
| 117-84-0 | Di-n-octylphthalate | 4800 | U |
| 205-99-2 | Benzo(b)fluoranthene | 4800 | U |
| 207-08-9 | Benzo(k)fluoranthene | 4800 | U |
| 50-32-8 | Benzo(a)pyrene | 4800 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4800 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 4800 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 4800 | U |

Comments:

JMW 6-22-09



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-022

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020928.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 25.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 11000 | U |
| 62-75-9 | N-Nitrosodimethylamine | 11000 | U |
| 108-95-2 | Phenol | 11000 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 11000 | U |
| 95-57-8 | 2-Chlorophenol | 11000 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 11000 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 11000 | U |
| 100-51-6 | Benzyl alcohol | 11000 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 11000 | U |
| 95-48-7 | 2-Methylphenol | 11000 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 11000 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 11000 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 11000 | U |
| 67-72-1 | Hexachloroethane | 11000 | U |
| 98-95-3 | Nitrobenzene | 11000 | U |
| 78-59-1 | Isophorone | 11000 | U |
| 88-75-5 | 2-Nitrophenol | 11000 | U |
| 105-67-9 | 2,4-Dimethylphenol | 11000 | U |
| 65-85-0 | Benzoic acid | 23000 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 11000 | U |
| 120-83-2 | 2,4-Dichlorophenol | 11000 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 11000 | U |
| 91-20-3 | Naphthalene | 11000 | U |
| 106-47-8 | 4-Chloroaniline | 11000 | U |
| 87-68-3 | Hexachlorobutadiene | 11000 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 11000 | U |



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-022

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020928.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 25.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 11000 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 11000 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 11000 | U |
| 91-58-7 | 2-Chloronaphthalene | 11000 | U |
| 88-74-4 | 2-Nitroaniline | 11000 | U |
| 131-11-3 | Dimethylphthalate | 11000 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 11000 | U |
| 208-96-8 | Acenaphthylene | 11000 | U |
| 99-09-2 | 3-Nitroaniline | 11000 | U |
| 83-32-9 | Acenaphthene | 11000 | U |
| 51-28-5 | 2,4-Dinitrophenol | 11000 | U J |
| 100-02-7 | 4-Nitrophenol | 11000 | U |
| 132-64-9 | Dibenzofuran | 11000 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 11000 | U |
| 84-66-2 | Diethylphthalate | 11000 | U |
| 86-73-7 | Fluorene | 11000 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 11000 | U |
| 100-01-6 | 4-Nitroaniline | 11000 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 11000 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 11000 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 11000 | U |
| 118-74-1 | Hexachlorobenzene | 11000 | U |
| 87-86-5 | Pentachlorophenol | 11000 | U |
| 85-01-8 | Phenanthrene | 11000 | U |
| 120-12-7 | Anthracene | 11000 | U |
| 86-74-8 | Carbazole | 11000 | U |
| 84-74-2 | Di-n-butylphthalate | 11000 | U |
| 206-44-0 | Fluoranthene | 11000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-022

Sample wt/vol: 0.22 (g/mL) gm

Lab File ID: 060209b.b-06020928.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 25.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 11000 | U |
| 85-68-7 | Butylbenzylphthalate | 11000 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 11000 | U |
| 56-55-3 | Benzo(a)anthracene | 11000 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 11000 | U |
| 218-01-9 | Chrysene | 11000 | U |
| 117-84-0 | Di-n-octylphthalate | 11000 | U |
| 205-99-2 | Benzo(b)fluoranthene | 11000 | U |
| 207-08-9 | Benzo(k)fluoranthene | 11000 | U |
| 50-32-8 | Benzo(a)pyrene | 11000 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 11000 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 11000 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 11000 | U |

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020929.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 25.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 12000 | U |
| 62-75-9 | N-Nitrosodimethylamine | 12000 | U |
| 108-95-2 | Phenol | 12000 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 12000 | U |
| 95-57-8 | 2-Chlorophenol | 12000 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 12000 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 12000 | U |
| 100-51-6 | Benzyl alcohol | 12000 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 12000 | U |
| 95-48-7 | 2-Methylphenol | 12000 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 12000 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 12000 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 12000 | U |
| 67-72-1 | Hexachloroethane | 12000 | U |
| 98-95-3 | Nitrobenzene | 12000 | U |
| 78-59-1 | Isophorone | 12000 | U |
| 88-75-5 | 2-Nitrophenol | 12000 | U |
| 105-67-9 | 2,4-Dimethylphenol | 12000 | U |
| 65-85-0 | Benzoic acid | 24000 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 12000 | U |
| 120-83-2 | 2,4-Dichlorophenol | 12000 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 12000 | U |
| 91-20-3 | Naphthalene | 12000 | U |
| 106-47-8 | 4-Chloroaniline | 12000 | U |
| 87-68-3 | Hexachlorobutadiene | 12000 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 12000 | U |

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020929.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 25.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 12000 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 12000 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 12000 | U |
| 91-58-7 | 2-Chloronaphthalene | 12000 | U |
| 88-74-4 | 2-Nitroaniline | 12000 | U |
| 131-11-3 | Dimethylphthalate | 12000 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 12000 | U |
| 208-96-8 | Acenaphthylene | 12000 | U |
| 99-09-2 | 3-Nitroaniline | 12000 | U |
| 83-32-9 | Acenaphthene | 12000 | U |
| 51-28-5 | 2,4-Dinitrophenol | 12000 | UJ |
| 100-02-7 | 4-Nitrophenol | 12000 | U |
| 132-64-9 | Dibenzofuran | 12000 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 12000 | U |
| 84-66-2 | Diethylphthalate | 12000 | U |
| 86-73-7 | Fluorene | 12000 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 12000 | U |
| 100-01-6 | 4-Nitroaniline | 12000 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 12000 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 12000 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 12000 | U |
| 118-74-1 | Hexachlorobenzene | 12000 | U |
| 87-86-5 | Pentachlorophenol | 12000 | U |
| 85-01-8 | Phenanthrene | 12000 | U |
| 120-12-7 | Anthracene | 12000 | U |
| 86-74-8 | Carbazole | 12000 | U |
| 84-74-2 | Di-n-butylphthalate | 12000 | U |
| 206-44-0 | Fluoranthene | 12000 | U |



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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036700

Matrix: (SOIL/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 0.21 (g/mL) gm

Lab File ID: 060209b.b-06020929.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: 0.0 Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 20000 (uL)

Date Analyzed: 06/03/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 25.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) WASTE

| CAS NO. | COMPOUND | CONCENTRATION UNITS: mg/Kg | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 12000 | U |
| 85-68-7 | Butylbenzylphthalate | 12000 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 12000 | U |
| 56-55-3 | Benzo(a)anthracene | 12000 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 12000 | U |
| 218-01-9 | Chrysene | 12000 | U |
| 117-84-0 | Di-n-octylphthalate | 12000 | U |
| 205-99-2 | Benzo(b)fluoranthene | 12000 | U |
| 207-08-9 | Benzo(k)fluoranthene | 12000 | U |
| 50-32-8 | Benzo(a)pyrene | 12000 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 12000 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 12000 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 12000 | U |

Comments:

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036687

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 1010.0 (g/mL) mL

Lab File ID: 060109b.b-06010932.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/01/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 5.0 | U |
| 62-75-9 | N-Nitrosodimethylamine | 5.0 | U |
| 108-95-2 | Phenol | 5.0 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 5.0 | U |
| 95-57-8 | 2-Chlorophenol | 5.0 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 5.0 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.0 | U |
| 100-51-6 | Benzyl alcohol | 5.0 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.0 | U |
| 95-48-7 | 2-Methylphenol | 5.0 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 5.0 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 5.0 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 5.0 | U |
| 67-72-1 | Hexachloroethane | 5.0 | U |
| 98-95-3 | Nitrobenzene | 5.0 | U |
| 78-59-1 | Isophorone | 5.0 | U |
| 88-75-5 | 2-Nitrophenol | 5.0 | U |
| 105-67-9 | 2,4-Dimethylphenol | 5.0 | U |
| 65-85-0 | Benzoic acid | 9.9 | U J |
| 111-91-1 | Bis(2-chloroethoxy)methane | 5.0 | U |
| 120-83-2 | 2,4-Dichlorophenol | 5.0 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.0 | U |
| 91-20-3 | Naphthalene | 5.0 | U |
| 106-47-8 | 4-Chloroaniline | 5.0 | U |
| 87-68-3 | Hexachlorobutadiene | 5.0 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 5.0 | U |



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FORM I SV

MW 6-22-09

1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036687

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 1010.0 (g/mL) mL

Lab File ID: 060109b.b-06010932.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/01/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 5.0 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 5.0 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 5.0 | U |
| 91-58-7 | 2-Chloronaphthalene | 5.0 | U |
| 88-74-4 | 2-Nitroaniline | 5.0 | U |
| 131-11-3 | Dimethylphthalate | 5.0 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 5.0 | U |
| 208-96-8 | Acenaphthylene | 5.0 | U |
| 99-09-2 | 3-Nitroaniline | 5.0 | U |
| 83-32-9 | Acenaphthene | 5.0 | U |
| 51-28-5 | 2,4-Dinitrophenol | 9.9 | U J |
| 100-02-7 | 4-Nitrophenol | 5.0 | U |
| 132-64-9 | Dibenzofuran | 5.0 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 5.0 | U |
| 84-66-2 | Diethylphthalate | 5.0 | U |
| 86-73-7 | Fluorene | 5.0 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 5.0 | U |
| 100-01-6 | 4-Nitroaniline | 5.0 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 5.0 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 5.0 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 5.0 | U |
| 118-74-1 | Hexachlorobenzene | 5.0 | U |
| 87-86-5 | Pentachlorophenol | 5.0 | U |
| 85-01-8 | Phenanthrene | 5.0 | U |
| 120-12-7 | Anthracene | 5.0 | U |
| 86-74-8 | Carbazole | 5.0 | U |
| 84-74-2 | Di-n-butylphthalate | 5.0 | U |
| 206-44-0 | Fluoranthene | 5.0 | U |



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FORM I SV

MW 6-22-09

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036687

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 1010.0 (g/mL) mL

Lab File ID: 060109b.b-06010932.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/01/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 5.0 | U |
| 85-68-7 | Butylbenzylphthalate | 5.0 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 5.0 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 5.0 | U |
| 56-55-3 | Benzo(a)anthracene | 5.0 | U |
| 218-01-9 | Chrysene | 5.0 | U |
| 117-84-0 | Di-n-octylphthalate | 5.0 | U |
| 205-99-2 | Benzo(b)fluoranthene | 5.0 | U |
| 207-08-9 | Benzo(k)fluoranthene | 5.0 | U |
| 50-32-8 | Benzo(a)pyrene | 5.0 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5.0 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 5.0 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 5.0 | U |

Comments:

MW 6-22-09



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FORM I SV

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036687

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: 060109b.b-06010935.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/01/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 86-30-6 | N-Nitrosodiphenylamine | 4.8 | U |
| 62-75-9 | N-Nitrosodimethylamine | 4.8 | U |
| 108-95-2 | Phenol | 4.8 | U |
| 111-44-4 | Bis(2-Chloroethyl)ether | 4.8 | U |
| 95-57-8 | 2-Chlorophenol | 4.8 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 4.8 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 4.8 | U |
| 100-51-6 | Benzyl alcohol | 4.8 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4.8 | U |
| 95-48-7 | 2-Methylphenol | 4.8 | U |
| 108-60-1 | Bis(2-chloroisopropyl)ether | 4.8 | U |
| 108-39-4/ | 3 & 4-Methylphenol | 4.8 | U |
| 621-64-7 | N-Nitroso-di-n-propylamine | 4.8 | U |
| 67-72-1 | Hexachloroethane | 4.8 | U |
| 98-95-3 | Nitrobenzene | 4.8 | U |
| 78-59-1 | Isophorone | 4.8 | U |
| 88-75-5 | 2-Nitrophenol | 4.8 | U |
| 105-67-9 | 2,4-Dimethylphenol | 4.8 | U |
| 65-85-0 | Benzoic acid | 9.6 | U |
| 111-91-1 | Bis(2-chloroethoxy)methane | 4.8 | U |
| 120-83-2 | 2,4-Dichlorophenol | 4.8 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4.8 | U |
| 91-20-3 | Naphthalene | 4.8 | U |
| 106-47-8 | 4-Chloroaniline | 4.8 | U |
| 87-68-3 | Hexachlorobutadiene | 4.8 | U |
| 59-50-7 | 4-Chloro-3-methylphenol | 4.8 | U |



MW 6-22-09

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036687

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: 060109b.b-06010935.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/01/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 91-57-6 | 2-Methylnaphthalene | 4.8 | U |
| 88-06-2 | 2,4,6-Trichlorophenol | 4.8 | U |
| 95-95-4 | 2,4,5-Trichlorophenol | 4.8 | U |
| 91-58-7 | 2-Chloronaphthalene | 4.8 | U |
| 88-74-4 | 2-Nitroaniline | 4.8 | U |
| 131-11-3 | Dimethylphthalate | 4.8 | U |
| 606-20-2 | 2,6-Dinitrotoluene | 4.8 | U |
| 208-96-8 | Acenaphthylene | 4.8 | U |
| 99-09-2 | 3-Nitroaniline | 4.8 | U |
| 83-32-9 | Acenaphthene | 4.8 | U |
| 51-28-5 | 2,4-Dinitrophenol | 9.6 | U |
| 100-02-7 | 4-Nitrophenol | 4.8 | U |
| 132-64-9 | Dibenzofuran | 4.8 | U |
| 121-14-2 | 2,4-Dinitrotoluene | 4.8 | U |
| 84-66-2 | Diethylphthalate | 4.8 | U |
| 86-73-7 | Fluorene | 4.8 | U |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 4.8 | U |
| 100-01-6 | 4-Nitroaniline | 4.8 | U |
| 534-52-1 | 4,6-Dinitro-2-methylphenol | 4.8 | U |
| 122-66-7 | 1,2-Diphenylhydrazine | 4.8 | U |
| 101-55-3 | 4-Bromophenyl-phenyl ether | 4.8 | U |
| 118-74-1 | Hexachlorobenzene | 4.8 | U |
| 87-86-5 | Pentachlorophenol | 4.8 | U |
| 85-01-8 | Phenanthrene | 4.8 | U |
| 120-12-7 | Anthracene | 4.8 | U |
| 86-74-8 | Carbazole | 4.8 | U |
| 84-74-2 | Di-n-butylphthalate | 4.8 | U |
| 206-44-0 | Fluoranthene | 4.8 | U |

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FORM I SV

MW 6-22-09

1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, In

Contract:

SDG No.: S10HD01

Run Sequence: R036687

Matrix: (SOIL/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 1040.0 (g/mL) mL

Lab File ID: 060109b.b-06010935.d

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: Decanted: (Y/N) N

Date Extracted: 05/26/2009

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 06/01/2009

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 129-00-0 | Pyrene | 4.8 | U |
| 85-68-7 | Butylbenzylphthalate | 4.8 | U |
| 117-81-7 | Bis(2-ethylhexyl)phthalate | 4.8 | U |
| 91-94-1 | 3,3'-Dichlorobenzidine | 4.8 | U |
| 56-55-3 | Benzo(a)anthracene | 4.8 | U |
| 218-01-9 | Chrysene | 4.8 | U |
| 117-84-0 | Di-n-octylphthalate | 4.8 | U |
| 205-99-2 | Benzo(b)fluoranthene | 4.8 | U |
| 207-08-9 | Benzo(k)fluoranthene | 4.8 | U |
| 50-32-8 | Benzo(a)pyrene | 4.8 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4.8 | U |
| 53-70-3 | Dibenzo(a,h)anthracene | 4.8 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 4.8 | U |

Comments:

MW
6-22-09



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FORM I SV

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: June 22, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 10 solid and 4 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Volatile Organic Compound (VOC) analysis (EPA Method 8260) was performed by Pace Laboratories, Inc., Seattle, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09050702 | 09050703 | 09050720 | 09050721 | 09050722 |
| 09050723 | 09050724 | 09050725 | 09050726 | 09050727 |
| 09050705 | 09050706 | 09050731 | 09050732 | |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of 4°C ± 2°C. The samples were collected on May 21, 2009, and were analyzed by June 2, 2009, therefore meeting QC criteria of less than 14 days between collection and analysis for soil and preserved water samples.

**2. Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

**3. Initial Calibration: Acceptable.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limits of 30%.

**4. Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limits of 25% except bromomethane, chloroethane, 1,2,4-trichlorobenzene, and naphthalene with increasing response factors in the May 26 calibration, methylene chloride, o-xylene, 1,3,5- and 1,2,4-trimethylbenzene with decreasing response factors and 2-chlorotoluene with an increasing response factor in the May 29 calibration, and naphthalene with an increasing response factor in the June 2 calibration. Positive results and sample quantitation limits for analytes with decreasing response factors were qualified

as estimated quantities (J or UJ). Positive results for analytes associated with increasing response factors were qualified as estimated quantities (J).

**5. Blanks: Satisfactory.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank except acetone (4.2 µg/kg) in the May 26 soil blank, acetone and 2-butanone (85 and 160 µg/kg) in the May 28 soil blank, acetone and methylene chloride (2.9 and 1.6 µg/L) in the water blank, 2,butanone, n-propylbenzene, 1,3,5- and 1,2,4-trimethylbenzene (120, 46, 49, and 62 µg/kg) in the May 29 soil blank, and acetone and 2-butanone (120 and 100 µg/kg) in the June 2 soil blank. Associated sample results less than 5 times the blank contamination (10 times for common laboratory contaminants) were qualified as not detected (U).

**6. System Monitoring Compounds (SMCs): Satisfactory.**

All SMC recoveries were within QC limits except 2 SMCs with high recoveries in samples 09050702, 09050702MS, and 09050702MSD and 1 SMC with a high recovery in samples 09050703, 09050703RE, 09050720, and 09050722. Positive sample results associated with high SMC recoveries were qualifies as estimated quantities (J).

**7. Matrix Spike (MS)/MS Duplicate (MSD)/Blank Spike (BS)/BS Duplicate (BSD) Analysis: Satisfactory.**

MS, MSD, BS, and BSD analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within QC limits except bromomethane and chloroethane with low recoveries in the soil BS (associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]) and many outliers in samples 09050702MS and 09050702MSD (all sample results in 09050702 were qualified as estimated quantities (J or UJ).

**8. Duplicate Analysis: Satisfactory.**

Laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits except chloroethane in the blank spike duplicate. Positive results and sample quantitation limits for chloroethene in soil samples were qualified as estimated quantities (J or UJ).

**9. Internal Standards: Satisfactory.**

All internal standards were within ± 30 seconds of the continuing calibration internal standard retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts except 3 low results in sample 09050703, 2 low results in sample 09050702MSD, and 1 low result in samples 09050702 and 09050702MS. Positive results and sample quantitation limits associated with the internal standard outliers were qualified as estimated quantities (J or UJ).

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

## 12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036673

Matrix: (SOIL/SED/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 4.01 (g/mL) gm

Lab File ID: B0526018.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 19.0

Date/Time Analyzed: 05/26/2009 16:21

GC Column: ZB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) Y

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 124-48-1 | Dibromochloromethane | 4.6 | U J |
| 75-71-8 | Dichlorodifluoromethane | 4.6 | U |
| 74-87-3 | Chloromethane | 4.6 | U |
| 75-01-4 | Vinyl chloride | 4.6 | U |
| 74-83-9 | Bromomethane | 4.6 | U |
| 75-00-3 | Chloroethane | 4.6 | U |
| 75-69-4 | Trichlorofluoromethane | 4.6 | U |
| 75-35-4 | 1,1-Dichloroethene | 4.6 | U |
| 67-64-1 | Acetone | 130 | J |
| 75-15-0 | Carbon disulfide | 4.6 | U J |
| 75-09-2 | Methylene chloride | 7.0 | J |
| 1634-04-4 | Methyl tert-butyl ether | 4.6 | U J |
| 156-60-5 | trans-1,2-Dichloroethene | 4.6 | U |
| 75-34-3 | 1,1-Dichloroethane | 4.6 | U |
| 594-20-7 | 2,2-Dichloropropane | 4.6 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 4.6 | U |
| 78-93-3 | 2-Butanone | 3.5 | J |
| 74-97-5 | Bromochloromethane | 4.6 | U J |
| 67-66-3 | Chloroform | 4.6 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 4.6 | U |
| 56-23-5 | Carbon tetrachloride | 4.6 | U |
| 563-58-6 | 1,1-Dichloropropene | 4.6 | U |
| 71-43-2 | Benzene | 4.6 | U |
| 107-06-2 | 1,2-Dichloroethane | 4.6 | U |
| 79-01-6 | Trichloroethene | 4.6 | U |
| 78-87-5 | 1,2-Dichloropropane | 4.6 | U |
| 74-95-3 | Dibromomethane | 4.6 | U |
| 75-27-4 | Bromodichloromethane | 4.6 | U |



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FORM I VOA

MW 6-22-09

1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036673

Matrix: (SOIL/SED/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 4.01 (g/mL) gm

Lab File ID: B0526018.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 19.0

Date/Time Analyzed: 05/26/2009 16:21

GC Column: ZB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) Y

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 10061-01- | cis-1,3-Dichloropropene | 4.6 | U J |
| 108-10-1 | 4-Methyl-2-pentanone | 31 | J |
| 108-88-3 | Toluene | 4.6 | U J |
| 10061-02- | trans-1,3-Dichloropropene | 4.6 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 4.6 | U |
| 127-18-4 | Tetrachloroethene | 4.6 | U |
| 591-78-6 | 2-Hexanone | 15 | U |
| 142-28-9 | 1,3-Dichloropropane | 4.6 | U |
| 106-93-4 | 1,2-Dibromoethane | 4.6 | U |
| 108-90-7 | Chlorobenzene | 4.6 | U |
| 100-41-4 | Ethylbenzene | 4.6 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 4.6 | U |
| 179601-23 | m,p-Xylene | 9.2 | U |
| 95-47-6 | o-Xylene | 4.6 | U |
| 100-42-5 | Styrene | 4.6 | U |
| 75-25-2 | Bromoform | 4.6 | U |
| 98-82-8 | Isopropylbenzene | 4.6 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 4.6 | U |
| 103-65-1 | n-Propylbenzene | 4.6 | U |
| 108-86-1 | Bromobenzene | 4.6 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 4.6 | U |
| 95-49-8 | 2-Chlorotoluene | 4.6 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 4.6 | U |
| 106-43-4 | 4-Chlorotoluene | 4.6 | U |
| 98-06-6 | tert-Butylbenzene | 4.6 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 4.6 | U |
| 135-98-8 | sec-Butylbenzene | 4.6 | U |
| 99-87-6 | 4-Isopropyltoluene | 4.6 | U |

MW 6-2-09



8260B

Date Printed: 6/10/2009 12:09

FORM I VOA

1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0702

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036673

Matrix: (SOIL/SED/WATER) Soil

Lab Sample ID: S10HD01-002

Sample wt/vol: 4.01 (g/mL) gm

Lab File ID: B0526018.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 19.0

Date/Time Analyzed: 05/26/2009 16:21

GC Column: ZB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) Y

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 4.6 | U J |
| 106-46-7 | 1,4-Dichlorobenzene | 4.6 | U |
| 104-51-8 | n-Butylbenzene | 4.6 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 4.6 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 4.6 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 4.6 | U |
| 87-68-3 | Hexachlorobutadiene | 4.6 | U |
| 91-20-3 | Naphthalene | 1.8 | J |
| 87-61-6 | 1,2,3-Trichlorobenzene | 4.6 | U J |

Comments:

MW 6-22-09



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FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703RE

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036673

Matrix: (SOIL/SED/WATER) Soil

Lab Sample ID: S10HD01-003RE

Sample wt/vol: 3.43 (g/mL) gm

Lab File ID: B0526019.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 22.0

Date/Time Analyzed: 05/26/2009 16:41

GC Column: ZB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) Y

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 124-48-1 | Dibromochloromethane | 5.6 | U |
| 75-71-8 | Dichlorodifluoromethane | 5.6 | U |
| 74-87-3 | Chloromethane | 5.6 | U |
| 75-01-4 | Vinyl chloride | 5.6 | U |
| 74-83-9 | Bromomethane | 5.6 | U J |
| 75-00-3 | Chloroethane | 5.6 | U J |
| 75-69-4 | Trichlorofluoromethane | 6.3 | |
| 75-35-4 | 1,1-Dichloroethene | 5.6 | U |
| 67-64-1 | Acetone | 230 | AMc |
| 75-15-0 | Carbon disulfide | 5.6 | U |
| 75-09-2 | Methylene chloride | 7.2 | |
| 1634-04-4 | Methyl tert-butyl ether | 5.6 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 5.6 | U |
| 75-34-3 | 1,1-Dichloroethane | 5.6 | U |
| 594-20-7 | 2,2-Dichloropropane | 5.6 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 5.6 | U |
| 78-93-3 | 2-Butanone | 43 | |
| 74-97-5 | Bromochloromethane | 5.6 | U |
| 67-66-3 | Chloroform | 5.6 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 5.6 | U |
| 56-23-5 | Carbon tetrachloride | 5.6 | U |
| 563-58-6 | 1,1-Dichloropropene | 5.6 | U |
| 71-43-2 | Benzene | 5.6 | U |
| 107-06-2 | 1,2-Dichloroethane | 5.6 | U |
| 79-01-6 | Trichloroethene | 5.6 | U |
| 78-87-5 | 1,2-Dichloropropane | 5.6 | U |
| 74-95-3 | Dibromomethane | 5.6 | U |
| 75-27-4 | Bromodichloromethane | 5.6 | U |

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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703RE

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036673

Matrix: (SOIL/SED/WATER) Soil

Lab Sample ID: S10HD01-003RE

Sample wt/vol: 3.43 (g/mL) gm

Lab File ID: B0526019.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 22.0

Date/Time Analyzed: 05/26/2009 16:41

GC Column: ZB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) Y

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 10061-01- | cis-1,3-Dichloropropene | 5.6 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 44 | |
| 108-88-3 | Toluene | 1.9 | J |
| 10061-02- | trans-1,3-Dichloropropene | 5.6 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 5.6 | U |
| 127-18-4 | Tetrachloroethene | 5.6 | U |
| 591-78-6 | 2-Hexanone | 6.6 | J |
| 142-28-9 | 1,3-Dichloropropane | 5.6 | U |
| 106-93-4 | 1,2-Dibromoethane | 5.6 | U |
| 108-90-7 | Chlorobenzene | 5.6 | U |
| 100-41-4 | Ethylbenzene | 5.6 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 5.6 | U |
| 179601-23 | m,p-Xylene | 2.9 | J |
| 95-47-6 | o-Xylene | 5.6 | U |
| 100-42-5 | Styrene | 5.6 | U |
| 75-25-2 | Bromoform | 5.6 | U |
| 98-82-8 | Isopropylbenzene | 5.6 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 5.6 | U |
| 103-65-1 | n-Propylbenzene | 5.6 | U |
| 108-86-1 | Bromobenzene | 5.6 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 5.6 | U |
| 95-49-8 | 2-Chlorotoluene | 5.6 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 5.6 | U |
| 106-43-4 | 4-Chlorotoluene | 5.6 | U |
| 98-06-6 | tert-Butylbenzene | 5.6 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 2.0 | J |
| 135-98-8 | sec-Butylbenzene | 5.6 | U |
| 99-87-6 | 4-Isopropyltoluene | 5.6 | U |

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FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0703RE

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036673

Matrix: (SOIL/SED/WATER) Soil

Lab Sample ID: S10HD01-003RE

Sample wt/vol: 3.43 (g/mL) gm

Lab File ID: B0526019.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 22.0

Date/Time Analyzed: 05/26/2009 16:41

GC Column: ZB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) Y

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 5.6 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 5.6 | U |
| 104-51-8 | n-Butylbenzene | 5.6 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 5.6 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 5.6 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 5.6 | U |
| 87-68-3 | Hexachlorobutadiene | 5.6 | U |
| 91-20-3 | Naphthalene | 1.9 | J |
| 87-61-6 | 1,2,3-Trichlorobenzene | 5.6 | U |

Comments:

MW 6-22-09

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 2.50 (g/mL) gm

Lab File ID: Y0528046.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 01:41

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 25 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 800 | U |
| 74-87-3 | Chloromethane | 800 | U |
| 75-01-4 | Vinyl chloride | 800 | U |
| 74-83-9 | Bromomethane | 800 | U J |
| 75-00-3 | Chloroethane | 340 | J |
| 75-69-4 | Trichlorofluoromethane | 800 | U |
| 75-35-4 | 1,1-Dichloroethene | 5900 | J |
| 67-64-1 | Acetone | ~~880~~ 1000000 | J |
| 75-15-0 | Carbon disulfide | 800 | U |
| 75-09-2 | Methylene chloride | 800 | U J |
| 1634-04-4 | Methyl tert-butyl ether | 800 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 800 | U |
| 75-34-3 | 1,1-Dichloroethane | 13000 | J |
| 594-20-7 | 2,2-Dichloropropane | 800 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 800 | U |
| 78-93-3 | 2-Butanone | 1800 | J |
| 74-97-5 | Bromochloromethane | 800 | U |
| 67-66-3 | Chloroform | 800 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 31000 | J |
| 56-23-5 | Carbon tetrachloride | 800 | U |
| 563-58-6 | 1,1-Dichloropropene | 800 | U |
| 71-43-2 | Benzene | 120 | J |
| 107-06-2 | 1,2-Dichloroethane | 800 | U |
| 79-01-6 | Trichloroethene | 800 | U |
| 78-87-5 | 1,2-Dichloropropane | 800 | U |
| 74-95-3 | Dibromomethane | 800 | U |
| 75-27-4 | Bromodichloromethane | 800 | U |
| 10061-01- | cis-1,3-Dichloropropene | 800 | U |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, Inc. Contract:

SDG No.: S10HD01 Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material Lab Sample ID: S10HD01-016

Sample wt/vol: 2.50 (g/mL) gm Lab File ID: Y0528046.D

Level: (LOW/MED) Date Collected: 05/21/2009

% Moisture: not dec. 0.0 Date/Time Analyzed: 05/29/2009 01:41

GC Column: DB-624 20m ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL) Soil Aliquot Volume: 25 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 108-10-1 | 4-Methyl-2-pentanone | ~~1600000~~ MW 140,000 | ~~B~~ MW |
| 108-88-3 | Toluene | ~~240000~~ MW 370,000 | ~~B~~ MW |
| 10061-02- | trans-1,3-Dichloropropene | 800 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 800 | U |
| 127-18-4 | Tetrachloroethene | 800 | U |
| 591-78-6 | 2-Hexanone | 4000 | U |
| 142-28-9 | 1,3-Dichloropropane | 800 | U |
| 124-48-1 | Dibromochloromethane | 800 | U |
| 106-93-4 | 1,2-Dibromoethane | 800 | U |
| 108-90-7 | Chlorobenzene | 800 | U |
| 100-41-4 | Ethylbenzene | ~~500000~~ MW 1,800,000 | ~~E~~ MW |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 800 | U |
| 179601-23 | m,p-Xylene | ~~1600~~ MW 8,100,000 | ~~B E~~ MW |
| 95-47-6 | o-Xylene | ~~800~~ MW 13,000,000 | ~~B E~~ MW |
| 100-42-5 | Styrene | 800 | U |
| 75-25-2 | Bromoform | 800 | U |
| 98-82-8 | Isopropylbenzene | ~~800~~ MW 3,300,000 | ~~B E~~ MW |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 800 | U |
| 103-65-1 | n-Propylbenzene | ~~800~~ MW 8,300,000 | ~~B E~~ MW |
| 108-86-1 | Bromobenzene | 800 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 800 | U |
| 95-49-8 | 2-Chlorotoluene | 800 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | ~~800~~ 12,000,000 | ~~B E~~ MW |
| 106-43-4 | 4-Chlorotoluene | 800 | U |
| 98-06-6 | tert-Butylbenzene | ~~800~~ MW 100,000 | U ~~B E~~ MW |
| 95-63-6 | 1,2,4-Trimethylbenzene | ~~800~~ MW 24,000,000 | ~~B E~~ MW |
| 135-98-8 | sec-Butylbenzene | 44000 | J |
| 99-87-6 | 4-Isopropyltoluene | 15000 | J |

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6/4/09 LPM

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0720

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-016

Sample wt/vol: 2.50 (g/mL) gm

Lab File ID: Y0528046.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 01:41

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 25 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 800 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 800 | U |
| 104-51-8 | n-Butylbenzene | 24000 | J |
| 95-50-1 | 1,2-Dichlorobenzene | 800 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 800 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 800 | U |
| 87-68-3 | Hexachlorobutadiene | 800 | U |
| 91-20-3 | Naphthalene | 2100 | J |
| 87-61-6 | 1,2,3-Trichlorobenzene | 800 | U |

Comments:

MW 6-22-09

1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 1.96 (g/mL) gm

Lab File ID: Y0528038.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/28/2009 22:35

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 130 | U |
| 74-87-3 | Chloromethane | 130 | U |
| 75-01-4 | Vinyl chloride | 130 | U |
| 74-83-9 | Bromomethane | 130 | U J |
| 75-00-3 | Chloroethane | 130 | U J |
| 75-69-4 | Trichlorofluoromethane | 130 | U |
| 75-35-4 | 1,1-Dichloroethene | 130 | U |
| 67-64-1 | Acetone | 280 | U |
| 75-15-0 | Carbon disulfide | 130 | U |
| 75-09-2 | Methylene chloride | 190 | |
| 1634-04-4 | Methyl tert-butyl ether | 130 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 130 | U |
| 75-34-3 | 1,1-Dichloroethane | 130 | U |
| 594-20-7 | 2,2-Dichloropropane | 130 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 130 | U |
| 78-93-3 | 2-Butanone | 260 | U |
| 74-97-5 | Bromochloromethane | 130 | U |
| 67-66-3 | Chloroform | 28 | J |
| 71-55-6 | 1,1,1-Trichloroethane | 130 | U |
| 56-23-5 | Carbon tetrachloride | 130 | U |
| 563-58-6 | 1,1-Dichloropropene | 130 | U |
| 71-43-2 | Benzene | 130 | U |
| 107-06-2 | 1,2-Dichloroethane | 130 | U |
| 79-01-6 | Trichloroethene | 130 | U |
| 78-87-5 | 1,2-Dichloropropane | 130 | U |
| 74-95-3 | Dibromomethane | 130 | U |
| 75-27-4 | Bromodichloromethane | 130 | U |
| 10061-01- | cis-1,3-Dichloropropene | 130 | U |

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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 1.96 (g/mL) gm

Lab File ID: Y0528038.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/28/2009 22:35

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 108-10-1 | 4-Methyl-2-pentanone | 640 | U |
| 108-88-3 | Toluene | 130 | U |
| 10061-02- | trans-1,3-Dichloropropene | 130 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 130 | U |
| 127-18-4 | Tetrachloroethene | 130 | U |
| 591-78-6 | 2-Hexanone | 640 | U |
| 142-28-9 | 1,3-Dichloropropane | 130 | U |
| 124-48-1 | Dibromochloromethane | 130 | U |
| 106-93-4 | 1,2-Dibromoethane | 130 | U |
| 108-90-7 | Chlorobenzene | 130 | U |
| 100-41-4 | Ethylbenzene | 130 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 130 | U |
| 179601-23 | m,p-Xylene | 260 | U |
| 95-47-6 | o-Xylene | 130 | U |
| 100-42-5 | Styrene | 130 | U |
| 75-25-2 | Bromoform | 130 | U |
| 98-82-8 | Isopropylbenzene | 130 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 130 | U |
| 103-65-1 | n-Propylbenzene | 130 | U |
| 108-86-1 | Bromobenzene | 130 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 130 | U |
| 95-49-8 | 2-Chlorotoluene | 130 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 130 | U |
| 106-43-4 | 4-Chlorotoluene | 130 | U |
| 98-06-6 | tert-Butylbenzene | 130 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 92 | J |
| 135-98-8 | sec-Butylbenzene | 130 | U |
| 99-87-6 | 4-Isopropyltoluene | 130 | U |



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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0721

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-017

Sample wt/vol: 1.96 (g/mL) gm

Lab File ID: Y0528038.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/28/2009 22:35

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 130 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 130 | U |
| 104-51-8 | n-Butylbenzene | 130 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 130 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 130 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 130 | U |
| 87-68-3 | Hexachlorobutadiene | 130 | U |
| 91-20-3 | Naphthalene | 130 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 130 | U |

Comments:

MW 6-22-09

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 1.21 (g/mL) gm

Lab File ID: Y0528045.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 01:18

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 210 | U |
| 74-87-3 | Chloromethane | 210 | U |
| 75-01-4 | Vinyl chloride | 210 | U |
| 74-83-9 | Bromomethane | 210 | U J |
| 75-00-3 | Chloroethane | 210 | U J |
| 75-69-4 | Trichlorofluoromethane | 210 | U |
| 75-35-4 | 1,1-Dichloroethene | 210 | U |
| 67-64-1 | Acetone | 1700 | J ~~Amv~~ |
| 75-15-0 | Carbon disulfide | 210 | U |
| 75-09-2 | Methylene chloride | 410 | J |
| 1634-04-4 | Methyl tert-butyl ether | 210 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 210 | U |
| 75-34-3 | 1,1-Dichloroethane | 210 | U |
| 594-20-7 | 2,2-Dichloropropane | 210 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 210 | U |
| 78-93-3 | 2-Butanone | 1300 | U ~~Amv~~ |
| 74-97-5 | Bromochloromethane | 210 | U |
| 67-66-3 | Chloroform | 60 | J |
| 71-55-6 | 1,1,1-Trichloroethane | 210 | U |
| 56-23-5 | Carbon tetrachloride | 210 | U |
| 563-58-6 | 1,1-Dichloropropene | 210 | U |
| 71-43-2 | Benzene | 450 | J |
| 107-06-2 | 1,2-Dichloroethane | 210 | U |
| 79-01-6 | Trichloroethene | 210 | U |
| 78-87-5 | 1,2-Dichloropropane | 210 | U |
| 74-95-3 | Dibromomethane | 210 | U |
| 75-27-4 | Bromodichloromethane | 210 | U |
| 10061-01- | cis-1,3-Dichloropropene | 210 | U |

MW 6-22-09



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Date Printed: 6/10/2009 12:09

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 1.21 (g/mL) gm

Lab File ID: Y0528045.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 01:18

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 108-10-1 | 4-Methyl-2-pentanone | 1000 | U |
| 108-88-3 | Toluene | 5800 | J |
| 10061-02- | trans-1,3-Dichloropropene | 210 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 210 | U |
| 127-18-4 | Tetrachloroethene | 210 | U |
| 591-78-6 | 2-Hexanone | 1000 | U |
| 142-28-9 | 1,3-Dichloropropane | 210 | U |
| 124-48-1 | Dibromochloromethane | 210 | U |
| 106-93-4 | 1,2-Dibromoethane | 210 | U |
| 108-90-7 | Chlorobenzene | 210 | U |
| 100-41-4 | Ethylbenzene | 3500 | J |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 210 | U |
| 179601-23 | m,p-Xylene | 14000 | J |
| 95-47-6 | o-Xylene | 7500 | J |
| 100-42-5 | Styrene | 210 | U |
| 75-25-2 | Bromoform | 210 | U |
| 98-82-8 | Isopropylbenzene | 950 | J |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 210 | U |
| 103-65-1 | n-Propylbenzene | 2300 | J |
| 108-86-1 | Bromobenzene | 210 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 210 | U |
| 95-49-8 | 2-Chlorotoluene | 2600 | J |
| 108-67-8 | 1,3,5-Trimethylbenzene | 6300 | J |
| 106-43-4 | 4-Chlorotoluene | 210 | U |
| 98-06-6 | tert-Butylbenzene | 270 | J |
| 95-63-6 | 1,2,4-Trimethylbenzene | 26000 | |
| 135-98-8 | sec-Butylbenzene | 910 | |
| 99-87-6 | 4-Isopropyltoluene | 1200 | |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-018

Sample wt/vol: 1.21 (g/mL) gm

Lab File ID: Y0528045.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 01:18

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 210 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 210 | U |
| 104-51-8 | n-Butylbenzene | 4500 | J |
| 95-50-1 | 1,2-Dichlorobenzene | 210 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 210 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 210 | U |
| 87-68-3 | Hexachlorobutadiene | 210 | U |
| 91-20-3 | Naphthalene | ~~44000~~ 57000 | J |
| 87-61-6 | 1,2,3-Trichlorobenzene | 210 | U |

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 1.42 (g/mL) gm

Lab File ID: Y0528044.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:55

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 180 | U |
| 74-87-3 | Chloromethane | 180 | U |
| 75-01-4 | Vinyl chloride | 180 | U |
| 74-83-9 | Bromomethane | 180 | U J |
| 75-00-3 | Chloroethane | 180 | U J |
| 75-69-4 | Trichlorofluoromethane | 180 | U |
| 75-35-4 | 1,1-Dichloroethene | 180 | U |
| 67-64-1 | Acetone | 2300 | Ann |
| 75-15-0 | Carbon disulfide | 180 | U |
| 75-09-2 | Methylene chloride | 270 | |
| 1634-04-4 | Methyl tert-butyl ether | 180 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 180 | U |
| 75-34-3 | 1,1-Dichloroethane | 180 | U |
| 594-20-7 | 2,2-Dichloropropane | 180 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 180 | U |
| 78-93-3 | 2-Butanone | 1800 | Ann |
| 74-97-5 | Bromochloromethane | 180 | U |
| 67-66-3 | Chloroform | 140 | J |
| 71-55-6 | 1,1,1-Trichloroethane | 180 | U |
| 56-23-5 | Carbon tetrachloride | 180 | U |
| 563-58-6 | 1,1-Dichloropropene | 180 | U |
| 71-43-2 | Benzene | 270 | |
| 107-06-2 | 1,2-Dichloroethane | 180 | U |
| 79-01-6 | Trichloroethene | 180 | U |
| 78-87-5 | 1,2-Dichloropropane | 180 | U |
| 74-95-3 | Dibromomethane | 180 | U |
| 75-27-4 | Bromodichloromethane | 180 | U |
| 10061-01- | cis-1,3-Dichloropropene | 180 | U |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0722

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 1.42 (g/mL) gm

Lab File ID: Y0528044.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:55

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 108-10-1 | 4-Methyl-2-pentanone | 880 | U |
| 108-88-3 | Toluene | 1200 | |
| 10061-02- | trans-1,3-Dichloropropene | 180 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 180 | U |
| 127-18-4 | Tetrachloroethene | 180 | U |
| 591-78-6 | 2-Hexanone | 880 | U |
| 142-28-9 | 1,3-Dichloropropane | 180 | U |
| 124-48-1 | Dibromochloromethane | 180 | U |
| 106-93-4 | 1,2-Dibromoethane | 180 | U |
| 108-90-7 | Chlorobenzene | 180 | U |
| 100-41-4 | Ethylbenzene | 1100 | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 180 | U |
| 179601-23 | m,p-Xylene | 4500 | |
| 95-47-6 | o-Xylene | 2500 | |
| 100-42-5 | Styrene | 180 | U |
| 75-25-2 | Bromoform | 180 | U |
| 98-82-8 | Isopropylbenzene | 350 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 180 | U |
| 103-65-1 | n-Propylbenzene | 1100 | |
| 108-86-1 | Bromobenzene | 180 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 180 | U |
| 95-49-8 | 2-Chlorotoluene | 1200 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 3000 | |
| 106-43-4 | 4-Chlorotoluene | 180 | U |
| 98-06-6 | tert-Butylbenzene | 180 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 13000 | |
| 135-98-8 | sec-Butylbenzene | 650 | |
| 99-87-6 | 4-Isopropyltoluene | 1000 | |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0723

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-019

Sample wt/vol: 1.42 (g/mL) gm

Lab File ID: Y0528044.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:55

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 180 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 180 | U |
| 104-51-8 | n-Butylbenzene | 2600 | |
| 95-50-1 | 1,2-Dichlorobenzene | 180 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 180 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 180 | U |
| 87-68-3 | Hexachlorobutadiene | 180 | U |
| 91-20-3 | Naphthalene | ~~[illegible]~~ 65,000 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 180 | U |

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.98 (g/mL) gm

Lab File ID: Y0528043.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:31

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 260 | U |
| 74-87-3 | Chloromethane | 260 | U |
| 75-01-4 | Vinyl chloride | 260 | U |
| 74-83-9 | Bromomethane | 260 | U J |
| 75-00-3 | Chloroethane | 260 | U J |
| 75-69-4 | Trichlorofluoromethane | 260 | U |
| 75-35-4 | 1,1-Dichloroethene | 260 | U |
| 67-64-1 | Acetone | 1900 | B mv |
| 75-15-0 | Carbon disulfide | 260 | U |
| 75-09-2 | Methylene chloride | 370 | |
| 1634-04-4 | Methyl tert-butyl ether | 260 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 260 | U |
| 75-34-3 | 1,1-Dichloroethane | 260 | U |
| 594-20-7 | 2,2-Dichloropropane | 260 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 260 | U |
| 78-93-3 | 2-Butanone | 990 | U mv |
| 74-97-5 | Bromochloromethane | 260 | U |
| 67-66-3 | Chloroform | 56 | J |
| 71-55-6 | 1,1,1-Trichloroethane | 260 | U |
| 56-23-5 | Carbon tetrachloride | 260 | U |
| 563-58-6 | 1,1-Dichloropropene | 260 | U |
| 71-43-2 | Benzene | 260 | U |
| 107-06-2 | 1,2-Dichloroethane | 260 | U |
| 79-01-6 | Trichloroethene | 260 | U |
| 78-87-5 | 1,2-Dichloropropane | 260 | U |
| 74-95-3 | Dibromomethane | 260 | U |
| 75-27-4 | Bromodichloromethane | 260 | U |
| 10061-01- | cis-1,3-Dichloropropene | 260 | U |

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FORM I VOA

MW 6-22-09

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.98 (g/mL) gm

Lab File ID: Y0528043.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:31

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 108-10-1 | 4-Methyl-2-pentanone | 1200 | J |
| 108-88-3 | Toluene | 48 | J |
| 10061-02- | trans-1,3-Dichloropropene | 260 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 260 | U |
| 127-18-4 | Tetrachloroethene | 260 | U |
| 591-78-6 | 2-Hexanone | 1300 | U |
| 142-28-9 | 1,3-Dichloropropane | 260 | U |
| 124-48-1 | Dibromochloromethane | 260 | U |
| 106-93-4 | 1,2-Dibromoethane | 260 | U |
| 108-90-7 | Chlorobenzene | 260 | U |
| 100-41-4 | Ethylbenzene | 69 | J |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 260 | U |
| 179601-23 | m,p-Xylene | 280 | J |
| 95-47-6 | o-Xylene | 180 | J |
| 100-42-5 | Styrene | 260 | U |
| 75-25-2 | Bromoform | 61 | J |
| 98-82-8 | Isopropylbenzene | 120 | J |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 150 | J |
| 103-65-1 | n-Propylbenzene | 240 | J |
| 108-86-1 | Bromobenzene | 260 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 97 | J |
| 95-49-8 | 2-Chlorotoluene | 87 | J |
| 108-67-8 | 1,3,5-Trimethylbenzene | 290 | |
| 106-43-4 | 4-Chlorotoluene | 51 | J |
| 98-06-6 | tert-Butylbenzene | 260 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 560 | |
| 135-98-8 | sec-Butylbenzene | 210 | J |
| 99-87-6 | 4-Isopropyltoluene | 260 | U |

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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0724

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-020

Sample wt/vol: 0.98 (g/mL) gm

Lab File ID: Y0528043.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:31

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 260 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 260 | U |
| 104-51-8 | n-Butylbenzene | 300 | |
| 95-50-1 | 1,2-Dichlorobenzene | 51 | J |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 260 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 260 | U |
| 87-68-3 | Hexachlorobutadiene | 260 | U |
| 91-20-3 | Naphthalene | 12000 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 260 | U |

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.93 (g/mL) gm

Lab File ID: Y0528039.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/28/2009 22:58

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 270 | U |
| 74-87-3 | Chloromethane | 270 | U |
| 75-01-4 | Vinyl chloride | 270 | U |
| 74-83-9 | Bromomethane | 270 | U J |
| 75-00-3 | Chloroethane | 270 | U J |
| 75-69-4 | Trichlorofluoromethane | 270 | U |
| 75-35-4 | 1,1-Dichloroethene | 270 | U |
| 67-64-1 | Acetone | 770 | U |
| 75-15-0 | Carbon disulfide | 270 | U |
| 75-09-2 | Methylene chloride | 380 | |
| 1634-04-4 | Methyl tert-butyl ether | 270 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 270 | U |
| 75-34-3 | 1,1-Dichloroethane | 270 | U |
| 594-20-7 | 2,2-Dichloropropane | 270 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 270 | U |
| 78-93-3 | 2-Butanone | 660 | U |
| 74-97-5 | Bromochloromethane | 270 | U |
| 67-66-3 | Chloroform | 43 | J |
| 71-55-6 | 1,1,1-Trichloroethane | 270 | U |
| 56-23-5 | Carbon tetrachloride | 270 | U |
| 563-58-6 | 1,1-Dichloropropene | 270 | U |
| 71-43-2 | Benzene | 140 | J |
| 107-06-2 | 1,2-Dichloroethane | 270 | U |
| 79-01-6 | Trichloroethene | 270 | U |
| 78-87-5 | 1,2-Dichloropropane | 270 | U |
| 74-95-3 | Dibromomethane | 270 | U |
| 75-27-4 | Bromodichloromethane | 270 | U |
| 10061-01- | cis-1,3-Dichloropropene | 270 | U |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.93 (g/mL) gm

Lab File ID: Y0528039.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/28/2009 22:58

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 108-10-1 | 4-Methyl-2-pentanone | 1300 | U |
| 108-88-3 | Toluene | 780 | |
| 10061-02- | trans-1,3-Dichloropropene | 270 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 270 | U |
| 127-18-4 | Tetrachloroethene | 270 | U |
| 591-78-6 | 2-Hexanone | 1300 | U |
| 142-28-9 | 1,3-Dichloropropane | 270 | U |
| 124-48-1 | Dibromochloromethane | 270 | U |
| 106-93-4 | 1,2-Dibromoethane | 270 | U |
| 108-90-7 | Chlorobenzene | 270 | U |
| 100-41-4 | Ethylbenzene | 190 | J |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 270 | U |
| 179601-23 | m,p-Xylene | 720 | |
| 95-47-6 | o-Xylene | 330 | |
| 100-42-5 | Styrene | 270 | U |
| 75-25-2 | Bromoform | 270 | U |
| 98-82-8 | Isopropylbenzene | 130 | J |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 270 | U |
| 103-65-1 | n-Propylbenzene | 290 | |
| 108-86-1 | Bromobenzene | 270 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 270 | U |
| 95-49-8 | 2-Chlorotoluene | 270 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 340 | |
| 106-43-4 | 4-Chlorotoluene | 270 | U |
| 98-06-6 | tert-Butylbenzene | 270 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 680 | |
| 135-98-8 | sec-Butylbenzene | 220 | J |
| 99-87-6 | 4-Isopropyltoluene | 270 | U |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0725

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-021

Sample wt/vol: 0.93 (g/mL) gm

Lab File ID: Y0528039.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/28/2009 22:58

GC Column: DB-624.20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 270 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 270 | U |
| 104-51-8 | n-Butylbenzene | 340 | |
| 95-50-1 | 1,2-Dichlorobenzene | 270 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 270 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 270 | U |
| 87-68-3 | Hexachlorobutadiene | 270 | U |
| 91-20-3 | Naphthalene | 360 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 270 | U |

Comments:

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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0726

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-022

Sample wt/vol: 1.86 (g/mL) gm

Lab File ID: Y0528041.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/28/2009 23:45

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 130 | U |
| 74-87-3 | Chloromethane | 130 | U |
| 75-01-4 | Vinyl chloride | 130 | U |
| 74-83-9 | Bromomethane | 130 | U J |
| 75-00-3 | Chloroethane | 130 | U J |
| 75-69-4 | Trichlorofluoromethane | 130 | U |
| 75-35-4 | 1,1-Dichloroethene | 130 | U |
| 67-64-1 | Acetone | 310 | U ~~J~~ mw |
| 75-15-0 | Carbon disulfide | 130 | U |
| 75-09-2 | Methylene chloride | 280 | |
| 1634-04-4 | Methyl tert-butyl ether | 130 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 130 | U |
| 75-34-3 | 1,1-Dichloroethane | 130 | U |
| 594-20-7 | 2,2-Dichloropropane | 130 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 130 | U |
| 78-93-3 | 2-Butanone | 320 | U ~~J~~ mw |
| 74-97-5 | Bromochloromethane | 130 | U |
| 67-66-3 | Chloroform | 30 | J |
| 71-55-6 | 1,1,1-Trichloroethane | 130 | U |
| 56-23-5 | Carbon tetrachloride | 130 | U |
| 563-58-6 | 1,1-Dichloropropene | 130 | U |
| 71-43-2 | Benzene | 130 | U |
| 107-06-2 | 1,2-Dichloroethane | 130 | U |
| 79-01-6 | Trichloroethene | 130 | U |
| 78-87-5 | 1,2-Dichloropropane | 130 | U |
| 74-95-3 | Dibromomethane | 130 | U |
| 75-27-4 | Bromodichloromethane | 130 | U |
| 10061-01- | cis-1,3-Dichloropropene | 130 | U |



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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 1.11 (g/mL) gm

Lab File ID: Y0528042.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:08

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 230 | U |
| 74-87-3 | Chloromethane | 230 | U |
| 75-01-4 | Vinyl chloride | 230 | U |
| 74-83-9 | Bromomethane | 230 | U J |
| 75-00-3 | Chloroethane | 230 | U J |
| 75-69-4 | Trichlorofluoromethane | 230 | U |
| 75-35-4 | 1,1-Dichloroethene | 230 | U |
| 67-64-1 | Acetone | 510 | U |
| 75-15-0 | Carbon disulfide | 230 | U |
| 75-09-2 | Methylene chloride | 660 | |
| 1634-04-4 | Methyl tert-butyl ether | 230 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 230 | U |
| 75-34-3 | 1,1-Dichloroethane | 230 | U |
| 594-20-7 | 2,2-Dichloropropane | 230 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 230 | U |
| 78-93-3 | 2-Butanone | 630 | U |
| 74-97-5 | Bromochloromethane | 230 | U |
| 67-66-3 | Chloroform | 230 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 230 | U |
| 56-23-5 | Carbon tetrachloride | 230 | U |
| 563-58-6 | 1,1-Dichloropropene | 230 | U |
| 71-43-2 | Benzene | 90 | J |
| 107-06-2 | 1,2-Dichloroethane | 230 | U |
| 79-01-6 | Trichloroethene | 230 | U |
| 78-87-5 | 1,2-Dichloropropane | 230 | U |
| 74-95-3 | Dibromomethane | 230 | U |
| 75-27-4 | Bromodichloromethane | 230 | U |
| 10061-01- | cis-1,3-Dichloropropene | 230 | U |

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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 1.11 (g/mL) gm

Lab File ID: Y0528042.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:08

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 108-10-1 | 4-Methyl-2-pentanone | 280 | J |
| 108-88-3 | Toluene | 9100 | |
| 10061-02- | trans-1,3-Dichloropropene | 230 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 230 | U |
| 127-18-4 | Tetrachloroethene | 230 | U |
| 591-78-6 | 2-Hexanone | 1100 | U |
| 142-28-9 | 1,3-Dichloropropane | 230 | U |
| 124-48-1 | Dibromochloromethane | 230 | U |
| 106-93-4 | 1,2-Dibromoethane | 230 | U |
| 108-90-7 | Chlorobenzene | 230 | U |
| 100-41-4 | Ethylbenzene | 9900 | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 230 | U |
| 179601-23 | m,p-Xylene | 43000 | |
| 95-47-6 | o-Xylene | 23000 | |
| 100-42-5 | Styrene | 990 | |
| 75-25-2 | Bromoform | 47 | J |
| 98-82-8 | Isopropylbenzene | 1500 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 230 | U |
| 103-65-1 | n-Propylbenzene | 8400 | |
| 108-86-1 | Bromobenzene | 230 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 230 | U |
| 95-49-8 | 2-Chlorotoluene | 230 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 21000 | |
| 106-43-4 | 4-Chlorotoluene | 230 | U |
| 98-06-6 | tert-Butylbenzene | 230 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 100000 | ~~E~~ MW |
| 135-98-8 | sec-Butylbenzene | 230 | U |
| 99-87-6 | 4-Isopropyltoluene | 930 | |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0727

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036662

Matrix: (SOIL/SED/WATER) Material

Lab Sample ID: S10HD01-023

Sample wt/vol: 1.11 (g/mL) gm

Lab File ID: Y0528042.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec. 0.0

Date/Time Analyzed: 05/29/2009 00:08

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 5000 (uL)

Soil Aliquot Volume: 200 (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/kg | Q |
|---|---|---|---|
| 541-73-1 | 1,3-Dichlorobenzene | 43 | J |
| 106-46-7 | 1,4-Dichlorobenzene | 45 | J |
| 104-51-8 | n-Butylbenzene | 8400 | |
| 95-50-1 | 1,2-Dichlorobenzene | 230 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 230 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 110 | J |
| 87-68-3 | Hexachlorobutadiene | 230 | U |
| 91-20-3 | Naphthalene | 31000 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | 230 | U |

Comments:

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528036.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:48

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.0 | U |
| 71-43-2 | Benzene | 1.0 | U |
| 108-86-1 | Bromobenzene | 1.0 | U |
| 74-97-5 | Bromochloromethane | 1.0 | U |
| 75-27-4 | Bromodichloromethane | 1.0 | U |
| 75-25-2 | Bromoform | 1.0 | U |
| 74-83-9 | Bromomethane | 1.0 | U |
| 78-93-3 | 2-Butanone | 5.0 | U |
| 104-51-8 | n-Butylbenzene | 1.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.0 | U |
| 98-06-6 | tert-Butylbenzene | 1.0 | U |
| 75-15-0 | Carbon disulfide | 1.0 | U |
| 56-23-5 | Carbon tetrachloride | 1.0 | U |
| 108-90-7 | Chlorobenzene | 1.0 | U |
| 75-00-3 | Chloroethane | 1.0 | U |
| 67-66-3 | Chloroform | 0.31 | J |
| 74-87-3 | Chloromethane | 1.0 | U |
| 95-49-8 | 2-Chlorotoluene | 1.0 | U |
| 106-43-4 | 4-Chlorotoluene | 1.0 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.0 | U |
| 124-48-1 | Dibromochloromethane | 1.0 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.0 | U |
| 74-95-3 | Dibromomethane | 1.0 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.0 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.0 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.0 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.0 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.0 | U |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528036.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:48

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 107-06-2 | 1,2-Dichloroethane | 1.0 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.0 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.0 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.0 | U |
| 78 87-5 | 1,2-Dichloropropane | 1.0 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.0 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.0 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.0 | U |
| 10061-01- | cis-1,3-Dichloropropene | 1.0 | U |
| 10061-02- | trans-1,3-Dichloropropene | 1.0 | U |
| 100-41-4 | Ethylbenzene | 1.0 | U |
| 87-68-3 | Hexachlorobutadiene | 1.0 | U |
| 591-78-6 | 2-Hexanone | 5.0 | U |
| 98-82-8 | Isopropylbenzene | 1.0 | U |
| 99-87-6 | 4-Isopropyltoluene | 1.0 | U |
| 1634-04-4 | Methyl tert-butyl ether | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.0 | U |
| 75-09-2 | Methylene chloride | 1.0 | U |
| 91-20-3 | Naphthalene | 1.0 | U |
| 103-65-1 | n-Propylbenzene | 1.0 | U |
| 100-42-5 | Styrene | 1.0 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.0 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.0 | U |
| 127-18-4 | Tetrachloroethene | 0.60 | J |
| 108-88-3 | Toluene | 1.0 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.0 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.0 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.0 | U |

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FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0705

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-024

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528036.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:48

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.0 | U |
| 79-01-6 | Trichloroethene | 1.0 | U |
| 75-69-4 | Trichlorofluoromethane | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.0 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.0 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.0 | U |
| 75-01-4 | Vinyl chloride | 1.0 | U |
| 179601-23 | m,p-Xylene | 2.0 | U |
| 95-47-6 | o-Xylene | 1.0 | U |

Comments:

MW 6-22-09



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FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528037.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 22:11

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.0 | U |
| 71-43-2 | Benzene | 1.0 | U |
| 108-86-1 | Bromobenzene | 1.0 | U |
| 74-97-5 | Bromochloromethane | 1.0 | U |
| 75-27-4 | Bromodichloromethane | 1.0 | U |
| 75-25-2 | Bromoform | 1.0 | U |
| 74-83-9 | Bromomethane | 1.0 | U |
| 78-93-3 | 2-Butanone | 5.0 | U |
| 104-51-8 | n-Butylbenzene | 1.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.0 | U |
| 98-06-6 | tert-Butylbenzene | 1.0 | U |
| 75-15-0 | Carbon disulfide | 1.0 | U |
| 56-23-5 | Carbon tetrachloride | 1.0 | U |
| 108-90-7 | Chlorobenzene | 1.0 | U |
| 75-00-3 | Chloroethane | 1.0 | U |
| 67-66-3 | Chloroform | 0.19 | J |
| 74-87-3 | Chloromethane | 1.0 | U |
| 95-49-8 | 2-Chlorotoluene | 1.0 | U |
| 106-43-4 | 4-Chlorotoluene | 1.0 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.0 | U |
| 124-48-1 | Dibromochloromethane | 1.0 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.0 | U |
| 74-95-3 | Dibromomethane | 1.0 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.0 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.0 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.0 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.0 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.0 | U |

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528037.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 22:11

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 107-06-2 | 1,2-Dichloroethane | 1.0 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.0 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.0 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.0 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.0 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.0 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.0 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.0 | U |
| 10061-01- | cis-1,3-Dichloropropene | 1.0 | U |
| 10061-02- | trans-1,3-Dichloropropene | 1.0 | U |
| 100-41-4 | Ethylbenzene | 1.0 | U |
| 87-68-3 | Hexachlorobutadiene | 1.0 | U |
| 591-78-6 | 2-Hexanone | 5.0 | U |
| 98-82-8 | Isopropylbenzene | 1.0 | U |
| 99-87-6 | 4-Isopropyltoluene | 1.0 | U |
| 1634-04-4 | Methyl tert-butyl ether | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.0 | U |
| 75-09-2 | Methylene chloride | 1.0 | U |
| 91-20-3 | Naphthalene | 1.0 | U |
| 103-65-1 | n-Propylbenzene | 1.0 | U |
| 100-42-5 | Styrene | 1.0 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.0 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.0 | U |
| 127-18-4 | Tetrachloroethene | 1.0 | U |
| 108-88-3 | Toluene | 1.0 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.0 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.0 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.0 | U |



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FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0706

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-025

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528037.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 22:11

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.0 | U |
| 79-01-6 | Trichloroethene | 1.0 | U |
| 75-69-4 | Trichlorofluoromethane | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.0 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.0 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.0 | U |
| 75-01-4 | Vinyl chloride | 1.0 | U |
| 179601-23 | m,p-Xylene | 2.0 | U |
| 95-47-6 | o-Xylene | 1.0 | U |

Comments:

MW 6-22-09



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Date Printed: 6/10/2009 12:09

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0731

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-026

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528034.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:01

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.0 | U |
| 71-43-2 | Benzene | 1.0 | U |
| 108-86-1 | Bromobenzene | 1.0 | U |
| 74-97-5 | Bromochloromethane | 1.0 | U |
| 75-27-4 | Bromodichloromethane | 1.0 | U |
| 75-25-2 | Bromoform | 1.0 | U |
| 74-83-9 | Bromomethane | 1.0 | U |
| 78-93-3 | 2-Butanone | 5.0 | U |
| 104-51-8 | n-Butylbenzene | 1.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.0 | U |
| 98-06-6 | tert-Butylbenzene | 1.0 | U |
| 75-15-0 | Carbon disulfide | 1.0 | U |
| 56-23-5 | Carbon tetrachloride | 1.0 | U |
| 108-90-7 | Chlorobenzene | 1.0 | U |
| 75-00-3 | Chloroethane | 1.0 | U |
| 67-66-3 | Chloroform | 1.0 | U |
| 74-87-3 | Chloromethane | 1.0 | U |
| 95-49-8 | 2-Chlorotoluene | 1.0 | U |
| 106-43-4 | 4-Chlorotoluene | 1.0 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.0 | U |
| 124-48-1 | Dibromochloromethane | 1.0 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.0 | U |
| 74-95-3 | Dibromomethane | 1.0 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.0 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.0 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.0 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.0 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.0 | U |

Date Printed: 6/10/2009 12:09 MWB-22-09



8260B

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0731

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-026

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528034.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:01

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 107-06-2 | 1,2-Dichloroethane | 1.0 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.0 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.0 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.0 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.0 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.0 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.0 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.0 | U |
| 10061-01- | cis-1,3-Dichloropropene | 1.0 | U |
| 10061-02- | trans-1,3-Dichloropropene | 1.0 | U |
| 100-41-4 | Ethylbenzene | 1.0 | U |
| 87-68-3 | Hexachlorobutadiene | 1.0 | U |
| 591-78-6 | 2-Hexanone | 5.0 | U |
| 98-82-8 | Isopropylbenzene | 1.0 | U |
| 99-87-6 | 4-Isopropyltoluene | 1.0 | U |
| 1634-04-4 | Methyl tert-butyl ether | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.0 | U |
| 75-09-2 | Methylene chloride | 1.0 | U |
| 91-20-3 | Naphthalene | 1.0 | U |
| 103-65-1 | n-Propylbenzene | 1.0 | U |
| 100-42-5 | Styrene | 1.0 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.0 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.0 | U |
| 127-18-4 | Tetrachloroethene | 1.0 | U |
| 108-88-3 | Toluene | 0.31 | J |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.0 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.0 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.0 | U |

Date Printed: 6/10/2009 12:09



8260B

FORM I VOA

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VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0731

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-026

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528034.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:01

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.0 | U |
| 79-01-6 | Trichloroethene | 1.0 | U |
| 75-69-4 | Trichlorofluoromethane | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.0 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.0 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.0 | U |
| 75-01-4 | Vinyl chloride | 1.0 | U |
| 179601-23 | m,p-Xylene | 2.0 | U |
| 95-47-6 | o-Xylene | 1.0 | U |

Comments:

MW 6-22-09



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Date Printed: 6/10/2009 12:09

FORM I VOA

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0732

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-027

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528035.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:24

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 67-64-1 | Acetone | 5.0 | U |
| 71-43-2 | Benzene | 1.0 | U |
| 108-86-1 | Bromobenzene | 1.0 | U |
| 74-97-5 | Bromochloromethane | 1.0 | U |
| 75-27-4 | Bromodichloromethane | 1.0 | U |
| 75-25-2 | Bromoform | 1.0 | U |
| 74-83-9 | Bromomethane | 1.0 | U |
| 78-93-3 | 2-Butanone | 4.2 | J |
| 104-51-8 | n-Butylbenzene | 1.0 | U |
| 135-98-8 | sec-Butylbenzene | 1.0 | U |
| 98-06-6 | tert-Butylbenzene | 1.0 | U |
| 75-15-0 | Carbon disulfide | 1.0 | U |
| 56-23-5 | Carbon tetrachloride | 1.0 | U |
| 108-90-7 | Chlorobenzene | 1.0 | U |
| 75-00-3 | Chloroethane | 1.0 | U |
| 67-66-3 | Chloroform | 1.0 | U |
| 74-87-3 | Chloromethane | 1.0 | U |
| 95-49-8 | 2-Chlorotoluene | 1.0 | U |
| 106-43-4 | 4-Chlorotoluene | 1.0 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 1.0 | U |
| 124-48-1 | Dibromochloromethane | 1.0 | U |
| 106-93-4 | 1,2-Dibromoethane | 1.0 | U |
| 74-95-3 | Dibromomethane | 1.0 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1.0 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1.0 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1.0 | U |
| 75-71-8 | Dichlorodifluoromethane | 1.0 | U |
| 75-34-3 | 1,1-Dichloroethane | 1.0 | U |



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FORM I VOA

MW 6-22-09

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0732

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-027

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528035.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:24

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 107-06-2 | 1,2-Dichloroethane | 1.0 | U |
| 75-35-4 | 1,1-Dichloroethene | 1.0 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1.0 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1.0 | U |
| 78-87-5 | 1,2-Dichloropropane | 1.0 | U |
| 142-28-9 | 1,3-Dichloropropane | 1.0 | U |
| 594-20-7 | 2,2-Dichloropropane | 1.0 | U |
| 563-58-6 | 1,1-Dichloropropene | 1.0 | U |
| 10061-01- | cis-1,3-Dichloropropene | 1.0 | U |
| 10061-02- | trans-1,3-Dichloropropene | 1.0 | U |
| 100-41-4 | Ethylbenzene | 1.0 | U |
| 87-68-3 | Hexachlorobutadiene | 1.0 | U |
| 591-78-6 | 2-Hexanone | 5.0 | U |
| 98-82-8 | Isopropylbenzene | 1.0 | U |
| 99-87-6 | 4-Isopropyltoluene | 1.0 | U |
| 1634-04-4 | Methyl tert-butyl ether | 1.0 | U |
| 108-10-1 | 4-Methyl-2-pentanone | 5.0 | U |
| 75-09-2 | Methylene chloride | 1.0 | U |
| 91-20-3 | Naphthalene | 1.0 | U |
| 103-65-1 | n-Propylbenzene | 1.0 | U |
| 100-42-5 | Styrene | 1.0 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.0 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.0 | U |
| 127-18-4 | Tetrachloroethene | 1.0 | U |
| 108-88-3 | Toluene | 1.0 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1.0 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.0 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1.0 | U |



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FORM I VOA

MW 6-22-09

1

VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

09-05-0732

Lab Name: Pace Analytical Services, Inc.

Contract:

SDG No.: S10HD01

Run Sequence: R036657

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: S10HD01-027

Sample wt/vol: 10.0 (g/mL) mL

Lab File ID: Y0528035.D

Level: (LOW/MED)

Date Collected: 05/21/2009

% Moisture: not dec.

Date/Time Analyzed: 05/28/2009 21:24

GC Column: DB-624 20m ID: 0.18 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Heated Purge: (Y/N) N

| CAS NO. | COMPOUND | CONCENTRATION UNITS: ug/L | Q |
|---|---|---|---|
| 79-00-5 | 1,1,2-Trichloroethane | 1.0 | U |
| 79-01-6 | Trichloroethene | 1.0 | U |
| 75-69-4 | Trichlorofluoromethane | 1.0 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 1.0 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.0 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.0 | U |
| 75-01-4 | Vinyl chloride | 1.0 | U |
| 179601-23 | m,p-Xylene | 2.0 | U |
| 95-47-6 | o-Xylene | 1.0 | U |

Comments:

MN 6-22-09

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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: June 25, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 2 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Polychlorinated Dibenzo-p-Dioxin (PCDD)/Polychlorinated Dibenzo Furan (PCDF) analysis (EPA SW-846 Method 8280) was performed by TestAmerica West Sacramento, Sacramento, California.

The samples were numbered: 09050702 09050703

**Data Qualifications:**

**1. Holding Times, Storage, and Preservation: Acceptable.**

The samples were received at 8°C, slightly above the QC limits of 4°C (± 2°C); no action was taken based on this slight QC outlier. The samples were collected on May 21, 2009, were extracted by May 28, 2009, and were analyzed by June 1, 2009, therefore meeting QC criteria of less than 14 days between collection and extraction and less than 30 days between extraction and analysis.

**2. Instrument Stability: Acceptable.**

The relative retention times (RRTs) of the native and labeled PCDDs/PCDFs were within QC limits. All CDDs/CDFs in the CS3 standard were within their respective ion abundance ratio limits. The peaks representing both native and labeled analytes in the CS3 standard had Signal-to-Noise (S/N) ratios ≥ 10.0. The CS3 Relative Response (RR) was within ± 25% of the RR of the initial calibration. The CS3 Relative Response Factor (RRF) was within ± 35% of the initial calibration.

**3. Initial Calibration: Acceptable.**

The relative ion abundance criteria were met for all CDD/CDF peaks. The RTs of the isomers were within the appropriate WDM RT windows. For all calibration solutions the S/N ratio was ≥ 10.0. The %RSD of the five RRFs was less than 35%. The %RSD of analytes applicable to isotope dilution was less than 20%.

**4. Calibration Verification: Acceptable.**

All ion abundance ratio criteria were met. The RT of $^{13}C_{12}$-1,2,3,4-TCDD met the absolute RT criteria. The absolute RT of the internal standards was within 15 seconds of the RTs obtained during the initial calibration. The RRTs of the native and labeled CDDs/CDFs were within QC limits. The Signal-to-Noise (S/N) ratio was $\geq$ 10.0 for all CDD/CDF peaks. The measured RRFs and RRs of each analyte and standard were within $\pm$ 35% (RRF) and within $\pm$ 20% (RR) of the mean values established during initial calibration.

**5. Identification Criteria: Acceptable.**

The RRTs for the 2,3,7,8-substituted compounds were within the appropriate windows. The RTs for the non-2,3,7,8-substituted compounds were within the RT windows established by the WDM. The SICP ion current responses for the two quantitation ions for each analyte maximized simultaneously (within 2 seconds). For each positive result, the S/N ratio was >2.5 and the detector has not been saturated. Ion abundance ratios were within QC limits.

**6. Method Blank Analysis: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and concentration or every 20 samples (whichever is greater). The method blank is free from contamination.

**7. Matrix Spike (MS) and Laboratory Control Sample (LCS) Analysis: Acceptable.**

All MS, MS duplicate, and LCS recoveries were within QC limits.

**8. Spike Duplicate Analysis: Acceptable.**

All spike duplicate results were within QC limits.

**9. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**10. Second Column Confirmation: Not Applicable.**

2,3,7,8-TCDF was not detected in any sample.

**11. Labeled Compound Recoveries: Acceptable.**

The labeled compound and internal standard recoveries were within the required limits. The S/N ratio of the labeled compounds was $\geq$ 10. The ion abundance ratios of the labeled compounds were within the required limits.

**12. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "USEPA Analytical Operations/Data Quality Center (AOC), National Functional Guidelines for Chlorinated Dioxin/Furan Data Review" (EPA 540-R-02-003, March 2002) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

R - The sample results are unusable. The analyte may or may not be present in the sample.

U - The analyte was analyzed for, but was not detected above the Contract Required Quantitation Limit (CRQL) or Sample Quantitation (SQL) for the sample.

UJ - The analyte was not detected above the adjusted CRQL or SQL. However, the reported adjusted CRQL or SQL is approximate and may be inaccurate or imprecise.

Ecology and Environment, Inc.

Client Sample ID: 09-05-0702

Trace Level Organic Compounds

Lot-Sample #...: G9E230214-001 Work Order #...: LDNTH1AC Matrix.....: SOLID
Date Sampled...: 05/21/09 Date Received..: 05/23/09
Prep Date.....: 05/28/09 Analysis Date..: 06/01/09
Prep Batch #...: 9148228
Dilution Factor: 1
% Moisture.....: 8.8

| PARAMETER | RESULT | DETECTION LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | 2.7 | ng/g | SW846 8280A |
| 1,2,3,7,8-PeCDD | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,4,7,8-HxCDD | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,6,7,8-HxCDD | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,7,8,9-HxCDD | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,4,6,7,8-HpCDD | ND | 6.8 | ng/g | SW846 8280A |
| OCDD | 8.1 J | 14 | ng/g | SW846 8280A |
| 2,3,7,8-TCDF | ND | 2.7 | ng/g | SW846 8280A |
| 1,2,3,7,8-PeCDF | ND | 6.8 | ng/g | SW846 8280A |
| 2,3,4,7,8-PeCDF | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,4,7,8-HxCDF | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,6,7,8-HxCDF | ND | 6.8 | ng/g | SW846 8280A |
| 2,3,4,6,7,8-HxCDF | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,7,8,9-HxCDF | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,4,6,7,8-HpCDF | ND | 6.8 | ng/g | SW846 8280A |
| 1,2,3,4,7,8,9-HpCDF | ND | 6.8 | ng/g | SW846 8280A |
| OCDF | ND | 14 | ng/g | SW846 8280A |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 85 | (25 - 150) |
| 13C-2,3,7,8-TCDF | 83 | (25 - 150) |
| 13C-1,2,3,6,7,8-HxCDD | 73 | (25 - 150) |
| 13C-1,2,3,4,6,7,8-HpCDF | 71 | (25 - 150) |
| 13C-OCDD | 67 | (25 - 150) |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 37Cl4-2,3,7,8-TCDD | 88 | (25 - 150) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight

J Estimated result. Result is less than the reporting limit.

MW 6-25-09

Ecology and Environment, Inc.

Client Sample ID: 09-05-0703

Trace Level Organic Compounds

Lot-Sample #...: G9E230214-002 Work Order #...: LDNTJ1AC Matrix.....: SOLID
Date Sampled...: 05/21/09 Date Received..: 05/23/09
Prep Date.....: 05/28/09 Analysis Date..: 06/01/09
Prep Batch #...: 9148228
Dilution Factor: 1
% Moisture.....: 24

| PARAMETER | RESULT | DETECTION LIMIT | UNITS | METHOD |
|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | 3.3 | ng/g | SW846 8280A |
| 1,2,3,7,8-PeCDD | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,4,7,8-HxCDD | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,6,7,8-HxCDD | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,7,8,9-HxCDD | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,4,6,7,8-HpCDD | 1.1 J | 8.2 | ng/g | SW846 8280A |
| OCDD | 14 J | 16 | ng/g | SW846 8280A |
| 2,3,7,8-TCDF | ND | 3.3 | ng/g | SW846 8280A |
| 1,2,3,7,8-PeCDF | ND | 8.2 | ng/g | SW846 8280A |
| 2,3,4,7,8-PeCDF | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,4,7,8-HxCDF | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,6,7,8-HxCDF | ND | 8.2 | ng/g | SW846 8280A |
| 2,3,4,6,7,8-HxCDF | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,7,8,9-HxCDF | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,4,6,7,8-HpCDF | ND | 8.2 | ng/g | SW846 8280A |
| 1,2,3,4,7,8,9-HpCDF | ND | 8.2 | ng/g | SW846 8280A |
| OCDF | ND | 16 | ng/g | SW846 8280A |

| INTERNAL STANDARDS | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 13C-2,3,7,8-TCDD | 95 | (25 - 150) |
| 13C-2,3,7,8-TCDF | 86 | (25 - 150) |
| 13C-1,2,3,6,7,8-HxCDD | 68 | (25 - 150) |
| 13C-1,2,3,4,6,7,8-HpCDF | 63 | (25 - 150) |
| 13C-OCDD | 56 | (25 - 150) |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 37Cl4-2,3,7,8-TCDD | 88 | (25 - 150) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than the reporting limit

MN 6-25-09

# E September 2009 Data Memoranda

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**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 7 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 6010, 6020, and 7471) were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090941 | 09090942 | 09090943 | 09090944 | 09090956 |
| 09090957 | 09090958 | | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 9, 2009, and were analyzed by September 22, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

3. **Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No sample results were affected by blank results.

4. **ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning and end of each sequence or at least twice every 8 hours, whichever was more frequent. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**9. Serial Dilution Analysis: Satisfactory.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits except potassium. Associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-01
Client ID: ~~09050741~~ 0909094

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 10000 J | 6.2 |
| Antimony | 6010B | ND | 6.2 U |
| Arsenic | 6010B | ND | 12 U |
| Barium | 6010B | 110 | 3.1 |
| Beryllium | 6010B | ND | 0.62 U |
| Cadmium | 6010B | 4.4 | 0.62 |
| Calcium | 6010B | 7500 | 620 |
| Chromium | 6010B | 36 | 0.62 |
| Cobalt | 6010B | 9.6 | 0.62 |
| Copper | 6010B | 4200 | 12 |
| Iron | 6010B | 41000 J | 62 |
| Lead | 6010B | 610 | 6.2 |





10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-01
Client ID: ~~09050741~~ 09090941

| Analyte | Method | Result | PQL |
|---|---|---|---|
| ~~Aluminum~~ | ~~6010B~~ | ~~10000~~ | ~~6.2~~ |
| Magnesium | 6010B | 5000 | 62 |
| Manganese | 6010B | 430 | 1.2 |
| Mercury | 7471A | 0.42 | 0.31 |
| Nickel | 6010B | 34 | 3.1 |
| Potassium | 6010B | 3000 K | 62 |
| Selenium | 6010B | ~~ND~~ | 12 U |
| Silver | 6010B | 4.1 | 0.62 |
| Sodium | 6010B | 490 | 62 |
| Thallium | 6020 | ~~ND~~ | 6.2 U |
| Vanadium | 6010B | 88 | 0.62 |
| Zinc | 6010B | 480 | 3.1 |

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-02
Client ID: ~~09050742~~ MW-0909092

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 13000 J | 60 |
| Antimony | 6010B | ND | 6.0 U |
| Arsenic | 6010B | ND | 12 U |
| Barium | 6010B | 130 | 3.0 |
| Beryllium | 6010B | ND | 0.60 U |
| Cadmium | 6010B | 0.69 | 0.60 |
| Calcium | 6010B | 12000 | 600 |
| Chromium | 6010B | 12 | 0.60 |
| Cobalt | 6010B | 8.5 | 0.60 |
| Copper | 6010B | 140 | 1.2 |
| Iron | 6010B | 31000 J | 60 |
| Lead | 6010B | 160 | 6.0 |





MW 10/1/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-02
Client ID: ~~09050742~~ 09090942

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 6500 | 60 |
| Manganese | 6010B | 470 | 1.2 |
| Mercury | 7471A | ~~ND~~ | 0.30 U |
| Nickel | 6010B | 12 | 3.0 |
| Potassium | 6010B | 4400 K | 60 |
| Selenium | 6010B | ~~ND~~ | 12 U |
| Silver | 6010B | ~~ND~~ | 0.60 U |
| Sodium | 6010B | 760 | 60 |
| Thallium | 6020 | ~~ND~~ | 6.0 U |
| Vanadium | 6010B | 93 | 0.60 |
| Zinc | 6010B | 170 | 3.0 |





10/4/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-03
Client ID: ~~09050743~~ 09090943

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 12000 J | 57 |
| Antimony | 6010B | ~~ND~~ | 5.7 U |
| Arsenic | 6010B | ~~ND~~ | 11 U |
| Barium | 6010B | 120 | 2.9 |
| Beryllium | 6010B | ~~ND~~ | 0.57 U |
| Cadmium | 6010B | 0.90 | 0.57 |
| Calcium | 6010B | 12000 | 570 |
| Chromium | 6010B | 17 | 0.57 |
| Cobalt | 6010B | 8.4 | 0.57 |
| Copper | 6010B | 52 | 1.1 |
| Iron | 6010B | 49000 J | 57 |
| Lead | 6010B | 100 | 5.7 |



MW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-03
Client ID: ~~09050743~~ 09090943

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 12000 | 57 |
| Magnesium | 6010B | 6500 | 57 |
| Manganese | 6010B | 450 | 1.1 |
| Mercury | 7471A | ~~ND~~ | 0.29 U |
| Nickel | 6010B | 12 | 2.9 |
| Potassium | 6010B | 4600 K | 57 |
| Selenium | 6010B | ~~ND~~ | 11 U |
| Silver | 6010B | ~~ND~~ | 0.57 U |
| Sodium | 6010B | 450 | 57 |
| Thallium | 6020 | ~~ND~~ | 5.7 U |
| Vanadium | 6010B | 87 | 0.57 |
| Zinc | 6010B | 330 | 2.9 |





10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-04
Client ID: ~~09050744~~ 09090944

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 13000 J | 61 |
| Antimony | 6010B | ND | 6.1 U |
| Arsenic | 6010B | ND | 12 U |
| Barium | 6010B | 130 | 3.0 |
| Beryllium | 6010B | ND | 0.61 U |
| Cadmium | 6010B | ND | 0.61 U |
| Calcium | 6010B | 9900 | 610 |
| Chromium | 6010B | 9.8 | 0.61 |
| Cobalt | 6010B | 8.1 | 0.61 |
| Copper | 6010B | 28 | 1.2 |
| Iron | 6010B | 29000 J | 61 |
| Lead | 6010B | 23 | 6.1 |

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-04
Client ID: ~~0905074~~ 0909044

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 6500 | 61 |
| Manganese | 6010B | 360 | 1.2 |
| Mercury | 7471A | ~~ND~~ | 0.30 U |
| Nickel | 6010B | 8.4 | 3.0 |
| Potassium | 6010B | 4600 K | 61 |
| Selenium | 6010B | ~~ND~~ | 12 U |
| Silver | 6010B | ~~ND~~ | 0.61 U |
| Sodium | 6010B | 530 | 61 |
| Thallium | 6020 | ~~ND~~ | 6.1 U |
| Vanadium | 6010B | 110 | 0.61 |
| Zinc | 6010B | 140 | 3.0 |

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-07
Client ID: ~~09050756~~ 09090956

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 13000 J | 7.8 |
| Antimony | 6010B | ND | 7.8 U |
| Arsenic | 6010B | ND | 16 U |
| Barium | 6010B | 100 | 3.9 |
| Beryllium | 6010B | ND | 0.78 U |
| Cadmium | 6010B | ND | 0.78 U |
| Calcium | 6010B | 4700 | 78 |
| Chromium | 6010B | 12 | 0.78 |
| Cobalt | 6010B | 8.0 | 0.78 |
| Copper | 6010B | 33 | 1.6 |
| Iron | 6010B | 29000 J | 78 |
| Lead | 6010B | 100 | 7.8 |





MW 10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-07
Client ID: ~~09050756~~ MW
09090956

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | **2800** | 78 |
| Manganese | 6010B | **180** | 1.6 |
| Mercury | 7471A | ~~ND~~ MW | 0.39 U |
| Nickel | 6010B | **9.6** | 3.9 |
| Potassium | 6010B | **1600** K | 78 |
| Selenium | 6010B | ~~ND~~ | 16 U |
| Silver | 6010B | ~~ND~~ MW | 0.78 U |
| Sodium | 6010B | **530** | 78 |
| Thallium | 6020 | ~~ND~~ MW | 7.8 U |
| Vanadium | 6010B | **150** | 0.78 |
| Zinc | 6010B | **170** | 3.9 |





MW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-08
Client ID: ~~09050757~~ MW 09090957

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 19000 J | 81 |
| Antimony | 6010B | ~~ND~~ | 8.1 U |
| Arsenic | 6010B | ~~ND~~ MW | 16 U |
| Barium | 6010B | 130 | 4.0 |
| Beryllium | 6010B | ~~ND~~ | 0.81 U |
| Cadmium | 6010B | ~~ND~~ MW | 0.81 U |
| Calcium | 6010B | 5400 | 810 |
| Chromium | 6010B | 15 | 0.81 |
| Cobalt | 6010B | 14 | 0.81 |
| Copper | 6010B | 28 | 1.6 |
| Iron | 6010B | 41000 J | 81 |
| Lead | 6010B | 18 | 8.1 |



MW 10/4/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-08
Client ID: ~~09050757~~ MW
09090957

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 3500 | 81 |
| Manganese | 6010B | 230 | 1.6 |
| Mercury | 7471A | ~~ND~~ MW | 0.40 U |
| Nickel | 6010B | 11 | 4.0 |
| Potassium | 6010B | 2300 K | 81 |
| Selenium | 6010B | ~~ND~~ | 16 U |
| Silver | 6010B | ~~ND~~ MW | 0.81 U |
| Sodium | 6010B | 480 | 81 |
| Thallium | 6020 | ~~ND~~ MW | 8.1 U |
| Vanadium | 6010B | 170 | 0.81 |
| Zinc | 6010B | 95 | 4.0 |

MW 10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-09
Client ID: ~~09050758~~ 0909095B

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 12000 J | 53 |
| Antimony | 6010B | 32 | 5.3 |
| Arsenic | 6010B | ND | 11 U |
| Barium | 6010B | 200 | 2.7 |
| Beryllium | 6010B | ND | 0.53 U |
| Cadmium | 6010B | 24 | 0.53 |
| Calcium | 6010B | 9200 | 530 |
| Chromium | 6010B | 28 | 0.53 |
| Cobalt | 6010B | 9.2 | 0.53 |
| Copper | 6010B | 25000 | 110 |
| Iron | 6010B | 36000 J | 53 |
| Lead | 6010B | 1200 | 5.3 |





MW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**TOTAL METALS**
**EPA 6010B/6020/7471A**
Page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-091-09
Client ID: ~~09050758~~ MW
09090958

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | **5000** | 53 |
| Manganese | 6010B | **460** | 1.1 |
| Mercury | 7471A | **28** | 11 |
| Nickel | 6010B | **95** | 2.7 |
| Potassium | 6010B | **3900** K | 53 |
| Selenium | 6010B | ~~ND~~ MW | 11 U |
| Silver | 6010B | **4.5** | 0.53 |
| Sodium | 6010B | **490** | 53 |
| Thallium | 6020 | ~~ND~~ MW | 5.3 U |
| Vanadium | 6010B | **86** | 0.53 |
| Zinc | 6010B | **4500** | 27 |

MW 10/14/09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 6 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 6010, 6020, and 7471) were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:
09090924 09090925 09090932 09090933 09090936
09090937

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 9, 2009, and were analyzed by September 21, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification.

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of each sequence. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within QC limits.

**8. Duplicate Analysis: Acceptable.**

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-03
Client ID: ~~09050724~~ 09090924

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 13000 | 64 |
| Antimony | 6010B | ~~ND~~ | 6.4 U |
| Arsenic | 6010B | ~~ND~~ | 13 U |
| Barium | 6010B | 140 | 3.2 |
| Beryllium | 6010B | ~~ND~~ | 0.64 U |
| Cadmium | 6010B | 0.98 | 0.64 |
| Calcium | 6010B | 8600 | 640 |
| Chromium | 6010B | 13 | 0.64 |
| Cobalt | 6010B | 12 | 0.64 |
| Copper | 6010B | 47 | 1.3 |
| Iron | 6010B | 39000 | 64 |
| Lead | 6010B | 600 | 6.4 |





10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-03
Client ID: ~~09050724~~ 09090924

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 4000 | 64 |
| Manganese | 6010B | 450 | 1.3 |
| Mercury | 7471A | ~~ND~~ | 0.32 U |
| Nickel | 6010B | 16 | 3.2 |
| Potassium | 6010B | 2800 | 64 |
| Selenium | 6010B | ~~ND~~ | 13 U |
| Silver | 6010B | ~~ND~~ | 0.64 U |
| Sodium | 6010B | 720 | 64 |
| Thallium | 6020 | ~~ND~~ | 6.4 U |
| Vanadium | 6010B | 160 | 0.64 |
| Zinc | 6010B | 350 | 3.2 |

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-04
Client ID: ~~09050725~~ 09090925

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 20000 | 72 |
| Antimony | 6010B | ~~ND~~ | 7.2 U |
| Arsenic | 6010B | ~~ND~~ | 14 U |
| Barium | 6010B | 160 | 3.6 |
| Beryllium | 6010B | ~~ND~~ | 0.72 U |
| Cadmium | 6010B | 2.3 | 0.72 |
| Calcium | 6010B | 5900 | 72 |
| Chromium | 6010B | 22 | 0.72 |
| Cobalt | 6010B | 16 | 0.72 |
| Copper | 6010B | 120 | 1.4 |
| Iron | 6010B | 43000 | 72 |
| Lead | 6010B | 180 | 7.2 |

JMW 10-4-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-04
Client ID: ~~09050725~~ MW
09090925

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 3200 | 72 |
| Manganese | 6010B | 440 | 1.4 |
| Mercury | 7471A | ~~ND~~ MW | 0.36 U |
| Nickel | 6010B | 20 | 3.6 |
| Potassium | 6010B | 1900 | 72 |
| Selenium | 6010B | ND | 14 U |
| Silver | 6010B | ~~ND~~ MW | 0.72 U |
| Sodium | 6010B | 680 | 72 |
| Thallium | 6020 | ~~ND~~ MW | 7.2 U |
| Vanadium | 6010B | 140 | 0.72 |
| Zinc | 6010B | 930 | 3.6 |

MW
10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-07
Client ID: ~~09050732~~ 09090932

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 32000 | 66 |
| Antimony | 6010B | 8.8 | 6.6 |
| Arsenic | 6010B | ~~ND~~ | 13 U |
| Barium | 6010B | 140 | 3.3 |
| Beryllium | 6010B | ~~ND~~ | 0.66 U |
| Cadmium | 6010B | 1.2 | 0.66 |
| Calcium | 6010B | 7600 | 660 |
| Chromium | 6010B | 44 | 0.66 |
| Cobalt | 6010B | 13 | 0.66 |
| Copper | 6010B | 780 | 13 |
| Iron | 6010B | 40000 | 66 |
| Lead | 6010B | 120 | 6.6 |





JMW 10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-07
Client ID: ~~09050732~~ MW
0909 0932

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 4100 | 66 |
| Manganese | 6010B | 420 | 1.3 |
| Mercury | 7471A | ~~ND~~ MW | 0.33 U |
| Nickel | 6010B | 22 | 3.3 |
| Potassium | 6010B | 2100 | 66 |
| Selenium | 6010B | ~~ND~~ | 13 U |
| Silver | 6010B | ~~ND~~ MW | 0.66 U |
| Sodium | 6010B | 640 | 66 |
| Thallium | 6020 | ~~ND~~ MW | 6.6 U |
| Vanadium | 6010B | 160 | 0.66 |
| Zinc | 6010B | 400 | 3.3 |

MW 10/4/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-08
Client ID: ~~09050733~~ MW
09090933

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 16000 | 68 |
| Antimony | 6010B | ~~ND~~ | 6.8 U |
| Arsenic | 6010B | ~~ND~~ MW | 14 U |
| Barium | 6010B | 120 | 3.4 |
| Beryllium | 6010B | ~~ND~~ | 0.68 U |
| Cadmium | 6010B | ~~ND~~ MW | 0.68 U |
| Calcium | 6010B | 5900 | 68 |
| Chromium | 6010B | 18 | 0.68 |
| Cobalt | 6010B | 19 | 0.68 |
| Copper | 6010B | 41 | 1.4 |
| Iron | 6010B | 57000 | 68 |
| Lead | 6010B | 40 | 6.8 |

MW 10/1/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Referehce: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-08
Client ID: ~~09050733~~ 09090933

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 3800 | 68 |
| Manganese | 6010B | 490 | 1.4 |
| Mercury | 7471A | ~~ND~~ | 0.34 U |
| Nickel | 6010B | 11 | 3.4 |
| Potassium | 6010B | 1600 | 68 |
| Selenium | 6010B | ~~ND~~ | 14 U |
| Silver | 6010B | ~~ND~~ | 0.68 U |
| Sodium | 6010B | 620 | 68 |
| Thallium | 6020 | ~~ND~~ | 6.8 U |
| Vanadium | 6010B | 200 | 0.68 |
| Zinc | 6010B | 120 | 3.4 |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-09
Client ID: ~~09050735~~ MW
09090937

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 12000 | 7.1 |
| Antimony | 6010B | 8.8 | 7.1 |
| Arsenic | 6010B | ~~ND~~ MW | 14 U |
| Barium | 6010B | 120 | 3.6 |
| Beryllium | 6010B | ~~ND~~ | 0.71 U |
| Cadmium | 6010B | ~~ND~~ MW | 0.71 U |
| Calcium | 6010B | 5000 | 71 |
| Chromium | 6010B | 13 | 0.71 |
| Cobalt | 6010B | 7.2 | 0.71 |
| Copper | 6010B | 260 | 1.4 |
| Iron | 6010B | 23000 | 71 |
| Lead | 6010B | 21 | 7.1 |

MW 9/24/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-09
Client ID: ~~09050736~~ MW
09090937

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | **2900** | 71 |
| Manganese | 6010B | **340** | 1.4 |
| Mercury | 7471A | ~~ND~~ MW | 0.36 U |
| Nickel | 6010B | **7.8** | 3.6 |
| Potassium | 6010B | **2000** | 71 |
| Selenium | 6010B | ~~ND~~ | 14 U |
| Silver | 6010B | ~~ND~~ MW | 0.71 U |
| Sodium | 6010B | **690** | 71 |
| Thallium | 6020 | ~~ND~~ MW | 7.1 U |
| Vanadium | 6010B | **90** | 0.71 |
| Zinc | 6010B | **140** | 3.6 |

MW
10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-10
Client ID: ~~09050737~~ MW
09090937

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 11000 | 7.8 |
| Antimony | 6010B | ~~ND~~ | 7.8 U |
| Arsenic | 6010B | ~~ND~~ MW | 16 U |
| Barium | 6010B | 92 | 3.9 |
| Beryllium | 6010B | ~~ND~~ | 0.78 U |
| Cadmium | 6010B | ~~ND~~ MW | 0.78 U |
| Calcium | 6010B | 2700 | 78 |
| Chromium | 6010B | 4.8 | 0.78 |
| Cobalt | 6010B | 3.4 | 0.78 |
| Copper | 6010B | 20 | 1.6 |
| Iron | 6010B | 9200 | 78 |
| Lead | 6010B | ~~ND~~ MW | 7.8 U |

MW 10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-14,17,18&21-09
Date Analyzed: 9-18&22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-102-10
Client ID: ~~09050737~~ MW
09090937

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 870 | 78 |
| Manganese | 6010B | 78 | 1.6 |
| Mercury | 7471A | ~~ND~~ MW | 0.39 U |
| Nickel | 6010B | 3.9 | 3.9 |
| Potassium | 6010B | 640 | 78 |
| Selenium | 6010B | ND | 16 U |
| Silver | 6010B | ~~ND~~ MW | 0.78 U |
| Sodium | 6010B | 1100 | 78 |
| Thallium | 6020 | ~~ND~~ MW | 7.8 U |
| Vanadium | 6010B | 31 | 0.78 |
| Zinc | 6010B | 16 | 3.9 |

MW 10/14/09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 9 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Target Analyte List (TAL) metals (EPA Methods 6010, 6020, and 7471) and Toxicity Characteristic Leaching Procedure (TCLP) metals (EPA Methods 1311, 6010, 6020, and 7471) analyses were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090907 | 09090912 | 09090913 | 09090915 | 09090919 |
| 09090927 | 09090953 | 09090954 | 09090962 | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 10, 2009, extracted on September 18, 2009, and were analyzed by September 28, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

3. **Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No positive blank results affected sample results.

4. **ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of each sequence. All ICS (solution AB) results were within QC limits of 80% - 120%.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike Analysis: Satisfactory.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits except lead with one high and one low recovery and nickel and sodium with one high recovery each. Lead positive results and sample quantitation limits were qualified as estimated quantities (J or UJ). Positive sample results associated with the high recovery outliers were qualified as estimated quantities (J).

**8. Duplicate Analysis: Satisfactory.**

Laboratory duplicate and spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except nickel in the duplicate analysis; associated sample results were qualified as estimated quantities (J or UJ).

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

**TCLP METALS**
**EPA 1311/6010B/7470A**

Date Prepared: 9-16-09
Date Extracted: 9-17&18-09
Date Analyzed: 9-18&21-09

Matrix: TCLP Extract
Units: mg/L (ppm)

Lab ID: 09-103-01
Client ID: ~~09050707~~ 09090907

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Arsenic | 6010B | ~~ND~~ | 0.40 U |
| Barium | 6010B | 22 | 2.0 |
| Cadmium | 6010B | ~~ND~~ | 0.020 U |
| Chromium | 6010B | 0.020 | 0.020 |
| Lead | 6010B | ND | 0.20 U |
| Mercury | 7470A | ND | 0.0050 |
| Selenium | 6010B | ND | 0.40 |
| Silver | 6010B | ND | 0.020 |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-04
Client ID: ~~09050712~~ 09090912

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 17000 | 110 |
| Antimony | 6010B | 6.6 | 5.5 |
| Arsenic | 6010B | ~~ND~~ | 11 U |
| Barium | 6010B | 140 | 2.7 |
| Beryllium | 6010B | ~~ND~~ | 0.55 U |
| Cadmium | 6010B | 0.59 | 0.55 |
| Calcium | 6010B | 7500 | 550 |
| Chromium | 6010B | 13 | 0.55 |
| Cobalt | 6010B | 16 | 0.55 |
| Copper | 6010B | 36 | 1.1 |
| Iron | 6010B | 45000 | 220 |
| Lead | 6010B | 52 J | 5.5 |

JMW 10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-04
Client ID: ~~09050712~~ 0909092

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 2900 | 55 |
| Manganese | 6010B | 540 | 0.55 |
| Mercury | 7471A | ~~ND~~ | 0.27 U |
| Nickel | 6010B | 11 J | 2.7 |
| Potassium | 6010B | 1800 | 55 |
| Selenium | 6010B | ND | 11 U |
| Silver | 6010B | ND | 0.55 U |
| Sodium | 6010B | 730 J | 82 |
| Thallium | 6020 | ~~ND~~ | 5.5 U |
| Vanadium | 6010B | 140 | 0.55 |
| Zinc | 6010B | 950 | 2.7 |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-05
Client ID: ~~09050713~~
09090913

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 7700 | 11 |
| Antimony | 6010B | ~~ND~~ | 5.6 U |
| Arsenic | 6010B | ~~ND~~ | 11 U |
| Barium | 6010B | 87 | 2.8 |
| Beryllium | 6010B | ~~ND~~ | 0.56 U |
| Cadmium | 6010B | ~~ND~~ | 0.56 U |
| Calcium | 6010B | 4700 | 56 |
| Chromium | 6010B | 6.7 | 0.56 |
| Cobalt | 6010B | 14 | 0.56 |
| Copper | 6010B | 17 | 1.1 |
| Iron | 6010B | 42000 | 220 |
| Lead | 6010B | ~~ND~~ | 5.6 UJ |





10/4/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-05
Client ID: ~~09050713~~ 0909091 3.

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 1900 | 56 |
| Manganese | 6010B | 700 | 5.6 |
| Mercury | 7471A | ~~ND~~ | 0.28 U |
| Nickel | 6010B | 6.2 J | 2.8 |
| Potassium | 6010B | 750 | 56 |
| Selenium | 6010B | ND | 11 U |
| Silver | 6010B | ND | 0.56 U |
| Sodium | 6010B | 490 J | 83 |
| Thallium | 6020 | ~~ND~~ | 5.6 U |
| Vanadium | 6010B | 140 | 0.56 |
| Zinc | 6010B | 69 | 2.8 |





10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-06
Client ID: ~~09050715~~ 09090915

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 16000 | 100 |
| Antimony | 6010B | 21 | 5.1 |
| Arsenic | 6010B | ~~ND~~ | 10 U |
| Barium | 6010B | 540 | 26 |
| Beryllium | 6010B | ~~ND~~ | 0.51 U |
| Cadmium | 6010B | 14 | 0.51 |
| Calcium | 6010B | 9700 | 510 |
| Chromium | 6010B | 37 | 0.51 |
| Cobalt | 6010B | 16 | 0.51 |
| Copper | 6010B | 490 | 1.0 |
| Iron | 6010B | 76000 | 200 |
| Lead | 6010B | 830 J | 5.1 |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-06
Client ID: ~~09050715~~ MW
09090915

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 3200 | 51 |
| Manganese | 6010B | 680 | 5.1 |
| Mercury | 7471A | 0.58 | 0.26 |
| Nickel | 6010B | 64 J | 2.6 |
| Potassium | 6010B | 2500 | 51 |
| Selenium | 6010B | ND | 10 U |
| Silver | 6010B | ND MW | 0.51 U |
| Sodium | 6010B | 590 J | 77 |
| Thallium | 6020 | ND MW | 5.1 U |
| Vanadium | 6010B | 120 | 0.51 |
| Zinc | 6010B | 3100 | 51 |

MW 10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-08
Client ID: ~~09050719~~ MW
09090919

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 15000 | 100 |
| Antimony | 6010B | 16 | 5.2 |
| Arsenic | 6010B | ~~ND~~ MW | 10 U |
| Barium | 6010B | 270 | 26 |
| Beryllium | 6010B | ~~ND~~ MW | 0.52 U |
| Cadmium | 6010B | 5.6 | 0.52 |
| Calcium | 6010B | 11000 | 520 |
| Chromium | 6010B | 33 | 5.2 |
| Cobalt | 6010B | 18 | 0.52 |
| Copper | 6010B | 620 | 10 |
| Iron | 6010B | 63000 | 210 |
| Lead | 6010B | 660 J | 52 |

MW 10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-08
Client ID: ~~09050719~~ 090919

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 4700 | 520 |
| Manganese | 6010B | 810 | 5.2 |
| Mercury | 7471A | ~~ND~~ | 0.26 U |
| Nickel | 6010B | 54 J | 2.6 |
| Potassium | 6010B | 2100 | 52 |
| Selenium | 6010B | ND | 10 U |
| Silver | 6010B | ND | 0.52 U |
| Sodium | 6010B | 700 J | 77 |
| Thallium | 6020 | ~~ND~~ | 5.2 U |
| Vanadium | 6010B | 140 | 5.2 |
| Zinc | 6010B | 1300 | 26 |

10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-09
Client ID: ~~09050727~~ MW
0909027

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | **27000** | 100 |
| Antimony | 6010B | **54** | 5.2 |
| Arsenic | 6010B | ~~ND~~ MW | 10 U |
| Barium | 6010B | **490** | 26 |
| Beryllium | 6010B | ~~ND~~ MW | 0.52 U |
| Cadmium | 6010B | **18** | 0.52 |
| Calcium | 6010B | **13000** | 520 |
| Chromium | 6010B | **77** | 0.52 |
| Cobalt | 6010B | **21** | 0.52 |
| Copper | 6010B | **1600** | 10 |
| Iron | 6010B | **76000** | 210 |
| Lead | 6010B | **1400** J | 5.2 |

MW 10/4/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-09
Client ID: ~~09050727~~ MW
0909 0927

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | **4300** | 52 |
| Manganese | 6010B | **710** | 5.2 |
| Mercury | 7471A | **2.1** | 1.0 |
| Nickel | 6010B | **120** J | 2.6 |
| Potassium | 6010B | **2300** | 52 |
| Selenium | 6010B | ~~ND~~ MW | 10 U |
| Silver | 6010B | **1.1** | 0.52 |
| Sodium | 6010B | **890** J | 77 |
| Thallium | 6020 | ~~ND~~ MW | 5.2 U |
| Vanadium | 6010B | **110** | 0.52 |
| Zinc | 6010B | **4800** | 52 |





MW 10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-10
Client ID: ~~09050753~~ MW
09090053

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 10000 | 12 |
| Antimony | 6010B | ~~ND~~ | 5.8 U |
| Arsenic | 6010B | ~~ND~~ MW | 12 U |
| Barium | 6010B | 91 | 2.9 |
| Beryllium | 6010B | ~~ND~~ | 0.58 U |
| Cadmium | 6010B | ~~ND~~ MW | 0.58 U |
| Calcium | 6010B | 4000 | 58 |
| Chromium | 6010B | 9.7 | 0.58 |
| Cobalt | 6010B | 12 | 0.58 |
| Copper | 6010B | 18 | 1.2 |
| Iron | 6010B | 35000 | 230 |
| Lead | 6010B | 32 J | 5.8 |

MW 10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-10
Client ID: ~~09060753~~ MW
09090953

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 2300 | 58 |
| Manganese | 6010B | 260 | 0.58 |
| Mercury | 7471A | ~~ND~~ MW | 0.29 U |
| Nickel | 6010B | 7.5 J | 2.9 |
| Potassium | 6010B | 1100 | 58 |
| Selenium | 6010B | ND | 12 U |
| Silver | 6010B | ~~ND~~ MW | 0.58 U |
| Sodium | 6010B | 570 J | 87 |
| Thallium | 6020 | ~~ND~~ MW | 5.8 U |
| Vanadium | 6010B | 130 | 0.58 |
| Zinc | 6010B | 96 | 2.9 |

MW 10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-11
Client ID: ~~09050754~~ 0909095Y

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | **9000** | 11 |
| Antimony | 6010B | **11** | 5.6 |
| Arsenic | 6010B | ~~ND~~ | 11 U |
| Barium | 6010B | **120** | 2.8 |
| Beryllium | 6010B | ~~ND~~ | 0.56 U |
| Cadmium | 6010B | **0.70** | 0.56 |
| Calcium | 6010B | **4600** | 56 |
| Chromium | 6010B | **9.9** | 0.56 |
| Cobalt | 6010B | **13** | 0.56 |
| Copper | 6010B | **28** | 1.1 |
| Iron | 6010B | **42000** | 220 |
| Lead | 6010B | **51** J | 5.6 |

MV 10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-11
Client ID: ~~09050754~~ MW
09090954

| | | | |
|---|---|---|---|
| Magnesium | 6010B | **2200** | 56 |
| Manganese | 6010B | **300** | 0.56 |
| Mercury | 7471A | ~~ND~~ MW | 0.28 U |
| Nickel | 6010B | **8.1** | 2.8 |
| Potassium | 6010B | **1100** | 56 |
| Selenium | 6010B | ~~ND~~ MW | 11 U |
| Silver | 6010B | **1.2** | 0.56 |
| Sodium | 6010B | **460** | 83 |
| Thallium | 6020 | **ND** | 5.6 |
| Vanadium | 6010B | **140** | 0.56 |
| Zinc | 6010B | **270** | 2.8 |

MW 10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-12
Client ID: ~~09050762~~ 09090962

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | **12000** | 100 |
| Antimony | 6010B | **12** | 5.2 |
| Arsenic | 6010B | ~~ND~~ | 10 U |
| Barium | 6010B | **160** | 2.6 |
| Beryllium | 6010B | ~~ND~~ | 0.52 U |
| Cadmium | 6010B | **11** | 0.52 |
| Calcium | 6010B | **14000** | 520 |
| Chromium | 6010B | **68** | 0.52 |
| Cobalt | 6010B | **10** | 0.52 |
| Copper | 6010B | **580** | 10 |
| Iron | 6010B | **49000** | 210 |
| Lead | 6010B | **750** J | 5.2 |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-12
Client ID: ~~09050752~~ 09090962

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 5000 | 52 |
| Manganese | 6010B | 420 | 0.52 |
| Mercury | 7471A | ~~ND~~ | 0.26 U |
| Nickel | 6010B | 57 J | 2.6 |
| Potassium | 6010B | 3200 | 52 |
| Selenium | 6010B | ~~ND~~ | 10 U |
| Silver | 6010B | ~~ND~~ | 0.52 U |
| Sodium | 6010B | 660 J | 78 |
| Thallium | 6020 | ~~ND~~ | 5.2 U |
| Vanadium | 6010B | 91 | 0.52 |
| Zinc | 6010B | 670 | 2.6 |

10-14-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 1 soil sample collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Resource Conservation and Recovery Act (RCRA) metals (EPA Methods 6010 and 7471) analyses were performed by OnSite Environmental, Inc., Redmond, Washington.

The sample was numbered: 09090907

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The sample was maintained at 4°C (± 2°C). The sample was collected on September 10, 2009, and was analyzed by October 5, 2009, therefore meeting QC criteria of less than 6 months between collection, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. The AA correlation coefficient was > 0.995. All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No sample results were qualified based on blank results.

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of the sequence. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike Analysis: Satisfactory.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits except lead with one low recovery and mercury with two low recoveries. Lead and mercury positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**8. Duplicate Analysis: Acceptable.**

Laboratory duplicate and spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 5, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103B
Project: 10HD-09/09/09-0005

**TOTAL METALS**
**EPA 6010B/7471A**

Date Extracted: 10-2-09
Date Analyzed: 10-2&5-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-103-01
Client ID: **09050707**

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Arsenic | 6010B | ~~ND~~ MW | 13 U |
| Barium | 6010B | **1900** | 31 |
| Cadmium | 6010B | **3.0** | 0.63 |
| Chromium | 6010B | **38** | 0.63 |
| Lead | 6010B | **290** J | 6.3 |
| Mercury | 7471A | **0.52** J | 0.31 |
| Selenium | 6010B | ~~ND~~ MW | 13 U |
| Silver | 6010B | ~~ND~~ MW | 0.63 U |

MW 10-6-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

# MEMORANDUM

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 8 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 6010, 6020, and 7471) were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090902 | 09090903 | 09090916 | 09090917 | 09090959 |
| 09090960 | 09090961 | 07090963 | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 10, 2009, and were analyzed by September 28, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

3. **Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No analytes were detected in the blanks that affected sample results.

4. **ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of each sequence. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike Analysis: Satisfactory.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits except lead with one high and one low recovery, zinc and sodium with one high recovery each, and nickel with one low recovery. Positive sample results associated with the high recovery outliers were qualified as estimated quantities (J). Positive sample results and sample quantitation limits associated with the low recovery outliers were qualified as estimated quantities (J or UJ).

**8. Duplicate Analysis: Satisfactory.**

Laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except nickel and lead; associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-01
Client ID: ~~09050702~~ 09090902

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 11000 | 14 |
| Antimony | 6010B | ND | 6.8 U |
| Arsenic | 6010B | ND | 14 U |
| Barium | 6010B | 80 | 3.4 |
| Beryllium | 6010B | 0.94 | 0.68 |
| Cadmium | 6010B | 0.92 | 0.68 |
| Calcium | 6010B | 6100 | 68 |
| Chromium | 6010B | 13 | 0.68 |
| Cobalt | 6010B | 8.1 | 0.68 |
| Copper | 6010B | 16 | 1.4 |
| Iron | 6010B | 22000 | 270 |
| Lead | 6010B | 9.4 J | 6.8 |





10/1/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-01
Client ID: ~~09050702~~ 09090802

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 6900 | 68 |
| Manganese | 6010B | 310 | 0.68 |
| Mercury | 7471A | ~~ND~~ | 0.34 U |
| Nickel | 6010B | 12 J | 3.4 |
| Potassium | 6010B | 3000 | 68 |
| Selenium | 6010B | ND | 14 U |
| Silver | 6010B | ~~ND~~ | 0.68 U |
| Sodium | 6010B | 1100 J | 100 |
| Thallium | 6020 | ~~ND~~ | 6.8 U |
| Vanadium | 6010B | 46 | 0.68 |
| Zinc | 6010B | 43 J | 3.4 |

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-02
Client ID: ~~09050703~~ 09090903

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 9900 | 13 |
| Antimony | 6010B | ND | 6.5 U |
| Arsenic | 6010B | ND | 13 U |
| Barium | 6010B | 100 | 3.2 |
| Beryllium | 6010B | ND | 0.65 U |
| Cadmium | 6010B | ND | 0.65 U |
| Calcium | 6010B | 13000 | 650 |
| Chromium | 6010B | 9.7 | 0.65 |
| Cobalt | 6010B | 7.1 | 0.65 |
| Copper | 6010B | 18 | 1.3 |
| Iron | 6010B | 21000 | 260 |
| Lead | 6010B | 18 J | 6.5 |





10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-02
Client ID: ~~09050703~~ 09090903

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 6000 | 65 |
| Manganese | 6010B | 310 | 0.65 |
| Mercury | 7471A | ~~ND~~ | 0.32 U |
| Nickel | 6010B | 8.3 J | 3.2 |
| Potassium | 6010B | 2900 | 65 |
| Selenium | 6010B | ~~ND~~ | 13 U |
| Silver | 6010B | 0.87 | 0.65 |
| Sodium | 6010B | 970 J | 97 |
| Thallium | 6020 | ~~ND~~ | 6.5 U |
| Vanadium | 6010B | 51 | 0.65 |
| Zinc | 6010B | 65 J | 3.2 |





10/1/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-03
Client ID: ~~09050716~~ MW
09090916

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 16000 | 120 |
| Antimony | 6010B | ND | 6.1 U |
| Arsenic | 6010B | ND MW | 12 |
| Barium | 6010B | 150 | 3.0 |
| Beryllium | 6010B | ND MW | 0.61 U |
| Cadmium | 6010B | 1.9 | 0.61 |
| Calcium | 6010B | 8200 | 610 |
| Chromium | 6010B | 19 | 0.61 |
| Cobalt | 6010B | 16 | 0.61 |
| Copper | 6010B | 320 | 1.2 |
| Iron | 6010B | 43000 | 240 |
| Lead | 6010B | 140 J | 6.1 |





MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-03
Client ID: ~~09050716~~ MW
09090916

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 2800 | 61 |
| Manganese | 6010B | 470 | 0.61 |
| Mercury | 7471A | ~~ND~~ MW | 0.30 U |
| Nickel | 6010B | 17 J | 3.0 |
| Potassium | 6010B | 2000 | 61 |
| Selenium | 6010B | ~~ND~~ | 12 U |
| Silver | 6010B | ~~ND~~ MW | 0.61 U |
| Sodium | 6010B | 730 J | 91 |
| Thallium | 6020 | ~~ND~~ MW | 6.1 U |
| Vanadium | 6010B | 140 | 0.61 |
| Zinc | 6010B | 380 J | 3.0 |



MW 10-16-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-04
Client ID: ~~09050717~~ MW
09090917

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 10000 | 11 |
| Antimony | 6010B | ~~ND~~ | 5.6 U |
| Arsenic | 6010B | ~~ND~~ MW | 11 U |
| Barium | 6010B | 100 | 2.8 |
| Beryllium | 6010B | ~~ND~~ MW | 0.56 U |
| Cadmium | 6010B | 0.62 | 0.56 |
| Calcium | 6010B | 7100 | 560 |
| Chromium | 6010B | 11 | 0.56 |
| Cobalt | 6010B | 14 | 0.56 |
| Copper | 6010B | 110 | 1.1 |
| Iron | 6010B | 43000 | 220 |
| Lead | 6010B | 63 J | 5.6 |

MW 10-6-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-04
Client ID: ~~09050717~~ MW
0909017

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 2500 | 56 |
| Manganese | 6010B | 440 | 0.56 |
| Mercury | 7471A | ~~ND~~ MW | 0.28 U |
| Nickel | 6010B | 25 J | 2.8 |
| Potassium | 6010B | 1200 | 56 |
| Selenium | 6010B | ~~ND~~ | 11 U |
| Silver | 6010B | ND MW | 0.56 U |
| Sodium | 6010B | 720 J | 84 |
| Thallium | 6020 | ~~ND~~ MW | 5.6 U |
| Vanadium | 6010B | 140 | 0.56 |
| Zinc | 6010B | 180 J | 2.8 |

MW 10-16-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-05
Client ID: ~~09050759~~ 09090959

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 11000 | 13 |
| Antimony | 6010B | ~~ND~~ | 6.6 U |
| Arsenic | 6010B | ~~ND~~ | 13 U |
| Barium | 6010B | 89 | 3.3 |
| Beryllium | 6010B | ~~ND~~ | 0.66 U |
| Cadmium | 6010B | ~~ND~~ | 0.66 U |
| Calcium | 6010B | 7900 | 660 |
| Chromium | 6010B | 8.2 | 0.66 |
| Cobalt | 6010B | 9.7 | 0.66 |
| Copper | 6010B | 27 | 1.3 |
| Iron | 6010B | 25000 | 260 |
| Lead | 6010B | 10 J | 6.6 |

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-05
Client ID: ~~09050759~~ MW
09090959

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | **5000** | 66 |
| Manganese | 6010B | **330** | 0.66 |
| Mercury | 7471A | ~~ND~~ MW | 0.33 U |
| Nickel | 6010B | **7.3** J | 3.3 |
| Potassium | 6010B | **2100** | 66 |
| Selenium | 6010B | ~~ND~~ | 13 U |
| Silver | 6010B | ~~ND~~ MW | 0.66 U |
| Sodium | 6010B | **1400** J | 99 |
| Thallium | 6020 | ~~ND~~ MW | 6.6 U |
| Vanadium | 6010B | **77** | 0.66 |
| Zinc | 6010B | **46** J | 3.3 |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-06
Client ID: ~~09050760~~ 09090960

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 18000 | 130 |
| Antimony | 6010B | ND | 6.6 U |
| Arsenic | 6010B | ND | 13 U |
| Barium | 6010B | 94 | 3.3 |
| Beryllium | 6010B | ND | 0.66 U |
| Cadmium | 6010B | ND | 0.66 U |
| Calcium | 6010B | 6400 | 66 |
| Chromium | 6010B | 12 | 0.66 |
| Cobalt | 6010B | 20 | 0.66 |
| Copper | 6010B | 19 | 1.3 |
| Iron | 6010B | 60000 | 260 |
| Lead | 6010B | 16 J | 6.6 |

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-06
Client ID: ~~09050760~~ 09090960

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 5000 | 66 |
| Manganese | 6010B | 420 | 0.66 |
| Mercury | 7471A | ~~ND~~ | 0.33 U |
| Nickel | 6010B | 10 J | 3.3 |
| Potassium | 6010B | 2200 | 66 |
| Selenium | 6010B | ~~ND~~ | 13 U |
| Silver | 6010B | ~~ND~~ | 0.66 U |
| Sodium | 6010B | 950 J | 99 |
| Thallium | 6020 | ~~ND~~ | 6.6 U |
| Vanadium | 6010B | 160 | 0.66 |
| Zinc | 6010B | 85 J | 3.3 |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-07
Client ID: ~~09050761~~ MW
09090961

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | **19000** | 130 |
| Antimony | 6010B | ~~ND~~ | 6.6 U |
| Arsenic | 6010B | ~~ND~~ MW | 13 U |
| Barium | 6010B | **120** | 3.3 |
| Beryllium | 6010B | ~~ND~~ | 0.66 U |
| Cadmium | 6010B | ~~ND~~ MW | 0.66 U |
| Calcium | 6010B | **6200** | 66 |
| Chromium | 6010B | **14** | 0.66 |
| Cobalt | 6010B | **21** | 0.66 |
| Copper | 6010B | **19** | 1.3 |
| Iron | 6010B | **52000** | 260 |
| Lead | 6010B | **7.6** J | 6.6 |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-07
Client ID: ~~09050781~~ MW
0909006

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 4300 | 66 |
| Manganese | 6010B | 1000 | 6.6 |
| Mercury | 7471A | ~~ND~~ MW | 0.33 U |
| Nickel | 6010B | 11 J | 3.3 |
| Potassium | 6010B | 1900 | 66 |
| Selenium | 6010B | ~~ND~~ | 13 U |
| Silver | 6010B | ND MW | 0.66 U |
| Sodium | 6010B | 860 J | 99 |
| Thallium | 6020 | ~~ND~~ MW | 6.6 U |
| Vanadium | 6010B | 150 | 0.66 |
| Zinc | 6010B | 94 J | 3.3 |

MW
10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-08
Client ID: ~~09050763~~ 09090963

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 15000 | 130 |
| Antimony | 6010B | ND | 6.3 U |
| Arsenic | 6010B | ND | 13 U |
| Barium | 6010B | 120 | 3.1 |
| Beryllium | 6010B | ND | 0.63 U |
| Cadmium | 6010B | ND | 0.63 U |
| Calcium | 6010B | 8600 | 630 |
| Chromium | 6010B | 10 | 0.63 |
| Cobalt | 6010B | 11 | 0.63 |
| Copper | 6010B | 18 | 1.3 |
| Iron | 6010B | 29000 | 250 |
| Lead | 6010B | 280 J | 6.3 |

MW 10-16-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-127-08
Client ID: ~~09050763~~ MW
09090963

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 4600 | 63 |
| Manganese | 6010B | 300 | 0.63 |
| Mercury | 7471A | ~~ND~~ MW | 0.31 U |
| Nickel | 6010B | 8.2 J | 3.1 |
| Potassium | 6010B | 2700 | 63 |
| Selenium | 6010B | ~~ND~~ | 13 U |
| Silver | 6010B | ND MW | 0.63 U |
| Sodium | 6010B | 1100 J | 94 |
| Thallium | 6020 | ~~ND~~ MW | 6.3 U |
| Vanadium | 6010B | 110 | 0.63 |
| Zinc | 6010B | 51 J | 3.1 |

MW 10/6/09

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# MEMORANDUM

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 2 soil and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 6010, 6020, and 7471) were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | |
|---|---|---|
| Soil | 09090901 | 09090904 |
| Water | 09090951 | 09090952 |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Satisfactory.**

The samples were received above the QC limits of 4°C ± 2°C; associated sample results were qualified as estimated quantities (J or UJ). The samples were collected on September 10, 2009, and were analyzed by September 28, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%.

3. **Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No positive blank results affected the sample results.

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of each sequence. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike Analysis: Satisfactory.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits except the soil lead (one high and one low), zinc and sodium (one high each) and nickel (one low recovery) recoveries. Positive sample results associated with the high recovery outliers were qualified as estimated quantities (J). Positive sample results and sample quantitation limits associated with the low recovery outliers were qualified as estimated quantities (J or UJ).

**8. Duplicate Analysis: Satisfactory.**

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except nickel and lead in the soil duplicate; associated sample results were qualified as estimated quantities (J or UJ).

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-128-01
Client ID: ~~09050701/M~~
09090901

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 21000 J | 130 |
| Antimony | 6010B | ND | 6.5 U J |
| Arsenic | 6010B | ND | 13 U J |
| Barium | 6010B | 140 J | 3.2 |
| Beryllium | 6010B | ND | 0.65 U J |
| Cadmium | 6010B | ND | 0.65 U J |
| Calcium | 6010B | 6400 J | 65 |
| Chromium | 6010B | 20 J | 0.65 |
| Cobalt | 6010B | 14 J | 0.65 |
| Copper | 6010B | 20 J | 1.3 |
| Iron | 6010B | 40000 J | 260 |
| Lead | 6010B | 7.8 J | 6.5 |

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-128-01
Client ID: ~~09050701~~ 09090901

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 7000 J | 65 |
| Manganese | 6010B | 1100 J | 6.5 |
| Mercury | 7471A | ~~ND~~ | 0.32 UJ |
| Nickel | 6010B | 16 J | 3.2 |
| Potassium | 6010B | 3100 J | 65 |
| Selenium | 6010B | ND | 13 UJ |
| Silver | 6010B | ~~ND~~ | 0.65 UJ |
| Sodium | 6010B | 990 J | 97 |
| Thallium | 6020 | ~~ND~~ | 6.5 UJ |
| Vanadium | 6010B | 81 J | 0.65 |
| Zinc | 6010B | 70 J | 3.2 |

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 1 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-128-02
Client ID: ~~09050704~~ 09090904

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 15000 J | 100 |
| Antimony | 6010B | ~~ND~~ | 5.2 UJ |
| Arsenic | 6010B | ~~ND~~ | 10 UJ |
| Barium | 6010B | 120 J | 2.6 |
| Beryllium | 6010B | ~~ND~~ | 0.52 UJ |
| Cadmium | 6010B | ~~ND~~ | 0.52 UJ |
| Calcium | 6010B | 11000 J | 520 |
| Chromium | 6010B | 17 J | 0.52 |
| Cobalt | 6010B | 10 J | 0.52 |
| Copper | 6010B | 24 J | 1.0 |
| Iron | 6010B | 34000 J | 210 |
| Lead | 6010B | 19 J | 5.2 |

MW 10/16/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 6010B/6020/7471A**
page 2 of 2

Date Extracted: 9-18&22-09
Date Analyzed: 9-18,25,26&28-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 09-128-02
Client ID: ~~09050704~~ MW 09090904

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 5500 J | 52 |
| Manganese | 6010B | 470 J | 0.52 |
| Mercury | 7471A | ~~ND~~ | 0.26 UJ |
| Nickel | 6010B | 13 J | 2.6 |
| Potassium | 6010B | 3200 J | 52 |
| Selenium | 6010B | ~~ND~~ | 10 UJ |
| Silver | 6010B | 0.97 J | 0.52 |
| Sodium | 6010B | 790 J | 77 |
| Thallium | 6020 | ~~ND~~ | 5.2 UJ |
| Vanadium | 6010B | 74 J | 0.52 |
| Zinc | 6010B | 94 J | 2.6 |

MW 10-16-09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 200.8/6010B/7470A**
page 1 of 2

Date Extracted: 9-18-09
Date Analyzed: 9-18,21&24-09

Matrix: Water
Units: ug/L (ppb)

Lab ID: 09-128-03
Client ID: ~~09050751~~
09090951

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | ND | 56 |
| Antimony | 200.8 | ND | 5.6 |
| Arsenic | 200.8 | ND | 3.3 |
| Barium | 200.8 | ND | 28 |
| Beryllium | 200.8 | ND | 11 |
| Cadmium | 200.8 | ND | 4.4 |
| Calcium | 6010B | ND | 1100 |
| Chromium | 200.8 | ND | 11 |
| Cobalt | 200.8 | ND | 11 |
| Copper | 200.8 | ND | 11 |
| Iron | 6010B | ND | 56 |
| Lead | 200.8 | ND | 1.1 |

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 200.8/6010B/7470A**
page 2 of 2

| | |
|---|---|
| Date Extracted: | 9-18-09 |
| Date Analyzed: | 9-18,21&24-09 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 09-128-03 |
| Client ID: | ~~09050751~~ MW 09090951 |

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | ND | 1100 |
| Manganese | 200.8 | ND | 11 |
| Mercury | 7470A | ND | 0.50 |
| Nickel | 200.8 | ND | 22 |
| Potassium | 6010B | ND | 1100 |
| Selenium | 200.8 | ND | 5.6 |
| Silver | 200.8 | ND | 11 |
| Sodium | 6010B | ND | 1100 |
| Thallium | 200.8 | ND | 5.6 |
| Vanadium | 200.8 | ND | 11 |
| Zinc | 200.8 | ND | 56 |

MW 10/6/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 200.8/6010B/7470A**
page 1 of 2

Date Extracted: 9-18-09
Date Analyzed: 9-18,21&24-09

Matrix: Water
Units: ug/L (ppb)

Lab ID: 09-128-04
Client ID: ~~09050752~~ 09090952

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Aluminum | 6010B | 11000 J | 56 |
| Antimony | 200.8 | ND | 5.6 UJ |
| Arsenic | 200.8 | 3.6 J | 3.3 |
| Barium | 200.8 | 160 J | 28 |
| Beryllium | 200.8 | ND | 11 UJ |
| Cadmium | 200.8 | ND | 4.4 UJ |
| Calcium | 6010B | 36000 J | 1100 |
| Chromium | 200.8 | 51 J | 11 |
| Cobalt | 200.8 | ND | 11 UJ |
| Copper | 200.8 | 94 J | 11 |
| Iron | 6010B | 30000 J | 56 |
| Lead | 200.8 | 61 J | 1.1 |





10-16-09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

**TOTAL METALS**
**EPA 200.8/6010B/7470A**
page 2 of 2

Date Extracted: 9-18-09
Date Analyzed: 9-18,21&24-09

Matrix: Water
Units: ug/L (ppb)

Lab ID: 09-128-04
Client ID: ~~09050752~~ 09090952

| Analyte | Method | Result | PQL |
|---|---|---|---|
| Magnesium | 6010B | 12000 J | 1100 |
| Manganese | 200.8 | 580 J | 11 |
| Mercury | 7470A | ~~ND~~ | 0.50 UJ |
| Nickel | 200.8 | 37 J | 22 |
| Potassium | 6010B | 10000 J | 1100 |
| Selenium | 200.8 | ~~ND~~ | 5.6 UJ |
| Silver | 200.8 | ~~ND~~ | 11 UJ |
| Sodium | 6010B | 29000 J | 1100 |
| Thallium | 200.8 | ~~ND~~ | 5.6 UJ |
| Vanadium | 200.8 | 38 J | 11 |
| Zinc | 200.8 | 430 J | 56 |





10/6-09

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**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 7 soil and 2 oil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Chlorinated Pesticides (EPA Method 8081A) and Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090941 | 09090942 | 09090943 | 09090944 | 09090956 |
| 09090957 | 09090958 | 09090949 | 09090950 | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 9, 2009, extracted by September 16, 2009, and were analyzed by September 22, 2009, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis.

**2. Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

**3. Initial and Continuing Calibration: Satisfactory.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column. All continuing calibration % differences (%D) were less than 15% and were within QC limits except Aroclor 1260 with high recoveries on 9-14-09 and 9-15-09 (associated positive results were qualified as estimated quantities [J]), endosulfan I with a low recovery associated with samples 09090942 and 09090944 (associated results were qualified as estimated quantities (J or UJ), 4,4'-DDT with a low recovery associated with dilutions of samples 09090950 and 09090941 and samples 09090942, 09090943, and 09090958 (associated sample results were qualified as estimated quantities [J or UJ]), and delta-BHC, 4,4'-DDT, endrin aldehyde, and methyoxychlor with high recoveries associated with samples 09090942, 09090943, and 09090958 (associated positive results were qualified as estimated [J]).

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Satisfactory.**

All recoveries of the SMCs were within the established control limits except one low pesticide SMC recovery each in samples 09090943, 09090956, 09090957, and 09090958; associated positive results and samples quantitation limits were qualified as estimated quantities (J or UJ).

**8. Matrix Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

**9. Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**10. Compound Identification: Satisfactory.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 0909094 ~~09050741~~ | | | | | |
| Laboratory ID: | 09-091-01 | | | | | |
| Aroclor 1016 | ND | 0.062 U | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1221 | ND | 0.062 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1232 | ND | 0.062 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1242 | ND | 0.062 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1248 | ND | 0.062 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1254 | ND | 0.062 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1260 | 0.95 J | 0.062 | EPA 8082 | 9-12-09 | 9-15-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *114* | *33-122* | | | | |
| **Client ID:** | 0909092 ~~09050742~~ | | | | | |
| Laboratory ID: | 09-091-02 | | | | | |
| Aroclor 1016 | ND | 0.060 U | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1221 | ND | 0.060 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1232 | ND | 0.060 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1242 | ND | 0.060 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1248 | ND | 0.060 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1254 | 0.080 | 0.060 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1260 | ND | 0.060 U | EPA 8082 | 9-12-09 | 9-14-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *78* | *33-122* | | | | |
| **Client ID:** | 0909093 ~~09050743~~ | | | | | |
| Laboratory ID: | 09-091-03 | | | | | |
| Aroclor 1016 | ND | 0.057 U | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1221 | ND | 0.057 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1232 | ND | 0.057 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1242 | ND | 0.057 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1248 | ND | 0.057 | EPA 8082 | 9-12-09 | 9-15-09 | |
| Aroclor 1254 | ND | 0.57 | EPA 8082 | 9-12-09 | 9-15-09 | U1 |
| Aroclor 1260 | ND | 0.57 | EPA 8082 | 9-12-09 | 9-15-09 | U |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *101* | *33-122* | | | | |

JMW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09090744 ~~09050744~~ | | | | | |
| Laboratory ID: | 09-091-04 | | | | | |
| Aroclor 1016 | ND | 0.061 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1221 | ND | 0.061 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1232 | ND | 0.061 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1242 | ND | 0.061 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1248 | ND | 0.061 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1254 | ND | 0.061 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1260 | ND | 0.061 | EPA 8082 | 9-12-09 | 9-14-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *33-122* | | | | |
| **Client ID:** | 09090756 ~~09050756~~ | | | | | |
| Laboratory ID: | 09-091-07 | | | | | |
| Aroclor 1016 | ND | 0.078 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1221 | ND | 0.078 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1232 | ND | 0.078 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1242 | ND | 0.078 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1248 | ND | 0.078 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1254 | ND | 0.078 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1260 | 0.12 J | 0.078 | EPA 8082 | 9-12-09 | 9-14-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *89* | *33-122* | | | | |
| **Client ID:** | 09090757 ~~09050757~~ | | | | | |
| Laboratory ID: | 09-091-08 | | | | | |
| Aroclor 1016 | ND | 0.081 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1221 | ND | 0.081 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1232 | ND | 0.081 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1242 | ND | 0.081 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1248 | ND | 0.081 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1254 | ND | 0.081 | EPA 8082 | 9-12-09 | 9-14-09 | |
| Aroclor 1260 | ND | 0.081 | EPA 8082 | 9-12-09 | 9-14-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *99* | *33-122* | | | | |

MW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050758~~ 09090858 | | | | | |
| Laboratory ID: | 09-091-09 | | | | | |
| Aroclor 1016 | ND | 0.27 U | EPA 8082 | 9-12-09 | 9-16-09 | |
| Aroclor 1221 | ND | 0.27 | EPA 8082 | 9-12-09 | 9-16-09 | |
| Aroclor 1232 | ND | 0.27 | EPA 8082 | 9-12-09 | 9-16-09 | |
| Aroclor 1242 | ND | 0.27 | EPA 8082 | 9-12-09 | 9-16-09 | |
| Aroclor 1248 | ND | 0.27 | EPA 8082 | 9-12-09 | 9-16-09 | |
| Aroclor 1254 | 1.2 | 0.27 | EPA 8082 | 9-12-09 | 9-16-09 | |
| Aroclor 1260 | ND | 0.27 U | EPA 8082 | 9-12-09 | 9-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *120* | *33-122* | | | | |

MW 10/4/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## PCBs by EPA 8082

Matrix: Oil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050749~~ 09090949 | | | | | |
| Laboratory ID: | 09-091-05 | | | | | |
| Aroclor 1016 | ND | 0.40 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1221 | ND | 0.40 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1232 | ND | 0.40 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1242 | ND | 0.40 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1248 | ND | 0.40 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1254 | ND | 0.40 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1260 | ND | 0.40 | EPA 8082 | 9-11-09 | 9-11-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *48* | *33-113* | | | | |
| **Client ID:** | ~~09050750~~ 09090950 | | | | | |
| Laboratory ID: | 09-091-06 | | | | | |
| Aroclor 1016 | ND | 0.39 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1221 | ND | 0.39 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1232 | ND | 0.39 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1242 | ND | 0.39 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1248 | ND | 0.39 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1254 | ND | 0.39 | EPA 8082 | 9-11-09 | 9-11-09 | |
| Aroclor 1260 | ND | 0.39 | EPA 8082 | 9-11-09 | 9-11-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *50* | *33-113* | | | | |

MW 9/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090941

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09050741 | | | | | |
| Laboratory ID: | 09-091-01 | | | | | |
| alpha-BHC | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| gamma-BHC | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| beta-BHC | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| delta-BHC | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Heptachlor | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Aldrin | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Heptachlor Epoxide | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| gamma-Chlordane | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| alpha-Chlordane | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| 4,4'-DDE | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endosulfan I | ND | 310 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Dieldrin | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endrin | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| 4,4'-DDD | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endosulfan II | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| 4,4'-DDT | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endrin Aldehyde | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Methoxychlor | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endsulfan Sulfate | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endrin Ketone | ND | 620 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Toxaphene | ND | 3100 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *66* | *43-99* | | | | |
| *DCB* | *56* | *44-104* | | | | |

MW

MW 10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090942

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050742~~ | | | | | |
| Laboratory ID: | 09-091-02 | | | | | |
| alpha-BHC | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-BHC | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| beta-BHC | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| delta-BHC | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Aldrin | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor Epoxide | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-Chlordane | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| alpha-Chlordane | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDE | 15 | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan I | ND | 6.0 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Dieldrin | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDD | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan II | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDT | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Aldehyde | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Methoxychlor | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endsulfan Sulfate | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Ketone | ND | 12 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Toxaphene | ND | 60 | EPA 8081 | 9-16-09 | 9-22-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *67* | *43-99* | | | | |
| *DCB* | *46* | *44-104* | | | | |

MW
10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

0909094B

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050743~~ | | | | | |
| Laboratory ID: | 09-091-03 | | | | | |
| alpha-BHC | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-BHC | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| beta-BHC | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| delta-BHC | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Aldrin | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor Epoxide | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-Chlordane | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| alpha-Chlordane | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDE | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan I | ND | 5.7 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Dieldrin | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDD | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan II | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDT | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Aldehyde | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Methoxychlor | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endsulfan Sulfate | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Ketone | ND | 11 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Toxaphene | ND | 57 | EPA 8081 | 9-16-09 | 9-22-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *48* | *43-99* | | | | |
| *DCB* | *39* | *44-104* | | | | |

JMW

JMW
10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

0909044

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050744~~ | | | | | |
| Laboratory ID: | 09-091-04 | | | | | |
| alpha-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.1 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 12 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 61 | EPA 8081 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *69* | *43-99* | | | | |
| *DCB* | *61* | *44-104* | | | | |

MW 10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090956

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050756~~ | | | | | |
| Laboratory ID: | 09-091-07 | | | | | |
| alpha-BHC | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-BHC | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| beta-BHC | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| delta-BHC | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Aldrin | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor Epoxide | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-Chlordane | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| alpha-Chlordane | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDE | 45 J | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan I | ND | 7.8 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Dieldrin | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDD | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan II | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDT | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Aldehyde | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Methoxychlor | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endsulfan Sulfate | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Ketone | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Toxaphene | ND | 78 | EPA 8081 | 9-16-09 | 9-22-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *60* | *43-99* | | | | |
| *DCB* | *42* | *44-104* | | | | |

MW

MW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090957

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050757~~ MW | | | | | |
| Laboratory ID: | 09-091-08 | | | | | |
| alpha-BHC | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-BHC | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| beta-BHC | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| delta-BHC | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Aldrin | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Heptachlor Epoxide | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| gamma-Chlordane | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| alpha-Chlordane | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDE | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan I | ND | 8.1 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Dieldrin | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDD | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endosulfan II | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| 4,4'-DDT | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Aldehyde | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Methoxychlor | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endsulfan Sulfate | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Endrin Ketone | ND | 16 | EPA 8081 | 9-16-09 | 9-22-09 | |
| Toxaphene | ND | 81 | EPA 8081 | 9-16-09 | 9-22-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *59* | *43-99* | | | | |
| *DCB* | *40* | *44-104* | | | | |

QMc

MW 10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Lab Traveler: 0909-091
Project: 10HD-09/09/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | 09050758/m 09090958 | | | | | |
| Laboratory ID: | 09-091-09 | | | | | |
| alpha-BHC | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| gamma-BHC | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| beta-BHC | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| delta-BHC | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Heptachlor | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Aldrin | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Heptachlor Epoxide | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| gamma-Chlordane | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| alpha-Chlordane | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| 4,4'-DDE | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endosulfan I | ND | 110 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Dieldrin | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endrin | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| 4,4'-DDD | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endosulfan II | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| 4,4'-DDT | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endrin Aldehyde | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Methoxychlor | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endsulfan Sulfate | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Endrin Ketone | ND | 210 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| Toxaphene | ND | 1100 | EPA 8081 | 9-16-09 | 9-22-09 | U1 |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *50* | *43-99* | | | | |
| *DCB* | *41* | *44-104* | | | | |

MW 10/14/09

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**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 10 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Chlorinated Pesticides (EPA Method 8081A) and Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090920 | 09090921 | 09090924 | 09090925 | 09090928 |
| 09090929 | 09090932 | 09090933 | 09090936 | 09090937 |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 9, 2009, extracted by September 16, 2009, and were analyzed by September 22, 2009, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis.

**2. Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses. All endrin and 4,4'-DDT breakdown results were within QC limits.

**3. Initial and Continuing Calibration: Satisfactory.**

All initial and continuing calibration results were within QC limits on at least one column except the following with low recoveries: alpha-chlordane, dieldrin, endosulfan II, endrin aldehye, and endosulfan sulfate (associated with all samples) and aldrin through endrin ketone (associated with samples 09090929, 09090932, 09090933, 09090936, and 09090937). Associated positive results and sample quantitation limits were qualified as estimated (J or UJ).

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Satisfactory.**

All recoveries of the SMCs were within the established control limits except one low pesticide SMC recovery in a matrix spike sample (no action was taken based on this outlier) and in samples 09090924, 09090928, 09090929, 09090932, and 09090930, and two low recoveries in samples 09090936 and 09090937; associated positive results and samples quantitation limits were qualified as estimated quantities (J or UJ).

**8. Matrix and Blank Spikes: Satisfactory.**

Recoveries of all spiked analytes were within the appropriate control limits except one low matrix spike dieldrin result; associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**9. Duplicates: Satisfactory.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits except the dieldrin matrix spike result; no additional action was taken.

**10. Compound Identification: Satisfactory.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050720~~ 09090920 | | | | | |
| Laboratory ID: | 09-102-01 | | | | | |
| alpha-BHC | ND | 6.3 U | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 6.3 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 6.3 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 6.3 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 6.3 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 6.3 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 6.3 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND MW | 13 J | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | 19 | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 6.3 U | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 13 J | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND MW | 13 J | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | 60 J | 13 | EPA 8081 | 9-15-09 | 9-21-09 | P |
| Endrin Aldehyde | 48 J | 13 | EPA 8081 | 9-15-09 | 9-21-09 | P MW |
| Methoxychlor | ND | 13 U | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 13 J | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND MW | 63 | EPA 8081 | 9-15-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *54* | *43-99* |
| *DCB* | *47* | *44-104* |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

0909092

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050721~~ | | | | | |
| Laboratory ID: | 09-102-02 | | | | | |
| alpha-BHC | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 5.9 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 59 | EPA 8081 | 9-15-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *59* | *43-99* |
| *DCB* | *54* | *44-104* |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090924

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050724~~ | | | | | |
| Laboratory ID: | 09-102-03 | | | | | |
| alpha-BHC | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 6.4 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 64 | EPA 8081 | 9-15-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *48* | *43-99* |
| *DCB* | *43* | *44-104* |

MW 10/4/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050728~~ 09090928 | | | | | |
| Laboratory ID: | 09-102-05 | | | | | |
| alpha-BHC | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 6.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | 24 J | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 12 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 61 | EPA 8081 | 9-15-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *49* | *43-99* |
| *DCB* | *42* | *44-104* |

10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050729~~ 09090929 | | | | | |
| Laboratory ID: | 09-102-06 | | | | | |
| alpha-BHC | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 6.5 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 65 | EPA 8081 | 9-15-09 | 9-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *45* | *43-99* | | | | |
| *DCB* | *38* | *44-104* | | | | |

JMW 10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050732~~ 0909093 2 | | | | | |
| Laboratory ID: | 09-102-07 | | | | | |
| alpha-BHC | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 6.6 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 66 | EPA 8081 | 9-15-09 | 9-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *53* | *43-99* | | | | |
| *DCB* | *39* | *44-104* | | | | |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090933

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050733 (N)~~ | | | | | |
| Laboratory ID: | 09-102-08 | | | | | |
| alpha-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 6.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 68 | EPA 8081 | 9-15-09 | 9-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *59* | *43-99* | | | | |
| *DCB* | *40* | *44-104* | | | | |

TMW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090930

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050736~~ | | | | | |
| Laboratory ID: | 09-102-09 | | | | | |
| alpha-BHC | ND | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | 54 J | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | 24 J | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 7.1 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | 26 J | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 14 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 71 | EPA 8081 | 9-15-09 | 9-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *32* | *43-99* | | | | |
| *DCB* | *37* | *44-104* | | | | |

MW 10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050737~~ 09090937 | | | | | |
| Laboratory ID: | 09-102-10 | | | | | |
| alpha-BHC | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-BHC | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| beta-BHC | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| delta-BHC | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Aldrin | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Heptachlor Epoxide | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| gamma-Chlordane | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| alpha-Chlordane | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDE | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan I | ND | 7.8 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Dieldrin | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDD | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endosulfan II | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| 4,4'-DDT | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Aldehyde | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Methoxychlor | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endsulfan Sulfate | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Endrin Ketone | ND | 16 | EPA 8081 | 9-15-09 | 9-21-09 | |
| Toxaphene | ND | 78 | EPA 8081 | 9-15-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *41* | *43-99* |
| *DCB* | *44* | *44-104* |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050720~~ 09090420 | | | | | |
| Laboratory ID: | 09-102-01 | | | | | |
| Aroclor 1016 | ND | 0.063 U | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.063 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.063 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.28 | 0.063 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ~~ND~~ | 0.063 U | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | 0.78 | 0.063 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | 0.74 | 0.063 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *82* | *33-122* | | | | |
| **Client ID:** | ~~09050721~~ 09090921 | | | | | |
| Laboratory ID: | 09-102-02 | | | | | |
| Aroclor 1016 | ND | 0.059 U | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.059 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.059 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.42 | 0.059 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ~~ND~~ | 0.059 U | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | 0.49 | 0.059 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | 0.18 | 0.059 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *78* | *33-122* | | | | |
| **Client ID:** | ~~09050724~~ 09090924 | | | | | |
| Laboratory ID: | 09-102-03 | | | | | |
| Aroclor 1016 | ND | 0.064 U | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.064 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.064 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.27 | 0.064 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ~~ND~~ | 0.064 U | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | 0.70 | 0.064 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | 0.20 J | 0.064 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *82* | *33-122* | | | | |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09090925 ~~09050725~~ | | | | | |
| Laboratory ID: | 09-102-04 | | | | | |
| Aroclor 1016 | ND | 0.36 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1221 | ND | 0.36 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1232 | ND | 0.36 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1242 | ND | 0.36 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1248 | ND | 0.36 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1254 | 2.3 | 0.36 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1260 | 0.71 | 0.36 | EPA 8082 | 9-16-09 | 9-22-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *105* | *33-122* | | | | |
| **Client ID:** | 09090928 ~~09050728~~ | | | | | |
| Laboratory ID: | 09-102-05 | | | | | |
| Aroclor 1016 | ND | 0.061 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.061 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.061 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.062 | 0.061 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.061 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | 0.18 | 0.061 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | 0.20 | 0.061 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *79* | *33-122* | | | | |
| **Client ID:** | 09090929 ~~09050729~~ | | | | | |
| Laboratory ID: | 09-102-06 | | | | | |
| Aroclor 1016 | ND | 0.065 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1221 | ND | 0.065 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1232 | ND | 0.065 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1242 | ND | 0.065 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1248 | ND | 0.065 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1254 | ND | 0.065 | EPA 8082 | 9-16-09 | 9-22-09 | |
| Aroclor 1260 | ND | 0.065 | EPA 8082 | 9-16-09 | 9-22-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *33-122* | | | | |

MW 10/1/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09090932 ~~09050732~~ | | | | | |
| Laboratory ID: | 09-102-07 | | | | | |
| Aroclor 1016 | ND | 0.066 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.066 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.066 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.075 J | 0.066 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.066 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | 0.16 | 0.066 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | 0.085 | 0.066 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *33-122* | | | | |
| **Client ID:** | 09090933 ~~09050733~~ | | | | | |
| Laboratory ID: | 09-102-08 | | | | | |
| Aroclor 1016 | ND | 0.068 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.068 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.068 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.16 | 0.068 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.068 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | ND | 0.068 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | 0.15 | 0.068 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *84* | *33-122* | | | | |
| **Client ID:** | 09090936 ~~09050736~~ | | | | | |
| Laboratory ID: | 09-102-09 | | | | | |
| Aroclor 1016 | ND | 0.71 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1221 | ND | 0.71 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1232 | ND | 0.71 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1242 | 4.5 | 0.71 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1248 | ND | 0.71 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1254 | ND | 0.71 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1260 | ND | 0.71 | EPA 8082 | 9-16-09 | 9-19-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *100* | *33-122* | | | | |

MW 10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-102
Project: 10ZZ-09/09/09-0004

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

09090937

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050737~~ | | | | | |
| Laboratory ID: | 09-102-10 | | | | | |
| Aroclor 1016 | ND | 0.078 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.078 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.078 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.54 | 0.078 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.078 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | ND | 0.078 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | ND | 0.078 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *93* | *33-122* | | | | |

10-4-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 11 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Chlorinated Pesticides (EPA Method 8081A), Polychlorinated Biphenyls (PCBs - EPA Method 8082), and Toxicity Characteristic Leaching Procedure (TCLP) pesticides (EPA Methods 1311 and 8081) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090907 | 09090908 | 09090909 | 09090912 | 09090913 |
| 09090915 | 09090919 | 09090927 | 09090953 | 09090954 |
| 09090962 | | | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 10, 2009, extracted by September 18, 2009, and were analyzed by September 23, 2009, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis.

2. **Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

3. **Initial and Continuing Calibration: Satisfactory.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column. All continuing calibration % differences (% D) were less than 15% on at least one column and were within QC limits except 4,4'-DDT with a low response on 9-22-09, endrin with a high response on 9-22-09 and 9-25-09 (associated positive results were qualified as estimated quantities [J]), low delta-BHC, aldrin, heptachlor epoxide, gamma-chlordane, alpha-chlordane, 4,4'-DDE, endosulfan I, dieldrin, endrin, 4,4'-DDD, endosulfan II, 4,4'-DDT, endrin aldehyde, methyoxychlor, endosulfan sulfate, and endrin ketone recoveries in the

September 23, 2009 morning calibration, and low heptachlor, aldrin, heptachlor epoxide, gamma-chlordane, alpha-chlordane, 4,4'-DDE, endosulfan I, dieldrin, endrin, endosulfan II, 4,4'-DDT, endrin aldehyde, methyoxychlor, endosulfan sulfate, and endrin ketone recoveries in the September 23, 2009 afternoon calibrations; associated positive results and sample quantitation limits were qualified as estimated [J or UJ] for analytes associated with low calibration outliers.

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Satisfactory.**

All recoveries of the SMCs were within the established control limits except one low pesticide SMC recovery each in samples 09090908, 09090909, and 09090912; associated positive results and samples quantitation limits were qualified as estimated quantities (J or UJ).

**8. Matrix and Blank Spikes: Satisfactory.**

Recoveries of all spiked analytes were within the appropriate control limits except one low dieldrin blank spike result and one low gamma-BHC blank spike result in the TCLP matrix spike analysis of sample 09090907; associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**9. Duplicates: Satisfactory.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits except the dieldrin blank spike duplicate result; no additional action was taken.

**10. Compound Identification: Satisfactory.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan,

the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## TCLP ORGANOCHLORINE PESTICIDES
## EPA 1311/8081A

Matrix: TCLP Extract
Units: ug/L (ppb)

09090907

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 9050707 | | | | | |
| Laboratory ID: | 09-103-01 | | | | | |
| gamma-BHC | ND | 0.050 | EPA 8081 | 9-18-09 | 9-18-09 | |
| Heptachlor | ND | 0.050 | EPA 8081 | 9-18-09 | 9-18-09 | |
| Heptachlor Epoxide | ND | 0.050 | EPA 8081 | 9-18-09 | 9-18-09 | |
| Endrin | ND | 0.050 | EPA 8081 | 9-18-09 | 9-18-09 | |
| Methoxychlor | ND | 0.10 | EPA 8081 | 9-18-09 | 9-18-09 | |
| Toxaphene | ND | 0.50 | EPA 8081 | 9-18-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *63* | *30-112* | | | | |
| *DCB* | *71* | *45-99* | | | | |

MN
10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09090908 ~~09050708~~ MW | | | | | |
| Laboratory ID: | 09-103-02 | | | | | |
| Aroclor 1016 | ND | 6.7 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1221 | ND | 6.7 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1232 | ND MW | 6.7 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1242 | 35 | 6.7 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1248 | ND | 6.7 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1254 | ND | 6.7 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1260 | ND MW | 6.7 | EPA 8082 | 9-16-09 | 09-19-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *87* | *33-122* | | | | |
| **Client ID:** | 09090909 ~~09050709~~ MW | | | | | |
| Laboratory ID: | 09-103-03 | | | | | |
| Aroclor 1016 | ND | 1.4 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1221 | ND | 1.4 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1232 | ND MW | 1.4 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1242 | 18 | 1.4 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1248 | ND | 1.4 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1254 | ND | 1.4 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1260 | ND MW | 1.4 | EPA 8082 | 9-16-09 | 9-19-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *100* | *33-122* | | | | |
| **Client ID:** | 09090912 ~~09050712~~ MW | | | | | |
| Laboratory ID: | 09-103-04 | | | | | |
| Aroclor 1016 | ND | 0.055 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.055 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.055 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | ND | 0.055 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.055 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | ND | 0.055 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | ND MW | 0.055 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *33-122* | | | | |

MW
10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09090913 ~~09050713~~ | | | | | |
| Laboratory ID: | 09-103-05 | | | | | |
| Aroclor 1016 | ND | 0.056 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.056 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.056 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | ND | 0.056 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.056 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | ND | 0.056 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | ND | 0.056 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *62* | *33-122* | | | | |
| **Client ID:** | 09090915 ~~09050715~~ | | | | | |
| Laboratory ID: | 09-103-06 | | | | | |
| Aroclor 1016 | ND | 0.51 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1221 | ND | 0.51 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1232 | ND | 0.51 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1242 | 0.71 | 0.51 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1248 | ~~ND~~ | 0.51 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1254 | 4.1 | 0.51 | EPA 8082 | 9-16-09 | 9-19-09 | |
| Aroclor 1260 | ND | 0.51 | EPA 8082 | 9-16-09 | 9-19-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *110* | *33-122* | | | | |
| **Client ID:** | 09090919 ~~09050719~~ | | | | | |
| Laboratory ID: | 09-103-08 | | | | | |
| Aroclor 1016 | ND | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.30 | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ~~ND~~ | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | 0.84 | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | 0.45 | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *101* | *33-122* | | | | |

MW
10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09090927 ~~09050727~~ | | | | | |
| Laboratory ID: | 09-103-09 | | | | | |
| Aroclor 1016 | ND | 5.2 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1221 | ND | 5.2 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1232 | ND | 5.2 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1242 | 10 | 5.2 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1248 | ND | 5.2 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1254 | 41 | 5.2 | EPA 8082 | 9-16-09 | 09-19-09 | |
| Aroclor 1260 | ND | 5.2 | EPA 8082 | 9-16-09 | 09-19-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *87* | *33-122* | | | | |
| **Client ID:** | 09090953 ~~09050753~~ | | | | | |
| Laboratory ID: | 09-103-10 | | | | | |
| Aroclor 1016 | ND | 0.058 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.058 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.058 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | ND | 0.058 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.058 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | ND | 0.058 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | ND | 0.058 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *67* | *33-122* | | | | |
| **Client ID:** | 09090954 ~~09050754~~ | | | | | |
| Laboratory ID: | 09-103-11 | | | | | |
| Aroclor 1016 | ND | 0.56 | EPA 8082 | 9-16-09 | 9-17-09 | U1 |
| Aroclor 1221 | ND | 0.56 | EPA 8082 | 9-16-09 | 9-17-09 | U1 |
| Aroclor 1232 | ND | 0.56 | EPA 8082 | 9-16-09 | 9-17-09 | U1 |
| Aroclor 1242 | ND | 0.56 | EPA 8082 | 9-16-09 | 9-17-09 | U1 |
| Aroclor 1248 | ND | 0.56 | EPA 8082 | 9-16-09 | 9-17-09 | U1 |
| Aroclor 1254 | ND | 0.56 | EPA 8082 | 9-16-09 | 9-17-09 | U1 |
| Aroclor 1260 | ND | 0.56 | EPA 8082 | 9-16-09 | 9-17-09 | U1 |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *95* | *33-122* | | | | |

MW 10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050762~~ 09090962 | | | | | |
| Laboratory ID: | 09-103-12 | | | | | |
| Aroclor 1016 | ND | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1242 | 0.14 | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1248 | ~~ND~~ | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1254 | 1.5 | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| Aroclor 1260 | ~~ND~~ | 0.052 | EPA 8082 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *94* | *33-122* | | | | |

MW
10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050708~~ 09090908 | | | | | |
| Laboratory ID: | 09-103-02 | | | | | |
| alpha-BHC | ~~ND~~ | 6.7 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-BHC | 110 J | 6.7 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| beta-BHC | 280 J | 6.7 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| delta-BHC | ND | 6.7 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor | ND | 6.7 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Aldrin | ND | 6.7 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 6.7 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-Chlordane | ~~ND~~ | 13 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| alpha-Chlordane | 44 J | 13 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| 4,4'-DDE | 160 J | 13 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Endosulfan I | ~~ND~~ | 6.7 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| Dieldrin | 100 J | 13 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin | ~~ND~~ | 13 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDD | 84 J | 13 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan II | ND | 13 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDT | ~~ND~~ | 13 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Aldehyde | 140 J | 13 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Methoxychlor | 86 J | 13 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Endsulfan Sulfate | ~~ND~~ | 13 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Ketone | 30 J | 13 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Toxaphene | ~~ND~~ | 67 UJ | EPA 8081 | 9-15-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *52* | *43-99* |
| *DCB* | *43* | *44-104* |

JMW
10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050709~~ 09090909 | | | | | |
| Laboratory ID: | 09-103-03 | | | | | |
| alpha-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| gamma-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| beta-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| delta-BHC | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Heptachlor | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Aldrin | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Heptachlor Epoxide | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| gamma-Chlordane | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| alpha-Chlordane | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| 4,4'-DDE | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endosulfan I | ND | 6.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Dieldrin | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endrin | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| 4,4'-DDD | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endosulfan II | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| 4,4'-DDT | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endrin Aldehyde | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Methoxychlor | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endsulfan Sulfate | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endrin Ketone | ND | 14 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Toxaphene | ND | 68 | EPA 8081 | 9-15-09 | 9-22-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *47* | *43-99* |
| *DCB* | *43* | *44-104* |

MW
10/1/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050712~~ 09090912 | | | | | |
| Laboratory ID: | 09-103-04 | | | | | |
| alpha-BHC | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-BHC | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| beta-BHC | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| delta-BHC | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Aldrin | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-Chlordane | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| alpha-Chlordane | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDE | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan I | ND | 5.5 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Dieldrin | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDD | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan II | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDT | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Aldehyde | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Methoxychlor | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Ketone | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Toxaphene | ND | 55 | EPA 8081 | 9-15-09 | 9-23-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *60* | *43-99* | | | | |
| *DCB* | *42* | *44-104* | | | | QTW |

MK
10/4/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050713~~ 09090913 | | | | | |
| Laboratory ID: | 09-103-05 | | | | | |
| alpha-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| beta-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| delta-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Aldrin | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-Chlordane | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| alpha-Chlordane | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDE | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan I | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Dieldrin | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDD | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan II | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDT | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Aldehyde | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Methoxychlor | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Ketone | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Toxaphene | ND | 56 | EPA 8081 | 9-15-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *65* | *43-99* |
| *DCB* | *45* | *44-104* |

10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~0905071~~ 09090915 | | | | | |
| Laboratory ID: | 09-103-06 | | | | | |
| alpha-BHC | ND | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-BHC | ND | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| beta-BHC | 9.6 | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| delta-BHC | ND | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor | ND | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Aldrin | ND | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-Chlordane | 26 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| alpha-Chlordane | ~~ND~~ | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDE | 52 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan I | ~~ND~~ | 5.1 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Dieldrin | 51 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Endrin | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDD | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan II | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDT | 72 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Endrin Aldehyde | 68 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Methoxychlor | 26 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Ketone | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Toxaphene | ND | 51 | EPA 8081 | 9-15-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *72* | *43-99* |
| *DCB* | *48* | *44-104* |

10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050719~~ 09090919 | | | | | |
| Laboratory ID: | 09-103-08 | | | | | |
| alpha-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| beta-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| delta-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Aldrin | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-Chlordane | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| alpha-Chlordane | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDE | 77 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan I | ~~ND~~ | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Dieldrin | 22 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Endrin | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDD | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan II | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDT | 89 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Aldehyde | 77 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | P |
| Methoxychlor | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Ketone | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Toxaphene | ND | 52 | EPA 8081 | 9-15-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *52* | *43-99* |
| *DCB* | *49* | *44-104* |

10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09060752~~ 09090953 MW | | | | | |
| Laboratory ID: | 09-103-10 | | | | | |
| alpha-BHC | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| gamma-BHC | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| beta-BHC | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| delta-BHC | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Heptachlor | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Aldrin | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Heptachlor Epoxide | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| gamma-Chlordane | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| alpha-Chlordane | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| 4,4'-DDE | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endosulfan I | ND | 5.8 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Dieldrin | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endrin | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| 4,4'-DDD | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endosulfan II | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| 4,4'-DDT | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endrin Aldehyde | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Methoxychlor | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endsulfan Sulfate | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Endrin Ketone | ND | 12 | EPA 8081 | 9-15-09 | 9-22-09 | |
| Toxaphene | ND | 58 | EPA 8081 | 9-15-09 | 9-22-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *66* | *43-99* |
| *DCB* | *48* | *44-104* |

MW
10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050754~~ 09090954 MW | | | | | |
| Laboratory ID: | 09-103-11 | | | | | |
| alpha-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| beta-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| delta-BHC | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Aldrin | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-Chlordane | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| alpha-Chlordane | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDE | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan I | ND | 5.6 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Dieldrin | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDD | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan II | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDT | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Aldehyde | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Methoxychlor | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Ketone | ND | 11 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Toxaphene | ND | 56 | EPA 8081 | 9-15-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *62* | *43-99* |
| *DCB* | *50* | *44-104* |

MW
10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090962

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050762~~ | | | | | |
| Laboratory ID: | 09-103-12 | | | | | |
| alpha-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| beta-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| delta-BHC | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Aldrin | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| gamma-Chlordane | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| alpha-Chlordane | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDE | 19 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan I | ND | 5.2 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Dieldrin | 29 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDD | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endosulfan II | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| 4,4'-DDT | 58 | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Aldehyde | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Methoxychlor | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Endrin Ketone | ND | 10 | EPA 8081 | 9-15-09 | 9-23-09 | |
| Toxaphene | ND | 52 | EPA 8081 | 9-15-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *69* | *43-99* |
| *DCB* | *48* | *44-104* |

**ecology and environment, inc.**
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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 8 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Chlorinated Pesticides (EPA Method 8081A) and Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090902 | 09090903 | 09090916 | 09090917 | 09090959 |
| 09090960 | 09090961 | 07090963 | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 10, 2009, extracted by September 17, 2009, and were analyzed by September 23, 2009, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis.

2. **Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

3. **Initial and Continuing Calibration: Satisfactory.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column. All continuing calibration % differences (% D) were less than 15% and were within QC limits except endosulfan I in the September 17, 2009 calibration and delta-BHC, aldrin, heptachlor epoxide, gamma-chlordane, alpha-chlordane, 4,4'-DDE, endosulfan I, dieldrin, endrin, 4,4'-DDD, endosulfan II, 4,4'-DDT, endrin aldehyde, methyoxychlor, endosulfan sulfate, and endrin ketone in the September 23, 2009 calibration, all with low recoveries. Associated positive results and sample quantitation limits were qualified as estimated [J or UJ]).

4. **Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

**8. Matrix Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

**9. Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**10. Compound Identification: Satisfactory.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | 09090902 ~~9050702~~ | | | | | |
| Laboratory ID: | 09-127-01 | | | | | |
| Aroclor 1016 | ND | 0.068 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.068 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.068 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.068 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.068 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.068 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.068 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *87* | *33-122* | | | | |
| **Client ID:** | 09090903 ~~9050703~~ | | | | | |
| Laboratory ID: | 09-127-02 | | | | | |
| Aroclor 1016 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *78* | *33-122* | | | | |
| **Client ID:** | 09090916 ~~9050716~~ | | | | | |
| Laboratory ID: | 09-127-03 | | | | | |
| Aroclor 1016 | ND | 0.061 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.061 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.061 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.061 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.061 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.061 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | 0.11 | 0.061 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *82* | *33-122* | | | | |

MW 10-16-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050717~~ 09090917 | | | | | |
| Laboratory ID: | 09-127-04 | | | | | |
| Aroclor 1016 | ND | 0.056 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.056 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.056 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.056 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.056 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.056 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.056 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *89* | *33-122* | | | | |
| **Client ID:** | ~~9050759~~ 09090959 | | | | | |
| Laboratory ID: | 09-127-05 | | | | | |
| Aroclor 1016 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *106* | *33-122* | | | | |
| **Client ID:** | ~~9050760~~ 09090960 | | | | | |
| Laboratory ID: | 09-127-06 | | | | | |
| Aroclor 1016 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *88* | *33-122* | | | | |

JMW 10-16-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050761~~ 09090961 | | | | | |
| Laboratory ID: | 09-127-07 | | | | | |
| Aroclor 1016 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.066 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *102* | *33-122* | | | | |
| **Client ID:** | ~~9050763~~ 09090963 | | | | | |
| Laboratory ID: | 09-127-08 | | | | | |
| Aroclor 1016 | ND | 0.063 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.063 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.063 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.063 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.063 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.063 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.063 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *98* | *33-122* | | | | |

10-1-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050702~~ 09090902 | | | | | |
| Laboratory ID: | 09-127-01 | | | | | |
| alpha-BHC | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.8 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 14 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 68 | EPA 8081 | 9-16-09 | 9-17-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *46* | *43-99* |
| *DCB* | *66* | *44-104* |

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050703~~ 0909090 MW | | | | | |
| Laboratory ID: | 09-127-02 | | | | | |
| alpha-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.5 J | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND MW | 65 | EPA 8081 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *49* | *43-99* | | | | |
| *DCB* | *59* | *44-104* | | | | |

MW 10-6-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050716~~ 09090816 | | | | | |
| Laboratory ID: | 09-127-03 | | | | | |
| alpha-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| gamma-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| beta-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| delta-BHC | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Heptachlor | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Aldrin | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| gamma-Chlordane | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| alpha-Chlordane | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDE | 31 | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endosulfan I | ND | 6.1 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Dieldrin | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDD | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endosulfan II | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDT | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin Aldehyde | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Methoxychlor | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin Ketone | ND | 12 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Toxaphene | ND | 61 | EPA 8081 | 9-16-09 | 9-23-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *58* | *43-99* | | | | |
| *DCB* | *51* | *44-104* | | | | |

MW 10-1-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | 090909A ~~09050717~~ | | | | | |
| Laboratory ID: | 09-127-04 | | | | | |
| alpha-BHC | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | 29 | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 5.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 11 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 56 | EPA 8081 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *68* | *43-99* | | | | |
| *DCB* | *62* | *44-104* | | | | |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050759~~ 09090959 | | | | | |
| Laboratory ID: | 09-127-05 | | | | | |
| alpha-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 66 | EPA 8081 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *58* | *43-99* | | | | |
| *DCB* | *60* | *44-104* | | | | |

JMW 10-16-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050760~~ 09090960 | | | | | |
| Laboratory ID: | 09-127-06 | | | | | |
| alpha-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 66 | EPA 8081 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *67* | *43-99* | | | | |
| *DCB* | *65* | *44-104* | | | | |

MW 10-16-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

09090861

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050767~~ MW | | | | | |
| Laboratory ID: | 09-127-07 | | | | | |
| alpha-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.6 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND MW | 66 | EPA 8081 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *64* | *43-99* | | | | |
| *DCB* | *60* | *44-104* | | | | |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-127
Project: 10HD-09/10/09-0007

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050763~~ 09090963 | | | | | |
| Laboratory ID: | 09-127-08 | | | | | |
| alpha-BHC | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.3 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 63 | EPA 8081 | 9-16-09 | 9-17-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *59* | *43-99* |
| *DCB* | *54* | *44-104* |

MW
10/6/09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 2 soil and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Chlorinated Pesticides (EPA Method 8081A) and Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | |
|---|---|---|
| Soil | 09090901 | 09090904 |
| Water | 09090951 | 09090952 |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

**1. Sample Holding Times: Satisfactory.**

The samples were received above the QC limits of 4°C ± 2°C; associated sample results were qualified as estimated quantities (J or UJ). The samples were collected on September 10, 2009, extracted by September 17, 2009, and were analyzed by September 23, 2009, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis.

**2. Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

**3. Initial and Continuing Calibration: Satisfactory.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column. All continuing calibration % differences (% D) were less than 15% and were within QC limits except endosulfan I with a low recovery in the September 17, 2009 calibration, endrin and delta-BHC with high recoveries in the September 23, 2009 calibration, and delta-BHC, aldrin, heptachlor epoxide, gamma-chlordane, alpha-chlordane, 4,4'-DDE, endosulfan I, dieldrin, endrin, 4,4'-DDD, endosulfan II, 4,4'-DDT, endrin aldehyde, methyoxychlor, endosulfan sulfate, and endrin ketone in the other September 23, 2009

calibration, all with low recoveries. Associated positive results and sample quantitation limits were qualified as estimated [J or UJ]).

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Satisfactory.**

All recoveries of the SMCs were within the established control limits except one low pesticide and one low PCB SMC recovery each in sample 09090952; associated positive results and samples quantitation limits were qualified as estimated quantities (J or UJ).

**8. Matrix Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

**9. Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**10. Compound Identification: Satisfactory.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-128
Project: 10HD-09/10/09-0006

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050701~~ 0909090 | | | | | |
| Laboratory ID: | 09-128-01 | | | | | |
| Aroclor 1016 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.065 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *117* | *33-122* | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050704~~ 0909090 | | | | | |
| Laboratory ID: | 09-128-02 | | | | | |
| Aroclor 1016 | ND | 0.052 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1221 | ND | 0.052 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1232 | ND | 0.052 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1242 | ND | 0.052 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1248 | ND | 0.052 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1254 | ND | 0.052 | EPA 8082 | 9-17-09 | 9-18-09 | |
| Aroclor 1260 | ND | 0.052 | EPA 8082 | 9-17-09 | 9-18-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *121* | *33-122* | | | | |

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-128
Project: 10HD-09/10/09-0006

## PCBs by EPA 8082

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050751~~ 09090951 | | | | | |
| Laboratory ID: | 09-128-03 | | | | | |
| Aroclor 1016 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1242 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1254 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1260 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *92* | *39-128* | | | | |
| **Client ID:** | ~~9050752~~ 09090952 | | | | | |
| Laboratory ID: | 09-128-04 | | | | | |
| Aroclor 1016 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1221 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1232 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1242 | 0.38 J | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1248 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1254 | 0.14 J | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| Aroclor 1260 | ND | 0.10 | EPA 8082 | 9-17-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *14* | *39-128* | | | | |

10/6/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-128
Project: 10HD-09/10/09-0006

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050701~~ 0909090 | | | | | |
| Laboratory ID: | 09-128-01 | | | | | |
| alpha-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 6.5 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 13 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 65 | EPA 8081 | 9-16-09 | 9-17-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *60* | *43-99* |
| *DCB* | *55* | *44-104* |

MW. 10-16-09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-128
Project: 10HD-09/10/09-0006

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Soil
Units: ug/Kg (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050704~~ 0909090 | | | | | |
| Laboratory ID: | 09-128-02 | | | | | |
| alpha-BHC | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| gamma-BHC | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| beta-BHC | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| delta-BHC | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Heptachlor | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Aldrin | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Heptachlor Epoxide | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| gamma-Chlordane | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| alpha-Chlordane | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDE | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endosulfan I | ND | 5.2 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Dieldrin | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDD | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endosulfan II | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDT | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin Aldehyde | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Methoxychlor | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endsulfan Sulfate | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin Ketone | ND | 10 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Toxaphene | ND | 52 | EPA 8081 | 9-16-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *70* | *43-99* |
| *DCB* | *59* | *44-104* |

MW 10-1-09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-128
Project: 10HD-09/10/09-0006

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050757~~ 09090951 | | | | | |
| Laboratory ID: | 09-128-03 | | | | | |
| alpha-BHC | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-BHC | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| beta-BHC | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| delta-BHC | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Aldrin | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Heptachlor Epoxide | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| gamma-Chlordane | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| alpha-Chlordane | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDE | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan I | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Dieldrin | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDD | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endosulfan II | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| 4,4'-DDT | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Aldehyde | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Methoxychlor | ND | 0.010 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endsulfan Sulfate | ND | 0.0052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Endrin Ketone | ND | 0.021 | EPA 8081 | 9-16-09 | 9-17-09 | |
| Toxaphene | ND | 0.052 | EPA 8081 | 9-16-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *68* | *30-93* | | | | |
| *DCB* | *66* | *40-107* | | | | |

MW 10/6/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Lab Traveler: 0909-128
Project: 10HD-09/10/09-0006

## ORGANOCHLORINE PESTICIDES by EPA 8081A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050752~~ 09090952 | | | | | |
| Laboratory ID: | 09-128-04 | | | | | |
| alpha-BHC | ND | 0.0049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| gamma-BHC | ND | 0.0049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| beta-BHC | 0.019 J | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | P |
| delta-BHC | 0.026 J | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | P |
| Heptachlor | ND | 0.0049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| Aldrin | 0.019 J | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | P |
| Heptachlor Epoxide | ND | 0.0049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| gamma-Chlordane | 0.016 J | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | P |
| alpha-Chlordane | ND | 0.0049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDE | 0.0071 J | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endosulfan I | ND | 0.0049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| Dieldrin | 0.0063 J | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin | ND | 0.0049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDD | ND | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endosulfan II | ND | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | |
| 4,4'-DDT | ND | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endrin Aldehyde | ND | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Methoxychlor | 0.019 J | 0.0098 | EPA 8081 | 9-16-09 | 9-23-09 | |
| Endsulfan Sulfate | 0.015 J | 0.0049 | EPA 8081 | 9-16-09 | 9-23-09 | P |
| Endrin Ketone | ND | 0.020 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |
| Toxaphene | ND | 0.049 UJ | EPA 8081 | 9-16-09 | 9-23-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *TCMX* | *71* | *30-93* |
| *DCB* | *12* | *40-107* |

10/6/09

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**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 7 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington. The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090941 | 09090942 | 09090943 | 09090944 | 09090956 |
| 09090957 | 09090958 | | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 9, 2009, extracted by September 15, 2009, and analyzed by September 15, 2009, therefore meeting QC criteria of less than 14 days between collection and extraction for soil samples and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. **System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria except when diluted out due to high analyte concentrations in the sample.

7. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

8. **Duplicates: Acceptable.**

Duplicate results were acceptable.

9. **Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

10. **Laboratory Contact: Not Required.**

No laboratory contact was required.

11. **Overall Assessment of Data for Use**

Diesel range organics in samples 09090941, 09090943 and 09090958 interfered with the lube oil results; the lube oil results in these samples were qualified as estimated quantities (J).

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 9-11-09 |
| Date Analyzed: | 9-11&14-09 |

| | |
|---|---|
| Matrix: | Soil |
| Units: | mg/kg (ppm) |

| | | | |
|---|---|---|---|
| | 09090941 | 09090942 | 09090943 |
| **Client ID:** | ~~9050741~~ | ~~9050742~~ | ~~9050743~~ MM |
| Lab ID: | 09-091-01 | 09-091-02 | 09-091-03 |
| Diesel Range: | **49000** | ~~ND~~ | **230** |
| PQL: | 620 | 30 U | 29 |
| Identification: | Diesel Range Organics | --- | Diesel Range Organics |
| Lube Oil Range: | **47000** J | **60** | **160** J |
| PQL: | 1200 | 60 | 57 |
| Identification: | Lube Oil | Lube Oil | Lube Oil |
| Surrogate Recovery | | | |
| o-Terphenyl: | --- | 62% | 58% |
| Flags: | ~~Y,N1,S~~ | Y | Y,N1 MM |

MM 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## NWTPH-Dx

Date Extracted: 9-11&15-09
Date Analyzed: 9-11,14&15-09

Matrix: Soil
Units: mg/kg (ppm)

| | | | |
|---|---|---|---|
| | 09090944 | 09090956 | 09090957 |
| **Client ID:** | ~~9050744~~ | ~~9050756~~ | ~~9050757~~ |
| Lab ID: | 09-091-04 | 09-091-07 | 09-091-08 |
| Diesel Range: | ~~ND~~ | ~~ND~~ | ~~ND~~ |
| PQL: | 31 U | 39 U | 40 U |
| Identification: | --- | --- | --- |
| Lube Oil Range: | ~~ND~~ | **210** | **110** |
| PQL: | 61 U | 78 | 81 |
| Identification: | --- | Lube Oil | Lube Oil |
| Surrogate Recovery | | | |
| o-Terphenyl: | 73% | 65% | 65% |
| Flags: | ~~Y~~ | ~~Y~~ | ~~Y~~ |

MW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 9-11-09 |
| Date Analyzed: | 9-14-09 |
| Matrix: | Soil |
| Units: | mg/kg (ppm) |
| **Client ID:** | 09090958 ~~9050758~~ MW |
| Lab ID: | 09-091-09 |
| Diesel Range: | **20000** |
| PQL: | 1300 |
| Identification: | Diesel Range Organics |
| Lube Oil Range: | **24000** J |
| PQL: | 2700 |
| Identification: | Lube Oil |
| Surrogate Recovery | |
| o-Terphenyl: | --- |
| Flags: | ~~Y,N1,S~~ MW |

MW 10/14/09

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**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 6 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington. The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090924 | 09090925 | 09090932 | 09090933 | 09090936 |
| 09090937 | | | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 9, 2009, extracted by September 14, 2009, and analyzed by September 15, 2009, therefore meeting QC criteria of less than 14 days between collection and extraction for soil samples and less than 40 days between extraction and analysis.

**2. Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

**3. Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were ≤ the laboratory control limits of 15%.

**4. Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. **System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria except when diluted out due to high analyte concentrations in the sample.

7. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

8. **Blank Spikes: Acceptable.**

Blank spike results were within QC limits.

9. **Duplicates: Acceptable.**

Duplicate results were acceptable.

10. **Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

11. **Laboratory Contact: Not Required.**

No laboratory contact was required.

12. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 9-14-09 |
| Date Analyzed: | 9-14&15-09 |

| | |
|---|---|
| Matrix: | Soil |
| Units: | mg/kg (ppm) |

| | | | |
|---|---|---|---|
| | 09090924 | 09090925 | 09090932 |
| **Client ID:** | ~~9050724~~ | ~~9050725~~ | ~~9050732~~ MU |
| Lab ID: | 09-102-03 | 09-102-04 | 09-102-07 |
| Diesel Range: | ~~ND~~ MU | ~~ND~~ MU | ~~ND~~ MU |
| PQL: | 130 U | 570 U | 2200 U |
| Identification: | --- | --- | --- |
| Lube Oil Range: | **1400** | **3400** | **35000** |
| PQL: | 64 | 72 | 1300 |
| Identification: | Lube Oil | Lube Oil | Lube Oil |
| Surrogate Recovery | | | |
| o-Terphenyl: | 91% | 95% | --- |
| Flags: | ~~Y,U1~~ | Y,U1 | ~~Y,U1,S~~ MU |

MW 10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 9-14-09 |
| Date Analyzed: | 9-15-09 |

| | |
|---|---|
| Matrix: | Soil |
| Units: | mg/kg (ppm) |

| | | | |
|---|---|---|---|
| **Client ID:** | 09090933 ~~9050733~~ | 09090936 ~~9050736~~ | 09090937 ~~9050737~~ |
| Lab ID: | 09-102-08 | 09-102-09 | 09-102-10 |
| Diesel Range: | ~~ND~~ U | **27000** | **2600** |
| PQL: | 2200 | 710 | 200 |
| Identification: | --- | Diesel Range Organics | Diesel Range Organics |
| Lube Oil Range: | **29000** | **46000** | **4400** |
| PQL: | 1400 | 1400 | 390 |
| Identification: | Lube Oil | Lube Oil | Lube Oil |
| Surrogate Recovery | | | |
| o-Terphenyl: | --- | --- | 93% |
| Flags: | ~~Y,U1,S~~ | Y,S | ~~Y~~ |

MW 10-14-09

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**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 7 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington. The samples were numbered:

| | | | |
|---|---|---|---|
| 09090912 | 09090913 | 09090915 | 09090927 |
| 09090953 | 09090954 | 09090962 | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 10, 2009, extracted by September 15, 2009, and analyzed by September 15, 2009, therefore meeting QC criteria of less than 14 days between collection and extraction for soil samples and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

**6. System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria except when diluted out due to high analyte concentrations in the sample.

**7. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**8. Duplicates: Acceptable.**

Duplicate results were acceptable.

**9. Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

**10. Laboratory Contact: Not Required.**

No laboratory contact was required.

**11. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**NWTPH-Dx**

Date Extracted: 9-14-09
Date Analyzed: 9-14&15-09

Matrix: Soil
Units: mg/kg (ppm)

| | | | |
|---|---|---|---|
| | 09090912 | 09090913 | 09090915 |
| **Client ID:** | ~~9050712~~ | ~~9050713~~ | ~~9050715~~ |
| Lab ID: | 09-103-04 | 09-103-05 | 09-103-06 |
| Diesel Range: | ~~ND~~ | ND | ~~ND~~ |
| PQL: | 28 U | 28 U | 93 U |
| Identification: | --- | --- | --- |
| Lube Oil Range: | ~~ND~~ | ~~ND~~ | **700** |
| PQL: | 55 U | 56 U | 51 |
| Identification: | --- | --- | Lube Oil |
| Surrogate Recovery | | | |
| o-Terphenyl: | 71% | 79% | 90% |
| Flags: | ~~Y~~ | ~~Y~~ | ~~Y,UT~~ |

MW 10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## NWTPH-Dx

| | |
|---|---|
| Date Extracted: | 9-14-09 |
| Date Analyzed: | 9-14&15-09 |

| | |
|---|---|
| Matrix: | Soil |
| Units: | mg/kg (ppm) |

| | | | |
|---|---|---|---|
| | 09090927 | 09090953 | 09090954 |
| **Client ID:** | ~~9050727~~ | ~~9050753~~ | ~~9050754~~ |
| Lab ID: | 09-103-09 | 09-103-10 | 09-103-11 |
| Diesel Range: | ~~ND~~ | ~~ND~~ | ~~33~~ |
| PQL: | 11000 U | 29 U | 28 |
| Identification: | --- | --- | Diesel Range Organics |
| Lube Oil Range: | 100000 | ~~ND~~ | 140 |
| PQL: | 2600 | 58 U | 56 |
| Identification: | Lube Oil | --- | Lube Oil |
| Surrogate Recovery | | | |
| o-Terphenyl: | --- | 64% | 94% |
| Flags: | ~~Y,U1,S~~ | Y | ~~Y~~ |

MW 01/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 9-14-09 |
| Date Analyzed: | 9-14-09 |
| Matrix: | Soil |
| Units: | mg/kg (ppm) |
| **Client ID:** | ~~9950762~~ 0909062 |
| Lab ID: | 09-103-12 |
| Diesel Range: | ~~ND~~ |
| PQL: | 46 U |
| Identification: | --- |
| Lube Oil Range: | **440** |
| PQL: | 52 |
| Identification: | Lube Oil |
| Surrogate Recovery | |
| o-Terphenyl: | 74% |
| Flags: | ~~Y,U1~~ |

MW 10/14/09

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**MEMORANDUM**

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 8 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington. The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090902 | 09090903 | 09090916 | 09090917 | 09090959 |
| 09090960 | 09090961 | 07090963 | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on September 10, 2009, extracted by September 17, 2009, and analyzed by September 17, 2009, therefore meeting QC criteria of less than 14 days between collection and extraction for soil samples and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. **System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria except when diluted out due to high analyte concentrations in the sample.

7. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

8. **Matrix and Blank Spikes: Acceptable.**

Applicable matrix and blank spike results were within QC limits.

9. **Duplicates: Acceptable.**

Duplicate results were acceptable.

10. **Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

11. **Laboratory Contact: Not Required.**

No laboratory contact was required.

12. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## NWTPH-Dx

Date Extracted: 9-17-09
Date Analyzed: 9-17-09

Matrix: Soil
Units: mg/kg (ppm)

| | | | |
|---|---|---|---|
| | 09090902 | 09090903 | 09090916 |
| **Client ID:** | ~~9050702~~ | ~~9050703~~ | ~~9050716~~ |
| Lab ID: | 09-127-01 | 09-127-02 | 09-127-03 |
| Diesel Range: | ~~ND~~ | ~~ND~~ | ~~ND~~ |
| PQL: | 34 U | 33 U | 31 U |
| Identification: | --- | --- | --- |
| Lube Oil Range: | ~~ND~~ | ~~ND~~ | 91 |
| PQL: | 68 U | 65 U | 61 |
| Identification: | --- | --- | Lube Oil |
| Surrogate Recovery | | | |
| o-Terphenyl: | 95% | 87% | 87% |
| Flags: | ~~Y~~ | ~~Y~~ | ~~Y~~ |

10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 9-17-09 |
| Date Analyzed: | 9-17-09 |

| | |
|---|---|
| Matrix: | Soil |
| Units: | mg/kg (ppm) |

| | | | |
|---|---|---|---|
| | 09090917 | 09090959 | 09090960 |
| **Client ID:** | ~~9050717~~ | ~~9050759~~ | ~~9050760~~ MW |
| Lab ID: | 09-127-04 | 09-127-05 | 09-127-06 |
| Diesel Range: | ~~ND~~ | ~~ND~~ | ~~ND~~ MW |
| PQL: | 28 U | 33 U | 33 U |
| Identification: | --- | --- | --- |
| Lube Oil Range: | 62 | ~~ND~~ | ~~ND~~ MW |
| PQL: | 56 | 66 U | 66 U |
| Identification: | Lube Oil | --- | --- |
| Surrogate Recovery | | | |
| o-Terphenyl: | 90% | 73% | 82% |
| Flags: | ~~Y~~ | ~~Y~~ | ~~Y~~ MW |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 9-17-09 |
| Date Analyzed: | 9-17-09 |

| | |
|---|---|
| Matrix: | Soil |
| Units: | mg/kg (ppm) |

| | | |
|---|---|---|
| | 09098761 | 09098763 |
| **Client ID:** | ~~9050761~~ | ~~9050763~~ MW |
| Lab ID: | 09-127-07 | 09-127-08 |
| Diesel Range: | ~~ND~~ | ~~ND~~ MW |
| PQL: | 33 U | 31 U |
| Identification: | --- | --- |
| Lube Oil Range: | ~~ND~~ | ~~ND~~ MW |
| PQL: | 66 U | 63 U |
| Identification: | --- | --- |
| Surrogate Recovery | | |
| o-Terpheny!: | 86% | 77% |
| Flags: | Y | Y |

MW 10/16/09

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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 2 soil and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington. The samples were numbered:

| | | |
|---|---|---|
| Soil | 09090901 | 09090904 |
| Water | 09090951 | 09090952 |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

**1. Sample Holding Times: Satisfactory.**

The samples were received above the QC limits of $4^{o}C \pm 2^{o}C$; associated sample results were qualified as estimated quantities (J or UJ). The samples were collected on September 10, 2009, extracted by September 17, 2009, and analyzed by September 18, 2009, therefore meeting QC criteria of less than 7 days between collection and extraction (14 days for soil samples) and less than 40 days between extraction and analysis.

**2. Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

**3. Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were $\leq$ the laboratory control limits of 15%.

**4. Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

**6. System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria except when diluted out due to high analyte concentrations in the sample.

**7. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**8. Matrix and Blank Spikes: Acceptable.**

Applicable matrix and blank spike results were within QC limits.

**9. Duplicates: Acceptable.**

Duplicate results were acceptable.

**10. Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

**11. Laboratory Contact: Not Required.**

No laboratory contact was required.

**12. Overall Assessment of Data for Use**

Lube oil results were impacting the diesel range result in sample 09090952, therefore the diesel range result was qualified as an estimated quantity (J).

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## NWTPH-Dx

| | |
|---|---|
| Date Extracted: | 9-17-09 |
| Date Analyzed: | 9-17-09 |

| | |
|---|---|
| Matrix: | Soil |
| Units: | mg/kg (ppm) |

| | | |
|---|---|---|
| | 09090901 | 09090904 |
| **Client ID:** | ~~9050701~~ | ~~9050704~~ |
| Lab ID: | 09-128-01 | 09-128-02 |
| Diesel Range: | ~~ND~~ | ~~ND~~ |
| PQL: | 33 UJ | 26 UJ |
| Identification: | --- | --- |
| Lube Oil Range: | ~~ND~~ | ~~ND~~ |
| PQL: | 65 UJ | 52 UJ |
| Identification: | --- | --- |
| Surrogate Recovery | | |
| o-Terphenyl: | 75% | 80% |
| Flags: | ~~Y~~ | ~~Y~~ |

MW 10/8/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## NWTPH-Dx

| | | |
|---|---|---|
| Date Extracted: | 8-17-09 | |
| Date Analyzed: | 8-17&18-09 | |
| Matrix: | Water | |
| Units: | mg/L (ppm) | |
| | 09090951 | 09090952 |
| **Client ID:** | ~~9050751~~ | ~~9050752~~ MW |
| Lab ID: | 09-128-03 | 09-128-04 |
| Diesel Range: | ~~<ND~~ MW | 2.9 J |
| PQL: | 0.27 UJ | 0.52 |
| Identification: | --- | Diesel Range Organics |
| Lube Oil Range: | ~~ND~~ MW | 8.1 J |
| PQL: | 0.43 UJ | 0.83 |
| Identification: | --- | Lube Oil |
| Surrogate Recovery | | |
| o-Terphenyl: | 86% | 67% |
| Flags: | ~~Y~~ | ~~Y,N~~ MW |

MW 10/6/09

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**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 7 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090941 | 09090942 | 09090943 | 09090944 | 09090956 |
| 09090957 | 09090958 | | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of 4°C ± 2°C. The samples were collected on September 9, 2009, were extracted by September 15, 2009, and were analyzed by September 16, 2009, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol in both initial calibrations; associated positive results were qualified as estimated quantities (J).

4. **Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol in the 9-15-09 calibration, all with

decreasing response factors. Associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)/Blank Spike (BS) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

0909091

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050741~~ | | | | | |
| Laboratory ID: | 09-091-01 | | | | | |
| N-Nitrosodimethylamine | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Pyridine | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Phenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Aniline | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis(2-Chloroethyl)ether | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Chlorophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,3-Dichlorobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,4-Dichlorobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Benzyl alcohol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2-Dichlorobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Methylphenol (o-Cresol) | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis(2-Chloroisopropyl)ether | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| N-Nitroso-di-n-propylamine | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Hexachloroethane | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Nitrobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Isophorone | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Nitrophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4-Dimethylphenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis(2-Chloroethoxy)methane | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4-Dichlorophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2,4-Trichlorobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Naphthalene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 4-Chloroaniline | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Hexachlorobutadiene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Chloro-3-methylphenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Methylnaphthalene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 1-Methylnaphthalene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4,6-Trichlorophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,3-Dichloroaniline | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4,5-Trichlorophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Chloronaphthalene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Nitroaniline | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,4-Dinitrobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Dimethylphthalate | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,3-Dinitrobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,6-Dinitrotoluene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2-Dinitrobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Acenaphthylene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 3-Nitroaniline | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |

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Date of Report: September 25, 2009
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Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050741~~ 0909094 | | | | | |
| Laboratory ID: | 09-091-01 | | | | | |
| 2,4-Dinitrophenol | ND | 21 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Acenaphthene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 4-Nitrophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4-Dinitrotoluene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Dibenzofuran | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Diethylphthalate | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Chlorophenyl-phenylether | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Nitroaniline | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Fluorene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 21 | EPA 8270 | 9-11-09 | 9-16-09 | |
| N-Nitrosodiphenylamine | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2-Diphenylhydrazine | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Bromophenyl-phenylether | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Hexachlorobenzene | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Pentachlorophenol | ND | 21 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Phenanthrene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Anthracene | 0.99 | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Carbazole | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Di-n-butylphthalate | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Fluoranthene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzidine | ND | 41 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Pyrene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Butylbenzylphthalate | 5.9 | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis-2-Ethylhexyladipate | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 3,3'-Dichlorobenzidine | ND | 41 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Benzo[a]anthracene | 0.20 | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Chrysene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| bis(2-Ethylhexyl)phthalate | 13 | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Di-n-octylphthalate | ND | 4.1 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Benzo[b]fluoranthene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzo[k]fluoranthene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzo[a]pyrene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Dibenz[a,h]anthracene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzo[g,h,i]perylene | ND | 0.082 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *58* | *19 - 97* | | | | |
| *Phenol-d6* | *63* | *22 - 108* | | | | |
| *Nitrobenzene-d5* | *66* | *21 - 106* | | | | |
| *2-Fluorobiphenyl* | *69* | *29 - 107* | | | | |
| *2,4,6-Tribromophenol* | *85* | *44 - 121* | | | | |
| *Terphenyl-d14* | *88* | *37 - 120* | | | | |

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050742~~ 09090942 | | | | | |
| Laboratory ID: | 09-091-02 | | | | | |
| N-Nitrosodimethylamine | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyridine | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Aniline | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethyl)ether | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chlorophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dichlorobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dichlorobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzyl alcohol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dichlorobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachloroethane | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Nitrobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Isophorone | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitrophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dimethylphenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dichlorophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Naphthalene | ND | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Chloroaniline | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobutadiene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chloro-3-methylphenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylnaphthalene | ND | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 1-Methylnaphthalene | ND | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Hexachlorocyclopentadiene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,6-Trichlorophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3-Dichloroaniline | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,5-Trichlorophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chloronaphthalene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitroaniline | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dinitrobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dimethylphthalate | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dinitrobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,6-Dinitrotoluene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dinitrobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthylene | ND | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 3-Nitroaniline | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
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## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050742~~ 09090942 | | | | | |
| Laboratory ID: | 09-091-02 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthene | ND | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Nitrophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dinitrotoluene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenzofuran | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Diethylphthalate | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Nitroaniline | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluorene | ND | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitrosodiphenylamine | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Diphenylhydrazine | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Bromophenyl-phenylether | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobenzene | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenanthrene | 0.097 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Anthracene | 0.016 | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Carbazole | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-butylphthalate | 0.14 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluoranthene | 0.36 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzidine | ND | 0.40 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyrene | 0.29 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Butylbenzylphthalate | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis-2-Ethylhexyladipate | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.40 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]anthracene | 0.17 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Chrysene | 0.25 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-octylphthalate | ND | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[b]fluoranthene | 0.19 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[k]fluoranthene | 0.17 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]pyrene | 0.15 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Indeno[1,2,3-cd]pyrene | 0.084 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenz[a,h]anthracene | 0.027 | 0.0080 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Benzo[g,h,i]perylene | 0.095 | 0.040 | EPA 8270 | 9-11-09 | 9-11-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *71* | *19 - 97* | | | | |
| *Phenol-d6* | *74* | *22 - 108* | | | | |
| *Nitrobenzene-d5* | *66* | *21 - 106* | | | | |
| *2-Fluorobiphenyl* | *76* | *29 - 107* | | | | |
| *2,4,6-Tribromophenol* | *82* | *44 - 121* | | | | |
| *Terphenyl-d14* | *77* | *37 - 120* | | | | |

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Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050743~~ 09090943 | | | | | |
| Laboratory ID: | 09-091-03 | | | | | |
| N-Nitrosodimethylamine | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Pyridine | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Phenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Aniline | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| bis(2-Chloroethyl)ether | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2-Chlorophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,3-Dichlorobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,4-Dichlorobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Benzyl alcohol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,2-Dichlorobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Hexachloroethane | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Nitrobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Isophorone | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2-Nitrophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,4-Dimethylphenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,4-Dichlorophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Naphthalene | ND | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Chloroaniline | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Hexachlorobutadiene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 4-Chloro-3-methylphenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2-Methylnaphthalene | 0.011 | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 1-Methylnaphthalene | 0.011 | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Hexachlorocyclopentadiene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,4,6-Trichlorophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,3-Dichloroaniline | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,4,5-Trichlorophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2-Chloronaphthalene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2-Nitroaniline | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,4-Dinitrobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Dimethylphthalate | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,3-Dinitrobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,6-Dinitrotoluene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,2-Dinitrobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Acenaphthylene | 0.0082 | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 3-Nitroaniline | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |

10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | 09050743 09090943 | | | | | |
| Laboratory ID: | 09-091-03 | | | | | |
| 2,4-Dinitrophenol | ND | 0.19 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Acenaphthene | ND | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Nitrophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,4-Dinitrotoluene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Dibenzofuran | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Diethylphthalate | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 4-Nitroaniline | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Fluorene | ND | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.19 | EPA 8270 | 9-11-09 | 9-14-09 | |
| N-Nitrosodiphenylamine | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 1,2-Diphenylhydrazine | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 4-Bromophenyl-phenylether | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Hexachlorobenzene | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Pentachlorophenol | ND | 0.19 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Phenanthrene | 0.082 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Anthracene | 0.028 | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Carbazole | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Di-n-butylphthalate | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Fluoranthene | 0.25 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Benzidine | ND | 0.38 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Pyrene | 0.19 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Butylbenzylphthalate | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| bis-2-Ethylhexyladipate | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.38 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Benzo[a]anthracene | 0.11 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Chrysene | 0.17 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| bis(2-Ethylhexyl)phthalate | 0.057 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Di-n-octylphthalate | ND | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Benzo[b]fluoranthene | 0.12 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Benzo[k]fluoranthene | 0.12 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Benzo[a]pyrene | 0.099 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Indeno[1,2,3-cd]pyrene | 0.080 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |
| Dibenz[a,h]anthracene | 0.019 | 0.0077 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Benzo[g,h,i]perylene | 0.10 | 0.038 | EPA 8270 | 9-11-09 | 9-14-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *73* | *19 - 97* |
| *Phenol-d6* | *78* | *22 - 108* |
| *Nitrobenzene-d5* | *72* | *21 - 106* |
| *2-Fluorobiphenyl* | *78* | *29 - 107* |
| *2,4,6-Tribromophenol* | *115* | *44 - 121* |
| *Terphenyl-d14* | *75* | *37 - 120* |

10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

09090944

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050744~~ | | | | | |
| Laboratory ID: | 09-091-04 | | | | | |
| N-Nitrosodimethylamine | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyridine | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Aniline | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethyl)ether | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chlorophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dichlorobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dichlorobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzyl alcohol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dichlorobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachloroethane | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Nitrobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Isophorone | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitrophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dimethylphenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dichlorophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Naphthalene | ND | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Chloroaniline | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobutadiene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chloro-3-methylphenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 1-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Hexachlorocyclopentadiene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,6-Trichlorophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3-Dichloroaniline | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,5-Trichlorophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chloronaphthalene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitroaniline | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dinitrobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dimethylphthalate | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dinitrobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,6-Dinitrotoluene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dinitrobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthylene | 0.0092 | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 3-Nitroaniline | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |

10/4/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090944 | | | | | |
| **Client ID:** | ~~09050741~~ | | | | | |
| Laboratory ID: | 09-091-04 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthene | ND | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Nitrophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dinitrotoluene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenzofuran | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Diethylphthalate | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Nitroaniline | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluorene | ND | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitrosodiphenylamine | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Diphenylhydrazine | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Bromophenyl-phenylether | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobenzene | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenanthrene | 0.014 | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Anthracene | 0.011 | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Carbazole | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-butylphthalate | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluoranthene | 0.068 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzidine | ~~ND~~ | 0.41 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyrene | 0.062 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Butylbenzylphthalate | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis-2-Ethylhexyladipate | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.41 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]anthracene | 0.050 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Chrysene | 0.086 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-octylphthalate | ND | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[b]fluoranthene | 0.086 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[k]fluoranthene | 0.090 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]pyrene | 0.070 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Indeno[1,2,3-cd]pyrene | 0.053 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenz[a,h]anthracene | 0.014 | 0.0081 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Benzo[g,h,i]perylene | 0.061 | 0.041 | EPA 8270 | 9-11-09 | 9-11-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *70* | *19 - 97* |
| *Phenol-d6* | *72* | *22 - 108* |
| *Nitrobenzene-d5* | *66* | *21 - 106* |
| *2-Fluorobiphenyl* | *74* | *29 - 107* |
| *2,4,6-Tribromophenol* | *82* | *44 - 121* |
| *Terphenyl-d14* | *76* | *37 - 120* |

JMW 10/4/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050756~~ 09090956 MW | | | | | |
| Laboratory ID: | 09-091-07 | | | | | |
| N-Nitrosodimethylamine | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyridine | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Aniline | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethyl)ether | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chlorophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dichlorobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dichlorobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzyl alcohol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dichlorobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachloroethane | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Nitrobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Isophorone | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitrophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dimethylphenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dichlorophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Chloroaniline | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobutadiene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chloro-3-methylphenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Hexachlorocyclopentadiene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,6-Trichlorophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3-Dichloroaniline | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,5-Trichlorophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chloronaphthalene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitroaniline | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dinitrobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dimethylphthalate | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dinitrobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,6-Dinitrotoluene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dinitrobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 3-Nitroaniline | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |

MW

MW 10/4/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090956 | | | | | |
| **Client ID:** | ~~09050756~~ MW | | | | | |
| Laboratory ID: | 09-091-07 | | | | | |
| 2,4-Dinitrophenol | ND | 0.26 U | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Nitrophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dinitrotoluene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenzofuran | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Diethylphthalate | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Nitroaniline | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluorene | ND | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitrosodiphenylamine | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Diphenylhydrazine | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Bromophenyl-phenylether | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobenzene | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pentachlorophenol | ND MW | 0.26 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenanthrene | 0.029 | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Anthracene | 0.010 | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Carbazole | ND | 0.052 U | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-butylphthalate | ND MW | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluoranthene | 0.13 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzidine | ND MW | 0.52 U | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyrene | 0.12 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Butylbenzylphthalate | ND | 0.052 U | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis-2-Ethylhexyladipate | ND | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 3,3'-Dichlorobenzidine | ND MW | 0.52 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]anthracene | 0.077 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Chrysene | 0.082 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Ethylhexyl)phthalate | 0.33 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-octylphthalate | ND MW | 0.052 U | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[b]fluoranthene | 0.067 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[k]fluoranthene | 0.072 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]pyrene | 0.088 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Indeno[1,2,3-cd]pyrene | 0.054 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenz[a,h]anthracene | 0.013 | 0.010 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Benzo[g,h,i]perylene | 0.063 | 0.052 | EPA 8270 | 9-11-09 | 9-11-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *64* | *19 - 97* |
| *Phenol-d6* | *67* | *22 - 108* |
| *Nitrobenzene-d5* | *58* | *21 - 106* |
| *2-Fluorobiphenyl* | *71* | *29 - 107* |
| *2,4,6-Tribromophenol* | *83* | *44 - 121* |
| *Terphenyl-d14* | *77* | *37 - 120* |

MW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

09090957

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050757~~ MW | | | | | |
| Laboratory ID: | 09-091-08 | | | | | |
| N-Nitrosodimethylamine | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyridine | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Aniline | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethyl)ether | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chlorophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dichlorobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dichlorobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzyl alcohol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dichlorobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachloroethane | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Nitrobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Isophorone | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitrophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dimethylphenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dichlorophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Naphthalene | ND | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Chloroaniline | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobutadiene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chloro-3-methylphenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 1-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Hexachlorocyclopentadiene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,6-Trichlorophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3-Dichloroaniline | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4,5-Trichlorophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Chloronaphthalene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2-Nitroaniline | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,4-Dinitrobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dimethylphthalate | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,3-Dinitrobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,6-Dinitrotoluene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Dinitrobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthylene | 0.013 | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 3-Nitroaniline | ~~ND~~ MW | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |

MW
10/14/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090957 | | | | | |
| **Client ID:** | ~~09050757~~ | | | | | |
| Laboratory ID: | 09-091-08 | | | | | |
| 2,4-Dinitrophenol | ND | 0.27 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Acenaphthene | ND | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4-Nitrophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,4-Dinitrotoluene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenzofuran | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Diethylphthalate | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Nitroaniline | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluorene | ND | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.27 | EPA 8270 | 9-11-09 | 9-11-09 | |
| N-Nitrosodiphenylamine | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 1,2-Diphenylhydrazine | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 4-Bromophenyl-phenylether | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Hexachlorobenzene | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pentachlorophenol | ND | 0.27 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Phenanthrene | 0.035 | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Anthracene | 0.029 | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Carbazole | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-butylphthalate | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Fluoranthene | 0.21 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzidine | ND | 0.54 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Pyrene | 0.21 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Butylbenzylphthalate | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis-2-Ethylhexyladipate | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.54 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]anthracene | 0.13 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Chrysene | 0.14 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Di-n-octylphthalate | ND | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[b]fluoranthene | 0.12 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[k]fluoranthene | 0.11 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Benzo[a]pyrene | 0.17 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Indeno[1,2,3-cd]pyrene | 0.10 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| Dibenz[a,h]anthracene | 0.022 | 0.011 | EPA 8270/SIM | 9-11-09 | 9-14-09 | |
| Benzo[g,h,i]perylene | 0.12 | 0.054 | EPA 8270 | 9-11-09 | 9-11-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *61* | *19 - 97* | | | | |
| *Phenol-d6* | *66* | *22 - 108* | | | | |
| *Nitrobenzene-d5* | *63* | *21 - 106* | | | | |
| *2-Fluorobiphenyl* | *70* | *29 - 107* | | | | |
| *2,4,6-Tribromophenol* | *79* | *44 - 121* | | | | |
| *Terphenyl-d14* | *75* | *37 - 120* | | | | |

JMW 10-14-09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050758~~ 09090958 | | | | | |
| Laboratory ID: | 09-091-09 | | | | | |
| N-Nitrosodimethylamine | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Pyridine | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Phenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Aniline | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis(2-Chloroethyl)ether | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Chlorophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,3-Dichlorobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,4-Dichlorobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Benzyl alcohol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2-Dichlorobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Methylphenol (o-Cresol) | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis(2-Chloroisopropyl)ether | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| N-Nitroso-di-n-propylamine | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Hexachloroethane | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Nitrobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Isophorone | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Nitrophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4-Dimethylphenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis(2-Chloroethoxy)methane | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4-Dichlorophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2,4-Trichlorobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Naphthalene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 4-Chloroaniline | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Hexachlorobutadiene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Chloro-3-methylphenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Methylnaphthalene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 1-Methylnaphthalene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4,6-Trichlorophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,3-Dichloroaniline | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4,5-Trichlorophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Chloronaphthalene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2-Nitroaniline | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,4-Dinitrobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Dimethylphthalate | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,3-Dinitrobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,6-Dinitrotoluene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2-Dinitrobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Acenaphthylene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 3-Nitroaniline | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |

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10/4/09

Date of Report: September 25, 2009
Samples Submitted: September 10, 2009
Laboratory Reference: 0909-091
Project: 10HD-09/09/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

09090958

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050758~~ | | | | | |
| Laboratory ID: | 09-091-09 | | | | | |
| 2,4-Dinitrophenol | ND | 8.9 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Acenaphthene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 4-Nitrophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,4-Dinitrotoluene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Dibenzofuran | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Diethylphthalate | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Chlorophenyl-phenylether | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Nitroaniline | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Fluorene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 8.9 | EPA 8270 | 9-11-09 | 9-16-09 | |
| N-Nitrosodiphenylamine | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 1,2-Diphenylhydrazine | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 4-Bromophenyl-phenylether | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Hexachlorobenzene | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Pentachlorophenol | ND | 8.9 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Phenanthrene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Anthracene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Carbazole | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Di-n-butylphthalate | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Fluoranthene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzidine | ND | 18 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Pyrene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Butylbenzylphthalate | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| bis-2-Ethylhexyladipate | ND | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| 3,3'-Dichlorobenzidine | ND | 18 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Benzo[a]anthracene | 0.11 | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Chrysene | 0.29 | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| bis(2-Ethylhexyl)phthalate | 7.1 | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Di-n-octylphthalate | ~~ND~~ | 1.8 | EPA 8270 | 9-11-09 | 9-16-09 | |
| Benzo[b]fluoranthene | 0.25 | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzo[k]fluoranthene | 0.067 | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzo[a]pyrene | 0.097 | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Indeno[1,2,3-cd]pyrene | 0.069 | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Dibenz[a,h]anthracene | ND | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |
| Benzo[g,h,i]perylene | 0.092 | 0.035 | EPA 8270/SIM | 9-11-09 | 9-15-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *50* | *19 - 97* |
| *Phenol-d6* | *62* | *22 - 108* |
| *Nitrobenzene-d5* | *68* | *21 - 106* |
| *2-Fluorobiphenyl* | *65* | *29 - 107* |
| *2,4,6-Tribromophenol* | *66* | *44 - 121* |
| *Terphenyl-d14* | *77* | *37 - 120* |

10/14/09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 10 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090920 | 09090921 | 09090924 | 09090925 | 09090928 |
| 09090929 | 09090932 | 09090933 | 09090936 | 09090937 |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of 4°C ± 2°C. The samples were collected on September 9, 2009, were extracted by September 15, 2009, and were analyzed by September 19, 2009, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol and benzidine; no action was taken as these analytes were not detected in any sample.

4. **Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, benzidine [all with low recoveries; associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ)] and 3,3'-dichlorobenzidine with a high recovery (no action taken as it was not detected) associated with all samples except 09090932.

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Satisfactory.**

All SMC recoveries were within QC limits except one high acid-fraction SMC in sample 09090928 (associated positive results were qualified as estimated quantities [J]) and one low acid-fraction result in sample 09090932 (associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]).

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)/Blank Spike (BS) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

<u>Data Qualifiers and Definitions</u>

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050720~~ 09090920 | | | | | |
| Laboratory ID: | 09-102-01 | | | | | |
| N-Nitrosodimethylamine | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | ND | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4-Chloroaniline | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | ND | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 1-Methylnaphthalene | ND | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Hexachlorocyclopentadiene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | ND | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 3-Nitroaniline | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |

MW

MW 10-1-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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09090926

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050720~~ | | | | | |
| Laboratory ID: | 09-102-01 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 10 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 0.049 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4-Nitrophenol | ND | 2.1 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ~~ND~~ | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | 0.045 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 10 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 2.1 | EPA 8270. | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ~~ND~~ | 10 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 0.66 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Anthracene | 0.22 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Carbazole | ND | 2.1 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ~~ND~~ | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 1.2 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzidine | ~~ND~~ | 21 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 1.0 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Butylbenzylphthalate | ND | 2.1 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 21 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 0.55 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Chrysene | 0.62 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 2.1 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ~~ND~~ | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 0.64 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzo[k]fluoranthene | 0.19 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzo[a]pyrene | 0.43 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Indeno[1,2,3-cd]pyrene | 0.22 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Dibenz[a,h]anthracene | 0.091 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzo[g,h,i]perylene | 0.26 | 0.042 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *79* | *19 - 97* |
| *Phenol-d6* | *80* | *22 - 108* |
| *Nitrobenzene-d5* | *79* | *21 - 106* |
| *2-Fluorobiphenyl* | *96* | *29 - 107* |
| *2,4,6-Tribromophenol* | *94* | *44 - 121* |
| *Terphenyl-d14* | *94* | *37 - 120* |

JMW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09850721~~ 0909072 | | | | | |
| Laboratory ID: | 09-102-02 | | | | | |
| N-Nitrosodimethylamine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | 0.071 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | 0.023 | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | 0.014 | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | 0.012 | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | ND | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09060721~~ 09090921 | | | | | |
| Laboratory ID: | 09-102-02 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | 0.26 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitrophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | 0.11 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | 0.24 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | 3.1 | 0.78 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Anthracene | 0.85 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Carbazole | 0.50 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | 0.049 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | 5.2 | 0.78 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ND | 0.39 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | 4.2 | 0.78 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | 0.18 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.39 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | 1.9 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Chrysene | 2.0 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Ethylhexyl)phthalate | 0.28 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-octylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | 1.4 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[k]fluoranthene | 1.0 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]pyrene | 1.3 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Indeno[1,2,3-cd]pyrene | 0.47 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenz[a,h]anthracene | 0.15 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[g,h,i]perylene | 0.44 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *48* | *19 - 97* |
| *Phenol-d6* | *75* | *22 - 108* |
| *Nitrobenzene-d5* | *66* | *21 - 106* |
| *2-Fluorobiphenyl* | *81* | *29 - 107* |
| *2,4,6-Tribromophenol* | *85* | *44 - 121* |
| *Terphenyl-d14* | *93* | *37 - 120* |

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~0950724NN~~ 09090924 | | | | | |
| Laboratory ID: | 09-102-03 | | | | | |
| N-Nitrosodimethylamine | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | 0.016 | 0.0085 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | 0.016 | 0.0085 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | 0.014 | 0.0085 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | 0.16 | 0.0085 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |

10/1/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result (0909092 4) | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050724~~ | | | | | |
| Laboratory ID: | 09-102-03 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 2.1 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 0.56 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitrophenol | ND | 0.43 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | 0.55 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 2.1 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ND | 2.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 5.7 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Anthracene | 2.2 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Carbazole | ND | 0.43 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ND | 0.43 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 14 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ~~ND~~ | 4.3 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 10 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | ND | 0.43 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ND | 4.3 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 5.3 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Chrysene | 5.2 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.43 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ND | 0.43 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 3.7 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[k]fluoranthene | 2.9 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]pyrene | 3.5 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Indeno[1,2,3-cd]pyrene | 1.9 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenz[a,h]anthracene | 0.70 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[g,h,i]perylene | 1.9 | 0.43 | EPA 8270 | 9-15-09 | 9-19-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *69* | *19 - 97* |
| *Phenol-d6* | *74* | *22 - 108* |
| *Nitrobenzene-d5* | *73* | *21 - 106* |
| *2-Fluorobiphenyl* | *97* | *29 - 107* |
| *2,4,6-Tribromophenol* | *106* | *44 - 121* |
| *Terphenyl-d14* | *97* | *37 - 120* |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050725~~ 0909925 | | | | | |
| Laboratory ID: | 09-102-04 | | | | | |
| N-Nitrosodimethylamine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | 1.4 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4-Chloroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | 0.49 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 1-Methylnaphthalene | 0.37 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Hexachlorocyclopentadiene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 3-Nitroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |

MW 10/1/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050725~~ 0908925 | | | | | |
| Laboratory ID: | 09-102-04 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 24 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 7.3 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitrophenol | ND | 4.8 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ~~ND~~ | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | 7.1 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 24 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ~~ND~~ | 24 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 59 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Anthracene | 18 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Carbazole | 12 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ~~ND~~ | 4.8 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 99 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ~~ND~~ | 48 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 67 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | ND | 4.8 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 48 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 33 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Chrysene | 34 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 4.8 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ~~ND~~ | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 20 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[k]fluoranthene | 21 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]pyrene | 22 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Indeno[1,2,3-cd]pyrene | 11 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenz[a,h]anthracene | 2.9 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzo[g,h,i]perylene | 11 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *84* | *19 - 97* |
| *Phenol-d6* | *82* | *22 - 108* |
| *Nitrobenzene-d5* | *80* | *21 - 106* |
| *2-Fluorobiphenyl* | *95* | *29 - 107* |
| *2,4,6-Tribromophenol* | *89* | *44 - 121* |
| *Terphenyl-d14* | *95* | *37 - 120* |

TMW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~0950728~~ 09090928 | | | | | |
| Laboratory ID: | 09-102-05 | | | | | |
| N-Nitrosodimethylamine | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | ND | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | 0.019 | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ~~ND~~ | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050728~~ 09090928 | | | | | |
| Laboratory ID: | 09-102-05 | | | | | |
| 2,4-Dinitrophenol | ND | 1.0 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | ND | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | ND | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 1.0 J | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ND | 1.0 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 0.14 | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Anthracene | 0.066 | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Carbazole | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 0.81 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ~~ND~~ | 2.0 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 0.69 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | 0.49 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ND | 2.0 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 0.37 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Chrysene | 0.40 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ND | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 0.32 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[k]fluoranthene | 0.32 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]pyrene | 0.41 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Indeno[1,2,3-cd]pyrene | 0.26 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenz[a,h]anthracene | 0.058 | 0.0081 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[g,h,i]perylene | 0.34 | 0.20 | EPA 8270 | 9-15-09 | 9-19-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *67* | *19 - 97* |
| *Phenol-d6* | *79* | *22 - 108* |
| *Nitrobenzene-d5* | *71* | *21 - 106* |
| *2-Fluorobiphenyl* | *98* | *29 - 107* |
| *2,4,6-Tribromophenol* | *124* | *44 - 121* |
| *Terphenyl-d14* | *99* | *37 - 120* |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

0909029

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~0050729~~ MW | | | | | |
| Laboratory ID: | 09-102-06 | | | | | |
| N-Nitrosodimethylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | ND | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND MW | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | 0.030 | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ~~ND~~ MW | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |



MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 0909092 | | | | | |
| **Client ID:** | ~~9950729~~ | | | | | |
| Laboratory ID: | 09-102-06 | | | | | |
| 2,4-Dinitrophenol | ND | 1.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | ND | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | ND | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 1.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ND | 1.1 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 0.058 | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Anthracene | 0.030 | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Carbazole | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 0.52 | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ~~ND~~ | 2.2 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 0.50 | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ND | 2.2 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 0.37 | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Chrysene | 0.36 | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 0.22 | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[k]fluoranthene | 0.30 | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]pyrene | 0.35 | 0.22 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Indeno[1,2,3-cd]pyrene | 0.13 | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Dibenz[a,h]anthracene | 0.050 | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[g,h,i]perylene | 0.13 | 0.0087 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *76* | *19 - 97* |
| *Phenol-d6* | *76* | *22 - 108* |
| *Nitrobenzene-d5* | *73* | *21 - 106* |
| *2-Fluorobiphenyl* | *91* | *29 - 107* |
| *2,4,6-Tribromophenol* | *112* | *44 - 121* |
| *Terphenyl-d14* | *98* | *37 - 120* |





10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

09090932

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050732~~ MW | | | | | |
| Laboratory ID: | 09-102-07 | | | | | |
| N-Nitrosodimethylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND MW | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | 0.018 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND MW | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | 0.081 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | 0.067 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | ND | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ND MW | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050732~~ 09090932 | | | | | |
| Laboratory ID: | 09-102-07 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 1.1 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | 0.029 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ~~ND~~ | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | 0.043 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 1.1 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ~~ND~~ | 1.1 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | 0.22 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Anthracene | 0.034 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Carbazole | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | ~~ND~~ | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | 0.060 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzidine | ~~ND~~ | 2.2 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | 0.22 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Butylbenzylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 2.2 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | 0.014 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Chrysene | 0.043 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| bis(2-Ethylhexyl)phthalate | 0.59 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | 0.11 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[k]fluoranthene | 0.032 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[a]pyrene | 0.12 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Indeno[1,2,3-cd]pyrene | ~~ND~~ | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Dibenz[a,h]anthracene | ~~ND~~ | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[g,h,i]perylene | 0.071 | 0.0088 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *10* | *19 - 97* |
| *Phenol-d6* | *26* | *22 - 108* |
| *Nitrobenzene-d5* | *49* | *21 - 106* |
| *2-Fluorobiphenyl* | *73* | *29 - 107* |
| *2,4,6-Tribromophenol* | *66* | *44 - 121* |
| *Terphenyl-d14* | *94* | *37 - 120* |





10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result (09090933) | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050733~~ | | | | | |
| Laboratory ID: | 09-102-08 | | | | | |
| N-Nitrosodimethylamine | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | 0.027 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | 0.067 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | 0.048 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | ND | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |





JMW 10/14/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

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0909033

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9050733~~ | | | | | |
| Laboratory ID: | 09-102-08 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 2.3 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 0.023 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | ND | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 2.3 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ND | 2.3 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 0.14 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Anthracene | 0.030 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Carbazole | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 0.42 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzidine | ~~ND~~ | 4.5 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 0.63 | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ND | 4.5 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 0.071 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Chrysene | 0.26 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ND | 0.45 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 0.14 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[k]fluoranthene | 0.20 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[a]pyrene | 0.20 | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Dibenz[a,h]anthracene | ND | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[g,h,i]perylene | ND | 0.018 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *19* | *19 - 97* |
| *Phenol-d6* | *42* | *22 - 108* |
| *Nitrobenzene-d5* | *48* | *21 - 106* |
| *2-Fluorobiphenyl* | *80* | *29 - 107* |
| *2,4,6-Tribromophenol* | *98* | *44 - 121* |
| *Terphenyl-d14* | *119* | *37 - 120* |

JMW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050736~~ 09090936 | | | | | |
| Laboratory ID: | 09-102-09 | | | | | |
| N-Nitrosodimethylamine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | 0.43 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4-Chloroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | 2.2 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 1-Methylnaphthalene | 2.0 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Hexachlorocyclopentadiene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 3-Nitroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |

MW 10/4/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~0950736~~ 0909036 | | | | | |
| Laboratory ID: | 09-102-09 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 24 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 0.37 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4-Nitrophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | 0.42 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 24 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ND | 24 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 0.97 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Anthracene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Carbazole | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzidine | ND | 48 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 0.46 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Butylbenzylphthalate | 9.0 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ND | 48 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Chrysene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| bis(2-Ethylhexyl)phthalate | 5.2 | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ~~ND~~ | 4.8 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 0.19 | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzo[k]fluoranthene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzo[a]pyrene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Dibenz[a,h]anthracene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Benzo[g,h,i]perylene | ND | 0.19 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *53* | *19 - 97* |
| *Phenol-d6* | *65* | *22 - 108* |
| *Nitrobenzene-d5* | *74* | *21 - 106* |
| *2-Fluorobiphenyl* | *91* | *29 - 107* |
| *2,4,6-Tribromophenol* | *97* | *44 - 121* |
| *Terphenyl-d14* | *98* | *37 - 120* |

MW 10/7/09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050737~~ 0909037 | | | | | |
| Laboratory ID: | 09-102-10 | | | | | |
| N-Nitrosodimethylamine | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | 0.041 | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | 0.38 | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1-Methylnaphthalene | 0.31 | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorocyclopentadiene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |

MW 10-14-09

Date of Report: September 28, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-102
Project: 10ZZ-09/09/09-0004

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050737~~ 09090937 | | | | | |
| Laboratory ID: | 09-102-10 | | | | | |
| 2,4-Dinitrophenol | ND | 1.3 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 0.029 | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | 0.048 | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 1.3 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | 0.31 | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ND | 1.3 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 0.14 | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Carbazole | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzidine | ND | 2.6 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 0.032 | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Butylbenzylphthalate | 1.4 | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ND | 2.6 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Chrysene | 0.011 | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| bis(2-Ethylhexyl)phthalate | 0.42 | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ND | 0.26 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[k]fluoranthene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *68* | *19 - 97* |
| *Phenol-d6* | *71* | *22 - 108* |
| *Nitrobenzene-d5* | *66* | *21 - 106* |
| *2-Fluorobiphenyl* | *85* | *29 - 107* |
| *2,4,6-Tribromophenol* | *113* | *44 - 121* |
| *Terphenyl-d14* | *83* | *37 - 120* |

MW 10-14-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 14, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 10 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) and synthetic precipitation leaching procedure (SPLP) SVOC analysis was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090908 | 09090909 | 09090912 | 09090913 | 09090915 |
| 09090919 | 09090927 | 09090953 | 09090954 | 09090962 |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of 4°C ± 2°C. The samples were collected on September 10, 2009, were extracted by September 18, 2009, and were analyzed by September 19, 2009, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol in the 9-14-09 calibration and 2,4-dinitrophenol and benzidine in the 9-18-09 calibration; associated positive results were qualified as estimated quantities (J).

4. **Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except hexachlorocyclopentadiene, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, benzidine (all with low recoveries), and 3,3-dichlorobenzidine (high recovery) in the 9-19-09 calibration, benzidine and

3,3'-dichlorobenzidine in the 9-21-09 calibration, and 2,4-dinitrophenol and hexachlorocyclopentadiene (low recoveries) in the 9-23-09 calibration. Associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ) for analytes associated with decreasing response factors. Positive results associated with high recovery outliers were qualified as estimated quantities (J).

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Satisfactory.**

All SMC recoveries were within QC limits except one base/neutral SMC with a high recovery in sample 09090927; no action was taken based on one outlier per fraction per sample.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)/Blank Spike (BS) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Satisfactory.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts except the last two IS compounds in sample 09090927 with low area counts; associated positive sample results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## SPLP SEMIVOLATILES
## EPA 1312/8270D

Matrix: SPLP Extract
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | 09050719 | | | | | |
| Laboratory ID: | 09-103-08 | | | | | |
| Pyridine | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| 1,4-Dichlorobenzene | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| 2-Methylphenol (o-Cresol) | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| Hexachloroethane | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| Nitrobenzene | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| Hexachlorobutadiene | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| 2,4,6-Trichlorophenol | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| 2,4,5-Trichlorophenol | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| 2,4-Dinitrotoluene | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| Hexachlorobenzene | ND | 10 | EPA 8270 | 9-23-09 | 9-24-09 | |
| Pentachlorophenol | ND | 50 | EPA 8270 | 9-23-09 | 9-24-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *78* | *10 - 95* | | | | |
| *Phenol-d6* | *81* | *10 - 109* | | | | |
| *Nitrobenzene-d5* | *88* | *28 - 109* | | | | |
| *2-Fluorobiphenyl* | *81* | *34 - 101* | | | | |
| *2,4,6-Tribromophenol* | *81* | *46 - 115* | | | | |
| *Terphenyl-d14* | *82* | *50 - 110* | | | | |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Lab Traveler: 0909-103
Project: 10HD-09/10/09-0005

## TCLP SEMIVOLATILES
## EPA 1311/8270D

Matrix: TCLP Extract
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050719~~ 09090919 | | | | | |
| Laboratory ID: | 09-103-08 | | | | | |
| Pyridine | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| 1,4-Dichlorobenzene | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| 2-Methylphenol (o-Cresol) | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| Hexachloroethane | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| Nitrobenzene | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| Hexachlorobutadiene | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| 2,4,6-Trichlorophenol | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| 2,4,5-Trichlorophenol | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| 2,4-Dinitrotoluene | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| Hexachlorobenzene | ND | 10 | EPA 8270 | 9-18-09 | 9-21-09 | |
| Pentachlorophenol | ND | 50 | EPA 8270 | 9-18-09 | 9-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *66* | *10 - 95* | | | | |
| *Phenol-d6* | *68* | *10 - 109* | | | | |
| *Nitrobenzene-d5* | *74* | *28 - 109* | | | | |
| *2-Fluorobiphenyl* | *81* | *34 - 101* | | | | |
| *2,4,6-Tribromophenol* | *105* | *46 - 115* | | | | |
| *Terphenyl-d14* | *92* | *50 - 110* | | | | |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~D9060708~~ 09090908 | | | | | |
| Laboratory ID: | 09-103-02 | | | | | |
| N-Nitrosodimethylamine | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Pyridine | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Phenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Aniline | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| bis(2-Chloroethyl)ether | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2-Chlorophenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,3-Dichlorobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,4-Dichlorobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Benzyl alcohol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,2-Dichlorobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Hexachloroethane | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Nitrobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Isophorone | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2-Nitrophenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,4-Dimethylphenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,4-Dichlorophenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Naphthalene | 0.78 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Hexachlorobutadiene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 4-Chloro-3-methylphenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2-Methylnaphthalene | 0.17 | 0.0089 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 1-Methylnaphthalene | 0.12 | 0.0089 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,4,6-Trichlorophenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,3-Dichloroaniline | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,4,5-Trichlorophenol | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2-Chloronaphthalene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2-Nitroaniline | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,4-Dinitrobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Dimethylphthalate | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,3-Dinitrobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,6-Dinitrotoluene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,2-Dinitrobenzene | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Acenaphthylene | 0.050 | 0.0089 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 3-Nitroaniline | ND | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |

MW 10/14/09

Date of Report: September 29, 2009
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## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050708~~ 09090908 | | | | | |
| Laboratory ID: | 09-103-02 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 2.2 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Acenaphthene | 2.0 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,4-Dinitrotoluene | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Dibenzofuran | 1.1 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,3,5,6-Tetrachlorophenol | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 2,3,4,6-Tetrachlorophenol | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Diethylphthalate | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 4-Chlorophenyl-phenylether | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 4-Nitroaniline | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Fluorene | 2.0 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ~~ND~~ | 2.2 | EPA 8270 | 9-15-09 | 9-16-09 | |
| N-Nitrosodiphenylamine | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 1,2-Diphenylhydrazine | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 4-Bromophenyl-phenylether | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Hexachlorobenzene | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Pentachlorophenol | ~~ND~~ | 2.2 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Phenanthrene | 19 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Anthracene | 5.7 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Carbazole | 3.1 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Di-n-butylphthalate | 0.55 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Fluoranthene | 46 | 2.2 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ~~ND~~ | 4.4 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Pyrene | 39 | 2.2 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | 3.3 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| bis-2-Ethylhexyladipate | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 4.4 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Benzo[a]anthracene | 17 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Chrysene | 18 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| bis(2-Ethylhexyl)phthalate | 6.1 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Benzo[b]fluoranthene | 13 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Benzo[k]fluoranthene | 9.1 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Benzo[a]pyrene | 12 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Indeno[1,2,3-cd]pyrene | 5.0 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Dibenz[a,h]anthracene | 1.8 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |
| Benzo[g,h,i]perylene | 5.1 | 0.44 | EPA 8270 | 9-15-09 | 9-16-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *63* | *19 - 97* |
| *Phenol-d6* | *76* | *22 - 108* |
| *Nitrobenzene-d5* | *77* | *21 - 106* |
| *2-Fluorobiphenyl* | *91* | *29 - 107* |
| *2,4,6-Tribromophenol* | *88* | *44 - 121* |
| *Terphenyl-d14* | *112* | *37 - 120* |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

09090909

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050709~~ | | | | | |
| Laboratory ID: | 09-103-03 | | | | | |
| N-Nitrosodimethylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | 0.086 | 0.0091 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Chloroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | 0.053 | 0.0091 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 1-Methylnaphthalene | 0.040 | 0.0091 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | 0.018 | 0.0091 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 3-Nitroaniline | ~~ND~~ | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |

MW 10/1/09

Date of Report: September 29, 2009
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## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~99050709~~ 09090709 | | | | | |
| Laboratory ID: | 09-103-03 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 1.1 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | 1.0 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitrophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | 0.38 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | 0.87 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 1.1 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ND | 1.1 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | 11 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Anthracene | 3.6 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Carbazole | 2.2 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | 0.25 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | 23 | 0.91 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ~~ND~~ | 2.2 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | 18 | 0.91 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | 0.48 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ND | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ND | 2.2 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | 8.0 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Chrysene | 8.3 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Ethylhexyl)phthalate | 3.5 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | 6.5 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[k]fluoranthene | 3.6 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]pyrene | 5.3 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Indeno[1,2,3-cd]pyrene | 2.2 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenz[a,h]anthracene | 0.78 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[g,h,i]perylene | 2.1 | 0.22 | EPA 8270 | 9-15-09 | 9-17-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *66* | *19 - 97* |
| *Phenol-d6* | *85* | *22 - 108* |
| *Nitrobenzene-d5* | *84* | *21 - 106* |
| *2-Fluorobiphenyl* | *84* | *29 - 107* |
| *2,4,6-Tribromophenol* | *78* | *44 - 121* |
| *Terphenyl-d14* | *100* | *37 - 120* |

MW 10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050712~~ 09090912 | | | | | |
| Laboratory ID: | 09-103-04 | | | | | |
| N-Nitrosodimethylamine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | ND | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Chloroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | ND | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 1-Methylnaphthalene | ND | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | 0.013 | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 3-Nitroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090912 | | | | | |
| **Client ID:** | ~~09050712~~ | | | | | |
| Laboratory ID: | 09-103-04 | | | | | |
| 2,4-Dinitrophenol | ND | 0.18 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | ND | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Nitrophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | ND | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.18 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ND | 0.18 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | 0.040 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Anthracene | 0.018 | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Carbazole | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | 0.21 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzidine | ND | 0.37 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | 0.17 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Butylbenzylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.37 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | 0.12 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Chrysene | 0.13 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-octylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | 0.089 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[k]fluoranthene | 0.12 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]pyrene | 0.13 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Indeno[1,2,3-cd]pyrene | 0.058 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenz[a,h]anthracene | 0.018 | 0.0073 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Benzo[g,h,i]perylene | 0.061 | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *48* | *19 - 97* |
| *Phenol-d6* | *61* | *22 - 108* |
| *Nitrobenzene-d5* | *60* | *21 - 106* |
| *2-Fluorobiphenyl* | *66* | *29 - 107* |
| *2,4,6-Tribromophenol* | *72* | *44 - 121* |
| *Terphenyl-d14* | *72* | *37 - 120* |

10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050713~~ 09080913 | | | | | |
| Laboratory ID: | 09-103-05 | | | | | |
| N-Nitrosodimethylamine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Chloroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 1-Methylnaphthalene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 3-Nitroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |

MW 10-1-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090913 | | | | | |
| **Client ID:** | ~~09050713~~ | | | | | |
| Laboratory ID: | 09-103-05 | | | | | |
| 2,4-Dinitrophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Nitrophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Anthracene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Carbazole | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Benzidine | ND | 0.37 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Butylbenzylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.37 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Chrysene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-octylphthalate | ND | 0.037 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Benzo[k]fluoranthene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Benzo[a]pyrene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Dibenz[a,h]anthracene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Benzo[g,h,i]perylene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *61* | *19 - 97* |
| *Phenol-d6* | *68* | *22 - 108* |
| *Nitrobenzene-d5* | *65* | *21 - 106* |
| *2-Fluorobiphenyl* | *68* | *29 - 107* |
| *2,4,6-Tribromophenol* | *95* | *44 - 121* |
| *Terphenyl-d14* | *92* | *37 - 120* |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~9950715~~ | | | | | |
| Laboratory ID: | 09-103-06 | | | | | |
| N-Nitrosodimethylamine | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | 0.015 | 0.0068 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | 0.013 | 0.0068 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | 0.0086 | 0.0068 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | 0.040 | 0.0068 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9050715~~ 09090915 | | | | | |
| Laboratory ID: | 09-103-06 | | | | | |
| 2,4-Dinitrophenol | ND | 0.85 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 0.019 | 0.0068 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | 0.019 | 0.0068 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.85 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ND | 0.85 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 0.52 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Anthracene | 0.099 | 0.0068 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Carbazole | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | 0.49 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 1.4 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzidine | ND | 1.7 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 1.1 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Butylbenzylphthalate | 0.87 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ND | 1.7 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 0.64 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Chrysene | 0.90 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Ethylhexyl)phthalate | 0.56 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ND | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 0.85 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[k]fluoranthene | 0.77 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]pyrene | 0.74 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Indeno[1,2,3-cd]pyrene | 0.54 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenz[a,h]anthracene | 0.19 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[g,h,i]perylene | 0.62 | 0.17 | EPA 8270 | 9-15-09 | 9-19-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *75* | *19 - 97* |
| *Phenol-d6* | *81* | *22 - 108* |
| *Nitrobenzene-d5* | *76* | *21 - 106* |
| *2-Fluorobiphenyl* | *101* | *29 - 107* |
| *2,4,6-Tribromophenol* | *121* | *44 - 121* |
| *Terphenyl-d14* | *101* | *37 - 120* |

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~9058727~~ 0909027 | | | | | |
| Laboratory ID: | 09-103-09 | | | | | |
| N-Nitrosodimethylamine | ND | 3.4 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyridine | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Aniline | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethyl)ether | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chlorophenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dichlorobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dichlorobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzyl alcohol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dichlorobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylphenol (o-Cresol) | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroisopropyl)ether | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitroso-di-n-propylamine | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachloroethane | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Nitrobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Isophorone | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitrophenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dimethylphenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Chloroethoxy)methane | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dichlorophenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2,4-Trichlorobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Naphthalene | 2.2 | 0.27 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 4-Chloroaniline | ND | 3.4 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobutadiene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chloro-3-methylphenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Methylnaphthalene | 0.89 | 0.27 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 1-Methylnaphthalene | 0.74 | 0.27 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| Hexachlorocyclopentadiene | ND | 3.4 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,6-Trichlorophenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3-Dichloroaniline | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4,5-Trichlorophenol | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Chloronaphthalene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2-Nitroaniline | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,4-Dinitrobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dimethylphthalate | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,3-Dinitrobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,6-Dinitrotoluene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Dinitrobenzene | ND | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthylene | 0.37 | 0.27 | EPA 8270/SIM | 9-15-09 | 9-18-09 | |
| 3-Nitroaniline | ~~ND~~ | 3.4 U | EPA 8270 | 9-15-09 | 9-19-09 | |

MW 10-14-09

Date of Report: September 29, 2009
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| Analyte | 0909027 Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~0950727~~ | | | | | |
| Laboratory ID: | 09-103-09 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 17 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Acenaphthene | 18 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitrophenol | ~~ND~~ | 3.4 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,4-Dinitrotoluene | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenzofuran | 7.8 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,5,6-Tetrachlorophenol | ~~ND~~ | 3.4 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| 2,3,4,6-Tetrachlorophenol | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Diethylphthalate | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Chlorophenyl-phenylether | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Nitroaniline | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluorene | 16 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4,6-Dinitro-2-methylphenol | ~~ND~~ | 17 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| N-Nitrosodiphenylamine | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 1,2-Diphenylhydrazine | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 4-Bromophenyl-phenylether | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Hexachlorobenzene | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pentachlorophenol | ~~ND~~ | 17 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Phenanthrene | 130 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Anthracene | 53 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Carbazole | 23 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-butylphthalate | ~~ND~~ | 3.4 U | EPA 8270 | 9-15-09 | 9-19-09 | |
| Fluoranthene | 370 | 6.9 | EPA 8270 | 9-15-09 | 9-21-09 | |
| Benzidine | ~~ND~~ | 34 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Pyrene | 340 | 6.9 | EPA 8270 | 9-15-09 | 9-21-09 | |
| Butylbenzylphthalate | ~~ND~~ | 3.4 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis-2-Ethylhexyladipate | ~~ND~~ | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 34 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]anthracene | 130 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Chrysene | 130 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| bis(2-Ethylhexyl)phthalate | 11 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ~~ND~~ | 3.4 UJ | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[b]fluoranthene | 90 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[k]fluoranthene | 66 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[a]pyrene | 84 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Indeno[1,2,3-cd]pyrene | 52 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Dibenz[a,h]anthracene | 18 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Benzo[g,h,i]perylene | 53 | 3.4 | EPA 8270 | 9-15-09 | 9-19-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *61* | *19 - 97* |
| *Phenol-d6* | *73* | *22 - 108* |
| *Nitrobenzene-d5* | *76* | *21 - 106* |
| *2-Fluorobiphenyl* | *94* | *29 - 107* |
| *2,4,6-Tribromophenol* | *89* | *44 - 121* |
| *Terphenyl-d14* | *125* | *37 - 120* |

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Date of Report: September 29, 2009
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Laboratory Reference: 0909-103
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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050753~~ 09090953 | | | | | |
| Laboratory ID: | 09-103-10 | | | | | |
| N-Nitrosodimethylamine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | ND | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Chloroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | ND | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 1-Methylnaphthalene | ND | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Hexachlorocyclopentadiene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | 0.011 | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 3-Nitroaniline | ~~ND~~ | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |

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Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

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| Analyte | 09090953 Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050753~~ | | | | | |
| Laboratory ID: | 09-103-10 | | | | | |
| 2,4-Dinitrophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | ND | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4-Nitrophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | ND | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | 0.091 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Anthracene | 0.048 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Carbazole | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | 0.44 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzidine | ND | 0.39 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | 0.34 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Butylbenzylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.39 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | 0.24 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Chrysene | 0.25 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-octylphthalate | ND | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | 0.15 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[k]fluoranthene | 0.23 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]pyrene | 0.26 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Indeno[1,2,3-cd]pyrene | 0.11 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenz[a,h]anthracene | 0.037 | 0.0078 | EPA 8270/SIM | 9-15-09 | 9-16-09 | |
| Benzo[g,h,i]perylene | 0.12 | 0.039 | EPA 8270 | 9-15-09 | 9-17-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *52* | *19 - 97* |
| *Phenol-d6* | *62* | *22 - 108* |
| *Nitrobenzene-d5* | *53* | *21 - 106* |
| *2-Fluorobiphenyl* | *70* | *29 - 107* |
| *2,4,6-Tribromophenol* | *77* | *44 - 121* |
| *Terphenyl-d14* | *77* | *37 - 120* |

MW 10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050754~~ 09090954 | | | | | |
| Laboratory ID: | 09-103-11 | | | | | |
| N-Nitrosodimethylamine | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | 0.036 | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Chloroaniline | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | 0.0095 | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 1-Methylnaphthalene | ND | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | 0.11 | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 3-Nitroaniline | ND | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |

10/14/09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | 09090954 Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050734~~ | | | | | |
| Laboratory ID: | 09-103-11 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.93 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | 0.0093 | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Nitrophenol | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | 0.048 | 0.0074 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4,6-Dinitro-2-methylphenol | ~~ND~~ | 0.93 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ~~ND~~ | 0.93 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | 0.82 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Anthracene | 0.94 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Carbazole | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | 6.1 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzidine | ~~ND~~ | 1.9 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | 5.6 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Butylbenzylphthalate | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 1.9 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | 2.5 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Chrysene | 2.6 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Ethylhexyl)phthalate | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | 1.7 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[k]fluoranthene | 2.4 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]pyrene | 2.8 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Indeno[1,2,3-cd]pyrene | 1.1 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenz[a,h]anthracene | 0.29 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[g,h,i]perylene | 1.2 | 0.19 | EPA 8270 | 9-15-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *52* | *19 - 97* | | | | |
| *Phenol-d6* | *70* | *22 - 108* | | | | |
| *Nitrobenzene-d5* | *62* | *21 - 106* | | | | |
| *2-Fluorobiphenyl* | *77* | *29 - 107* | | | | |
| *2,4,6-Tribromophenol* | *78* | *44 - 121* | | | | |
| *Terphenyl-d14* | *95* | *37 - 120* | | | | |

MW
10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | 09090962 ~~09050762~~ | | | | | |
| Laboratory ID: | 09-103-12 | | | | | |
| N-Nitrosodimethylamine | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyridine | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Aniline | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethyl)ether | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chlorophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dichlorobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dichlorobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzyl alcohol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dichlorobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachloroethane | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Nitrobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Isophorone | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitrophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dimethylphenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dichlorophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Naphthalene | ND | 0.0069 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Chloroaniline | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobutadiene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chloro-3-methylphenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Methylnaphthalene | ND | 0.0069 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 1-Methylnaphthalene | ND | 0.0069 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Hexachlorocyclopentadiene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,6-Trichlorophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3-Dichloroaniline | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4,5-Trichlorophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Chloronaphthalene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2-Nitroaniline | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,4-Dinitrobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dimethylphthalate | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,3-Dinitrobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,6-Dinitrotoluene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Dinitrobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthylene | 0.023 | 0.0069 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 3-Nitroaniline | ~~ND~~ | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |

MW 10-14-09

Date of Report: September 29, 2009
Samples Submitted: September 11, 2009
Laboratory Reference: 0909-103
Project: 10HD-09/10/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050762~~ 09090962 | | | | | |
| Laboratory ID: | 09-103-12 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.17 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Acenaphthene | 0.0082 | 0.0069 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4-Nitrophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,4-Dinitrotoluene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenzofuran | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Diethylphthalate | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Nitroaniline | ~~ND~~ | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluorene | 0.0087 | 0.0069 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.17 | EPA 8270 | 9-15-09 | 9-17-09 | |
| N-Nitrosodiphenylamine | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 1,2-Diphenylhydrazine | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 4-Bromophenyl-phenylether | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Hexachlorobenzene | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pentachlorophenol | ~~ND~~ | 0.17 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Phenanthrene | 0.16 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Anthracene | 0.051 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Carbazole | 0.038 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Di-n-butylphthalate | 1.3 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Fluoranthene | 0.44 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzidine | ~~ND~~ | 0.35 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Pyrene | 0.27 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Butylbenzylphthalate | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis-2-Ethylhexyladipate | ND | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 0.35 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]anthracene | 0.20 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Chrysene | 0.26 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| bis(2-Ethylhexyl)phthalate | 4.8 | 0.69 | EPA 8270 | 9-15-09 | 9-19-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[b]fluoranthene | 0.22 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[k]fluoranthene | 0.18 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Benzo[a]pyrene | 0.18 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Indeno[1,2,3-cd]pyrene | 0.095 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| Dibenz[a,h]anthracene | 0.033 | 0.0069 | EPA 8270/SIM | 9-15-09 | 9-15-09 | |
| Benzo[g,h,i]perylene | 0.10 | 0.035 | EPA 8270 | 9-15-09 | 9-17-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *57* | *19 - 97* | | | | |
| *Phenol-d6* | *76* | *22 - 108* | | | | |
| *Nitrobenzene-d5* | *59* | *21 - 106* | | | | |
| *2-Fluorobiphenyl* | *78* | *29 - 107* | | | | |
| *2,4,6-Tribromophenol* | *81* | *44 - 121* | | | | |
| *Terphenyl-d14* | *73* | *37 - 120* | | | | |

10-14-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 8 soil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09090902 | 09090903 | 09090916 | 09090917 | 09090959 |
| 09090960 | 09090961 | 07090963 | | |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of 4°C ± 2°C. The samples were collected on September 10, 2009, were extracted by September 19, 2009, and were analyzed by September 22, 2009, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol, benzidine, and benzoic acid. Associated positive results were qualified as estimated quantities (J).

4. **Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except 2,4-dinitrophenol, benzidine, and 3,3'-dichlorobenzidine with low recoveries in the

September 22, 2009 calibration. Associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050702~~ 0909002 | | | | | |
| Laboratory ID: | 09-127-01 | | | | | |
| N-Nitrosodimethylamine | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090902 | | | | | |
| **Client ID:** | ~~09050702~~ | | | | | |
| Laboratory ID: | 09-127-01 | | | | | |
| 2,4-Dinitrophenol | ND | 0.23 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.23 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Anthracene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzidine | ND | 0.46 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Butylbenzylphthalate | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.46 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Chrysene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ND | 0.046 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[a]pyrene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | ND | 0.0091 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *43* | *19 - 97* | | | | |
| *Phenol-d6* | *47* | *22 - 108* | | | | |
| *Nitrobenzene-d5* | *43* | *21 - 106* | | | | |
| *2-Fluorobiphenyl* | *51* | *29 - 107* | | | | |
| *2,4,6-Tribromophenol* | *76* | *44 - 121* | | | | |
| *Terphenyl-d14* | *68* | *37 - 120* | | | | |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | 09050703 MW | | | | | |
| Laboratory ID: | 09-127-02 | | | | | |
| N-Nitrosodimethylamine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW

MW 10/1/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050703~~ 09090903 | | | | | |
| Laboratory ID: | 09-127-02 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | 0.014 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Anthracene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | 0.028 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzidine | ND | 0.43 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | 0.027 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Butylbenzylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.43 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | 0.016 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Chrysene | 0.027 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | 0.039 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[k]fluoranthene | 0.015 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[a]pyrene | 0.032 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Indeno[1,2,3-cd]pyrene | 0.023 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | 0.028 | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *46* | *19 - 97* |
| *Phenol-d6* | *51* | *22 - 108* |
| *Nitrobenzene-d5* | *46* | *21 - 106* |
| *2-Fluorobiphenyl* | *59* | *29 - 107* |
| *2,4,6-Tribromophenol* | *76* | *44 - 121* |
| *Terphenyl-d14* | *67* | *37 - 120* |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090916 | | | | | |
| **Client ID:** | ~~09050715~~ MW | | | | | |
| Laboratory ID: | 09-127-03 | | | | | |
| N-Nitrosodimethylamine | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND MW | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | 0.0081 | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND MW | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | 0.011 | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND MW | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | 0.010 | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND MW | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050716~~ 0909016 | | | | | |
| Laboratory ID: | 09-127-03 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | 0.073 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Anthracene | 0.020 | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | 0.21 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzidine | ~~ND~~ | 0.41 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | 0.22 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Butylbenzylphthalate | 0.079 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.41 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | 0.13 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Chrysene | 0.13 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Ethylhexyl)phthalate | 0.070 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | 0.11 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[k]fluoranthene | 0.13 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]pyrene | 0.14 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Indeno[1,2,3-cd]pyrene | 0.086 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenz[a,h]anthracene | 0.021 | 0.0081 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | 0.099 | 0.041 | EPA 8270 | 9-19-09 | 9-22-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *53* | *19 - 97* |
| *Phenol-d6* | *59* | *22 - 108* |
| *Nitrobenzene-d5* | *57* | *21 - 106* |
| *2-Fluorobiphenyl* | *71* | *29 - 107* |
| *2,4,6-Tribromophenol* | *88* | *44 - 121* |
| *Terphenyl-d14* | *81* | *37 - 120* |

10-6-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050717~~ 09090917 | | | | | |
| Laboratory ID: | 09-127-04 | | | | | |
| N-Nitrosodimethylamine | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | 0909097 Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050717~~ | | | | | |
| Laboratory ID: | 09-127-04 | | | | | |
| 2,4-Dinitrophenol | ND | 0.19 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.19 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.19 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | 0.016 | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Anthracene | ND | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | 0.077 | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzidine | ~~ND~~ | 0.37 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | 0.084 | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Butylbenzylphthalate | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.37 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | 0.048 | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Chrysene | 0.054 | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Ethylhexyl)phthalate | 0.076 | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | 0.044 | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[k]fluoranthene | 0.045 | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]pyrene | 0.050 | 0.037 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Indeno[1,2,3-cd]pyrene | 0.020 | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Dibenz[a,h]anthracene | ~~ND~~ | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | 0.024 | 0.0075 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *31* | *19 - 97* |
| *Phenol-d6* | *38* | *22 - 108* |
| *Nitrobenzene-d5* | *36* | *21 - 106* |
| *2-Fluorobiphenyl* | *52* | *29 - 107* |
| *2,4,6-Tribromophenol* | *75* | *44 - 121* |
| *Terphenyl-d14* | *70* | *37 - 120* |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050759~~ 09090959 MW | | | | | |
| Laboratory ID: | 09-127-05 | | | | | |
| N-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW

MW 10-1-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050759~~ 09090959 | | | | | |
| Laboratory ID: | 09-127-05 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzidine | ND | 0.44 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Butylbenzylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Chrysene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[a]pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *50* | *19 - 97* |
| *Phenol-d6* | *56* | *22 - 108* |
| *Nitrobenzene-d5* | *52* | *21 - 106* |
| *2-Fluorobiphenyl* | *62* | *29 - 107* |
| *2,4,6-Tribromophenol* | *79* | *44 - 121* |
| *Terphenyl-d14* | *72* | *37 - 120* |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050706~~ 09090960 | | | | | |
| Laboratory ID: | 09-127-06 | | | | | |
| N-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | 09090960 Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050750~~ MW | | | | | |
| Laboratory ID: | 09-127-06 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzidine | ND | 0.44 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Butylbenzylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Chrysene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[a]pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | ND MW | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *51* | *19 - 97* |
| *Phenol-d6* | *57* | *22 - 108* |
| *Nitrobenzene-d5* | *57* | *21 - 106* |
| *2-Fluorobiphenyl* | *64* | *29 - 107* |
| *2,4,6-Tribromophenol* | *79* | *44 - 121* |
| *Terphenyl-d14* | *73* | *37 - 120* |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050761~~ 0909096 | | | | | |
| Laboratory ID: | 09-127-07 | | | | | |
| N-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~0905076 TW~~ 0909061 | | | | | |
| Laboratory ID: | 09-127-07 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzidine | ND | 0.44 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Butylbenzylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Chrysene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[a]pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | ND | 0.0088 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *37* | *19 - 97* | | | | |
| *Phenol-d6* | *43* | *22 - 108* | | | | |
| *Nitrobenzene-d5* | *41* | *21 - 106* | | | | |
| *2-Fluorobiphenyl* | *48* | *29 - 107* | | | | |
| *2,4,6-Tribromophenol* | *68* | *44 - 121* | | | | |
| *Terphenyl-d14* | *64* | *37 - 120* | | | | |

MW 10-1-09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| | 09090963 | | | | | |
| Client ID: | ~~090507631~~ | | | | | |
| Laboratory ID: | 09-127-08 | | | | | |
| N-Nitrosodimethylamine | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Chloroaniline | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 1-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 3-Nitroaniline | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW 10/6/09

Date of Report: October 1, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-127
Project: 10HD-09/10/09-0007

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | 09090963 Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050763~~ | | | | | |
| Laboratory ID: | 09-127-08 | | | | | |
| 2,4-Dinitrophenol | ND | 0.21 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4-Nitrophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.21 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.21 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Anthracene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Carbazole | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzidine | ND | 0.42 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Butylbenzylphthalate | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.42 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Chrysene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ND | 0.042 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[a]pyrene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |
| Benzo[g,h,i]perylene | ND NW | 0.0083 | EPA 8270/SIM | 9-19-09 | 9-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *41* | *19 - 97* |
| *Phenol-d6* | *45* | *22 - 108* |
| *Nitrobenzene-d5* | *44* | *21 - 106* |
| *2-Fluorobiphenyl* | *51* | *29 - 107* |
| *2,4,6-Tribromophenol* | *71* | *44 - 121* |
| *Terphenyl-d14* | *69* | *37 - 120* |

JMW 10-16-09

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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 16, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 2 soil and 2 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | |
|---|---|---|
| Soil | 09090901 | 09090904 |
| Water | 09090951 | 09090952 |

Incorrect sample numbers were provided to the laboratory and were listed on the sample result sheets. The data reviewer corrected the sample numbers to match those listed above.

**Data Qualifications:**

1. **Sample Holding Times: Satisfactory.**

The samples were received above the QC limits of 4°C ± 2°C; associated sample results were qualified as estimated quantities (J or UJ). The samples were collected on September 10, 2009, were extracted by September 19, 2009, and were analyzed by September 22, 2009, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol, benzidine, and benzoic acid. Associated positive results were qualified as estimated quantities (J).

4. **Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except 2,4-dinitrophenol, Benzidine, and 3,3'-dichlorobenzidine with high recoveries in the

September 22, 2009 soil calibration (positive results were qualified as estimated quantities [J or UJ]), and hexachlorocyclobutadiene and benzidine with low recoveries in the September 18, 2009 water continuing calibration [associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ)].

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)/Blank Spike (BS) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

## 12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050701~~ 0909090 | | | | | |
| Laboratory ID: | 09-128-01 | | | | | |
| N-Nitrosodimethylamine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 4-Chloroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 1-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Hexachlorocyclopentadiene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 3-Nitroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |

MW 10-16-09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050701~~ 09090901 | | | | | |
| Laboratory ID: | 09-128-01 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 4-Nitrophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Anthracene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Carbazole | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Benzidine | ND | 0.43 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Butylbenzylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ND | 0.43 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Chrysene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ND | 0.043 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Benzo[k]fluoranthene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Benzo[a]pyrene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Dibenz[a,h]anthracene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Benzo[g,h,i]perylene | ND | 0.0087 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *47* | *19 - 97* |
| *Phenol-d6* | *52* | *22 - 108* |
| *Nitrobenzene-d5* | *51* | *21 - 106* |
| *2-Fluorobiphenyl* | *58* | *29 - 107* |
| *2,4,6-Tribromophenol* | *68* | *44 - 121* |
| *Terphenyl-d14* | *70* | *37 - 120* |

MW 10/6/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050704~~ 09090904 | | | | | |
| Laboratory ID: | 09-128-02 | | | | | |
| N-Nitrosodimethylamine | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyridine | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Aniline | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethyl)ether | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chlorophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dichlorobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dichlorobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzyl alcohol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dichlorobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitroso-di-n-propylamine | 0.13 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachloroethane | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Nitrobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Isophorone | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitrophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dimethylphenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dichlorophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Naphthalene | ND | 0.0069 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 4-Chloroaniline | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobutadiene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chloro-3-methylphenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Methylnaphthalene | ND | 0.0069 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 1-Methylnaphthalene | ND | 0.0069 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Hexachlorocyclopentadiene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,6-Trichlorophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3-Dichloroaniline | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4,5-Trichlorophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Chloronaphthalene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2-Nitroaniline | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,4-Dinitrobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dimethylphthalate | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,3-Dinitrobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,6-Dinitrotoluene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Dinitrobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthylene | ND | 0.0069 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 3-Nitroaniline | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050704~~ 09090904 | | | | | |
| Laboratory ID: | 09-128-02 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.17 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Acenaphthene | 0.040 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitrophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,4-Dinitrotoluene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenzofuran | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Diethylphthalate | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Nitroaniline | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluorene | 0.027 | 0.0069 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.17 | EPA 8270 | 9-19-09 | 9-22-09 | |
| N-Nitrosodiphenylamine | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 1,2-Diphenylhydrazine | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 4-Bromophenyl-phenylether | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Hexachlorobenzene | ND | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pentachlorophenol | ND | 0.17 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Phenanthrene | 0.42 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Anthracene | 0.091 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Carbazole | 0.042 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-butylphthalate | ~~ND~~ | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Fluoranthene | 0.72 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzidine | ~~ND~~ | 0.34 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Pyrene | 0.55 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Butylbenzylphthalate | ~~ND~~ | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis-2-Ethylhexyladipate | 0.039 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 0.34 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]anthracene | 0.39 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Chrysene | 0.44 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| bis(2-Ethylhexyl)phthalate | 0.11 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Di-n-octylphthalate | ~~ND~~ | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[b]fluoranthene | 0.46 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[k]fluoranthene | 0.31 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Benzo[a]pyrene | 0.39 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Indeno[1,2,3-cd]pyrene | 0.21 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |
| Dibenz[a,h]anthracene | 0.071 | 0.0069 | EPA 8270/SIM | 9-19-09 | 9-22-09 | |
| Benzo[g,h,i]perylene | 0.21 | 0.034 | EPA 8270 | 9-19-09 | 9-22-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *52* | *19 - 97* |
| *Phenol-d6* | *60* | *22 - 108* |
| *Nitrobenzene-d5* | *48* | *21 - 106* |
| *2-Fluorobiphenyl* | *70* | *29 - 107* |
| *2,4,6-Tribromophenol* | *81* | *44 - 121* |
| *Terphenyl-d14* | *74* | *37 - 120* |

10/6/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~0905075~~ 0909095 | | | | | |
| Laboratory ID: | 09-128-03 | | | | | |
| N-Nitrosodimethylamine | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Pyridine | ND | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Phenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Aniline | ND | 5.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis(2-Chloroethyl)ether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Chlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,3-Dichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,4-Dichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Benzyl alcohol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2-Dichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Methylphenol (o-Cresol) | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis(2-Chloroisopropyl)ether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| N-Nitroso-di-n-propylamine | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Hexachloroethane | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Nitrobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Isophorone | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Nitrophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4-Dimethylphenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis(2-Chloroethoxy)methane | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4-Dichlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Naphthalene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 4-Chloroaniline | ND | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Hexachlorobutadiene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Chloro-3-methylphenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 1-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Hexachlorocyclopentadiene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4,6-Trichlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,3-Dichloroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4,5-Trichlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Chloronaphthalene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Nitroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,4-Dinitrobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Dimethylphthalate | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,3-Dinitrobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,6-Dinitrotoluene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2-Dinitrobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Acenaphthylene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 3-Nitroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |

MW 10/6/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050751~~ MW 090951 | | | | | |
| Laboratory ID: | 09-128-03 | | | | | |
| 2,4-Dinitrophenol | ND | 10 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Acenaphthene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 4-Nitrophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4-Dinitrotoluene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Dibenzofuran | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Diethylphthalate | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Chlorophenyl-phenylether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Nitroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Fluorene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| N-Nitrosodiphenylamine | ND | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2-Diphenylhydrazine | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Bromophenyl-phenylether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Hexachlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Pentachlorophenol | ND | 5.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Phenanthrene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Anthracene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Carbazole | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Di-n-butylphthalate | ND MW | 1.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Fluoranthene | 0.13 J | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzidine | ~~ND~~ MW | 10 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Pyrene | 0.14 J | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Butylbenzylphthalate | ND | 1.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis-2-Ethylhexyladipate | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 3,3'-Dichlorobenzidine | ND MW | 10 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Benzo[a]anthracene | 0.12 J | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Chrysene | 0.13 J | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 1.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Di-n-octylphthalate | ND MW | 1.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Benzo[b]fluoranthene | 0.13 J | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzo[k]fluoranthene | 0.040 J | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzo[a]pyrene | 0.085 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Indeno[1,2,3-cd]pyrene | 0.036 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Dibenz[a,h]anthracene | 0.14 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzo[g,h,i]perylene | 0.039 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *45* | *12 - 91* |
| *Phenol-d6* | *41* | *10 - 102* |
| *Nitrobenzene-d5* | *53* | *27 - 115* |
| *2-Fluorobiphenyl* | *52* | *37 - 111* |
| *2,4,6-Tribromophenol* | *84* | *48 - 121* |
| *Terphenyl-d14* | *67* | *47 - 116* |

MW 10-16-09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Client ID: | ~~09050752~~ 0909095-2 | | | | | |
| Laboratory ID: | 09-128-04 | | | | | |
| N-Nitrosodimethylamine | ND | 1.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Pyridine | ND | 10 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| Phenol | 2.6 J | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Aniline | ND | 5.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis(2-Chloroethyl)ether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Chlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,3-Dichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,4-Dichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Benzyl alcohol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2-Dichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Methylphenol (o-Cresol) | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis(2-Chloroisopropyl)ether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| N-Nitroso-di-n-propylamine | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Hexachloroethane | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Nitrobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Isophorone | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Nitrophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4-Dimethylphenol | 1.4 J | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis(2-Chloroethoxy)methane | ND | 1.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4-Dichlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Naphthalene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 4-Chloroaniline | ND | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Hexachlorobutadiene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Chloro-3-methylphenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 1-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Hexachlorocyclopentadiene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4,6-Trichlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,3-Dichloroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4,5-Trichlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Chloronaphthalene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2-Nitroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,4-Dinitrobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Dimethylphthalate | 11 J | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,3-Dinitrobenzene | ND | 1.0 UJ | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,6-Dinitrotoluene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2-Dinitrobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Acenaphthylene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 3-Nitroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |

MW 10/6/09

Date of Report: October 2, 2009
Samples Submitted: September 15, 2009
Laboratory Reference: 0909-128
Project: 10HD-09/10/09-0006

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | ~~09050752~~ 09090952 | | | | | |
| Laboratory ID: | 09-128-04 | | | | | |
| 2,4-Dinitrophenol | ND | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Acenaphthene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 4-Nitrophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,4-Dinitrotoluene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Dibenzofuran | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Diethylphthalate | 6.0 | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Chlorophenyl-phenylether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Nitroaniline | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Fluorene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| N-Nitrosodiphenylamine | ND | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 1,2-Diphenylhydrazine | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 4-Bromophenyl-phenylether | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Hexachlorobenzene | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Pentachlorophenol | ND | 5.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Phenanthrene | 0.18 | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Anthracene | ND | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Carbazole | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Di-n-butylphthalate | 1.9 | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Fluoranthene | 0.18 | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzidine | ~~ND~~ | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Pyrene | 0.18 | 0.10 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Butylbenzylphthalate | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| bis-2-Ethylhexyladipate | ND | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| 3,3'-Dichlorobenzidine | ND | 10 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Benzo[a]anthracene | 0.054 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Chrysene | 0.061 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| bis(2-Ethylhexyl)phthalate | 14 | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Di-n-octylphthalate | ~~ND~~ | 1.0 | EPA 8270 | 9-16-09 | 9-18-09 | |
| Benzo[b]fluoranthene | 0.062 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzo[k]fluoranthene | 0.028 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzo[a]pyrene | 0.036 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Indeno[1,2,3-cd]pyrene | 0.023 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Dibenz[a,h]anthracene | 0.018 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |
| Benzo[g,h,i]perylene | 0.028 | 0.010 | EPA 8270/SIM | 9-16-09 | 9-18-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *47* | *12 - 91* |
| *Phenol-d6* | *48* | *10 - 102* |
| *Nitrobenzene-d5* | *60* | *27 - 115* |
| *2-Fluorobiphenyl* | *73* | *37 - 111* |
| *2,4,6-Tribromophenol* | *83* | *48 - 121* |
| *Terphenyl-d14* | *73* | *47 - 116* |

MW 10/6/09

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# F October 2009 Data Memoranda

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**MEMORANDUM**

DATE: November 22, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Target Analyte List Metals (EPA Methods 200.8, 6010B, and 7470A) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The samples were numbered:

09101021 09101022 09101023 09101024

**Data Qualifications:**

**1. Sample Holding Times: Satisfactory.**

All liquid samples were preserved to a pH < 2 except sample 09101021; associated sample results are qualified as estimated quantities (J or UJ). The samples were maintained at 4°C (± 2°C). The samples were collected on October 15 or 16, 2009, and were analyzed by November 4, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No blank results affected the sample results.

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning and end of each sequence or at least twice every 8 hours, whichever was more frequent. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike and Matrix Spike Duplicate Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

<u>Data Qualifiers and Definitions</u>

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-136-01 | | | | | |
| **Client ID:** | **9101021** | | | | | |
| Aluminum | ND | 110 UJ | 6010B | 10-29-09 | 11-4-09 | |
| Antimony | ND | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Arsenic | ND | 3.3 | 200.8 | 10-29-09 | 10-29-09 | |
| Barium | ND | 28 | 200.8 | 10-29-09 | 10-29-09 | |
| Beryllium | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Cadmium | ND | 4.4 | 200.8 | 10-29-09 | 10-29-09 | |
| Calcium | 9600 J | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Chromium | ND | 11 UJ | 200.8 | 10-29-09 | 10-29-09 | |
| Cobalt | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Copper | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Iron | 120 J | 56 | 6010B | 10-29-09 | 11-4-09 | |
| Lead | ND | 1.1 UJ | 200.8 | 10-29-09 | 10-29-09 | |
| Magnesium | 3700 J | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Manganese | ND | 11 UJ | 200.8 | 10-29-09 | 10-29-09 | |
| Mercury | ND | 0.50 | 7470A | 10-21-09 | 10-21-09 | |
| Nickel | ND | 22 | 200.8 | 10-29-09 | 10-29-09 | |
| Potassium | 2800 J | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Selenium | ND | 5.6 UJ | 200.8 | 10-29-09 | 10-29-09 | |
| Silver | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Sodium | 4200 J | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Thallium | ND | 5.6 UJ | 200.8 | 10-29-09 | 10-29-09 | |
| Vanadium | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Zinc | ND | 56 | 200.8 | 10-29-09 | 10-29-09 | |

11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-136-02 | | | | | |
| **Client ID:** | **9101022** | | | | | |
| Aluminum | **120** | 110 | 6010B | 10-29-09 | 11-4-09 | |
| Antimony | ND | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Arsenic | ND | 3.3 | 200.8 | 10-29-09 | 10-29-09 | |
| Barium | ND | 28 | 200.8 | 10-29-09 | 10-29-09 | |
| Beryllium | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Cadmium | ND | 4.4 | 200.8 | 10-29-09 | 10-29-09 | |
| Calcium | **10000** | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Chromium | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Cobalt | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Copper | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Iron | **190** | 56 | 6010B | 10-29-09 | 11-4-09 | |
| Lead | ND | 1.1 | 200.8 | 10-29-09 | 10-29-09 | |
| Magnesium | **3900** | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Manganese | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Mercury | ND | 0.50 | 7470A | 10-21-09 | 10-21-09 | |
| Nickel | ND | 22 | 200.8 | 10-29-09 | 10-29-09 | |
| Potassium | **2900** | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Selenium | ND | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Silver | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Sodium | **4600** | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Thallium | ND | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Vanadium | ND | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Zinc | ND | 56 | 200.8 | 10-29-09 | 10-29-09 | |

JMW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-136-03 | | | | | |
| **Client ID:** | **9101023** | | | | | |
| Aluminum | ~~ND~~ | 110 | 6010B | 10-29-09 | 11-4-09 | |
| Antimony | ~~ND~~ | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Arsenic | ~~ND~~ | 3.3 | 200.8 | 10-29-09 | 10-29-09 | |
| Barium | ~~ND~~ | 28 | 200.8 | 10-29-09 | 10-29-09 | |
| Beryllium | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Cadmium | ~~ND~~ | 4.4 | 200.8 | 10-29-09 | 10-29-09 | |
| Calcium | 9900 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Chromium | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Cobalt | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Copper | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Iron | 82 | 56 | 6010B | 10-29-09 | 11-4-09 | |
| Lead | ~~ND~~ | 1.1 | 200.8 | 10-29-09 | 10-29-09 | |
| Magnesium | 3800 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Manganese | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Mercury | ~~ND~~ | 0.50 | 7470A | 10-21-09 | 10-21-09 | |
| Nickel | ~~ND~~ | 22 | 200.8 | 10-29-09 | 10-29-09 | |
| Potassium | 2800 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Selenium | ~~ND~~ | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Silver | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Sodium | 4300 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Thallium | ~~ND~~ | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Vanadium | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Zinc | ~~ND~~ | 56 | 200.8 | 10-29-09 | 10-29-09 | |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-136-04 | | | | | |
| **Client ID:** | **9101024** | | | | | |
| Aluminum | ~~ND~~ | 110 | 6010B | 10-29-09 | 11-4-09 | |
| Antimony | ~~ND~~ | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Arsenic | ~~ND~~ | 3.3 | 200.8 | 10-29-09 | 10-29-09 | |
| Barium | ~~ND~~ | 28 | 200.8 | 10-29-09 | 10-29-09 | |
| Beryllium | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Cadmium | ~~ND~~ | 4.4 | 200.8 | 10-29-09 | 10-29-09 | |
| Calcium | 10000 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Chromium | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Cobalt | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Copper | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Iron | 110 | 56 | 6010B | 10-29-09 | 11-4-09 | |
| Lead | ~~ND~~ | 1.1 | 200.8 | 10-29-09 | 10-29-09 | |
| Magnesium | 3900 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Manganese | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Mercury | ~~ND~~ | 0.50 | 7470A | 10-21-09 | 10-21-09 | |
| Nickel | ~~ND~~ | 22 | 200.8 | 10-29-09 | 10-29-09 | |
| Potassium | 2700 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Selenium | ~~ND~~ | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Silver | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Sodium | 4300 | 1100 | 6010B | 10-29-09 | 11-4-09 | |
| Thallium | ~~ND~~ | 5.6 | 200.8 | 10-29-09 | 10-29-09 | |
| Vanadium | ~~ND~~ | 11 | 200.8 | 10-29-09 | 10-29-09 | |
| Zinc | ~~ND~~ | 56 | 200.8 | 10-29-09 | 10-29-09 | |

MW 11-22-09

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**MEMORANDUM**

DATE: November 25, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 1 soil sample collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Target Analyte List Metals (EPA Methods 200.8, 6010B, and 7470A) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The sample was numbered: 09101047

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The sample was received at 15°C; no action was taken based on sample receipt at this temperature since these metals are known to be stable at this temperature. The sample was collected on October 17, 2009, and was analyzed by November 4, 2009, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No blank results affected any sample results.

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning and end of each sequence or at least twice every 8 hours, whichever was more frequent. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike and Matrix Spike Duplicate Analysis: Satisfactory.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits except barium and lead with low recoveries; associated positive sample results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**8. Duplicate Analysis: Acceptable.**

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

<u>Data Qualifiers and Definitions</u>

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 13, 2009
Samples Submitted: October 21, 2009
Laboratory Reference: 0910-172
Project: 10HD-10/21/09-0005

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-172-01 | | | | | |
| **Client ID:** | **9101047** | | | | | |
| Aluminum | **12000** | 66 | 6010B | 10-29-09 | 11-4-09 | |
| Antimony | **7.5** | 6.6 | 6010B | 10-29-09 | 11-4-09 | |
| Arsenic | ~~ND~~ | 13 U | 6010B | 11-2-09 | 11-4-09 | |
| Barium | **300** J | 33 | 6010B | 11-2-09 | 11-4-09 | |
| Beryllium | ~~ND~~ | 0.66 U | 6010B | 11-2-09 | 11-4-09 | |
| Cadmium | **10** | 0.66 | 6010B | 11-2-09 | 11-4-09 | |
| Calcium | **7800** | 660 | 6010B | 11-2-09 | 11-4-09 | |
| Chromium | **46** | 0.66 | 6010B | 11-2-09 | 11-4-09 | |
| Cobalt | **22** | 0.66 | 6010B | 11-2-09 | 11-4-09 | |
| Copper | **300** | 1.3 | 6010B | 11-2-09 | 11-4-09 | |
| Iron | **48000** | 33 | 6010B | 11-2-09 | 11-4-09 | |
| Lead | **840** J | 6.6 | 6010B | 10-29-09 | 11-4-09 | |
| Magnesium | **3300** | 66 | 6010B | 10-29-09 | 11-4-09 | |
| Manganese | **440** | 0.66 | 6010B | 11-2-09 | 11-4-09 | |
| Mercury | ~~ND~~ | 0.33 U | 7471A | 10-26-09 | 10-26-09 | |
| Nickel | **42** | 3.3 | 6010B | 11-2-09 | 11-4-09 | |
| Potassium | **2600** | 66 | 6010B | 11-2-09 | 11-4-09 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 11-2-09 | 11-4-09 | |
| Silver | ~~ND~~ | 0.66 U | 6010B | 11-2-09 | 11-4-09 | |
| Sodium | **590** | 66 | 6010B | 11-2-09 | 11-4-09 | |
| Thallium | ~~ND~~ | 6.6 U | 6020 | 11-2-09 | 11-4-09 | |
| Vanadium | **130** | 0.66 | 6010B | 11-2-09 | 11-4-09 | |
| Zinc | **1500** | 33 | 6010B | 11-2-09 | 11-4-09 | |

11-25-09

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**MEMORANDUM**

DATE: October 30, 2009

TO: Ryan Whitchurch, START-3 Project Manager, E & E, Portland, OR

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 4 soil and 11 oil samples collected from the Stubblefield Salvage site located in Walla Walla, Washington, has been completed. Analysis for Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 09101006 | 09101007 | 09101008 | 09101009 | 09101010 |
| 09101011 | 09101012 | 09101013 | 09101014 | 09101015 |
| 09101016 | 09101017 | 09101018 | 09101019 | 09101020 |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained at 4°C (± 2°C). The samples were collected on October 15, 2009, extracted by October 16, 2009, and were analyzed by October 16, 2009, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis; soil holding times were used in the absence of oil QC criteria.

**2. Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

**3. Initial and Continuing Calibration: Acceptable.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column. All continuing calibration % differences (% D) were less than 15% on at least one column and were within QC limits.

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

6. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

7. **System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

8. **Matrix and Blank Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

9. **Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

10. **Compound Identification: Acceptable.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

11. **Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

12. **Laboratory Contact**

No laboratory contact was required.

13. **Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 19, 2009
Samples Submitted: October 16, 2009
Lab Traveler: 0910-130
Project: 10HD-10/15/09-0002

## PCBs by EPA 8082

Matrix: Oil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101006** | | | | | |
| Laboratory ID: | 10-130-01 | | | | | |
| Aroclor 1016 | ND | 4.8 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *70* | *33-113* | | | | |
| **Client ID:** | **09101007** | | | | | |
| Laboratory ID: | 10-130-02 | | | | | |
| Aroclor 1016 | ND | 4.8 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | 15 | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.8 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | 7.6 | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.8 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *71* | *33-113* | | | | |
| **Client ID:** | **09101008** | | | | | |
| Laboratory ID: | 10-130-03 | | | | | |
| Aroclor 1016 | ND | 4.9 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *81* | *33-113* | | | | |

MW 10-30-09

Date of Report: October 19, 2009
Samples Submitted: October 16, 2009
Lab Traveler: 0910-130
Project: 10HD-10/15/09-0002

## PCBs by EPA 8082

Matrix: Oil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101009** | | | | | |
| Laboratory ID: | 10-130-04 | | | | | |
| Aroclor 1016 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *58* | *33-113* | | | | |
| **Client ID:** | **09101010** | | | | | |
| Laboratory ID: | 10-130-05 | | | | | |
| Aroclor 1016 | ND | 5.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 5.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 5.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | 13 | 5.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 5.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 5.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 5.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *67* | *33-113* | | | | |
| **Client ID:** | **09101011** | | | | | |
| Laboratory ID: | 10-130-06 | | | | | |
| Aroclor 1016 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *73* | *33-113* | | | | |

MW 10-30-09

Date of Report: October 19, 2009
Samples Submitted: October 16, 2009
Lab Traveler: 0910-130
Project: 10HD-10/15/09-0002

## PCBs by EPA 8082

Matrix: Oil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101012** | | | | | |
| Laboratory ID: | 10-130-07 | | | | | |
| Aroclor 1016 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | 11 | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *67* | *33-113* | | | | |
| **Client ID:** | **09101013** | | | | | |
| Laboratory ID: | 10-130-08 | | | | | |
| Aroclor 1016 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *60* | *33-113* | | | | |
| **Client ID:** | **09101014** | | | | | |
| Laboratory ID: | 10-130-09 | | | | | |
| Aroclor 1016 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *71* | *33-113* | | | | |

MW 10-30-09

Date of Report: October 19, 2009
Samples Submitted: October 16, 2009
Lab Traveler: 0910-130
Project: 10HD-10/15/09-0002

## PCBs by EPA 8082

Matrix: Oil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101019** | | | | | |
| Laboratory ID: | 10-130-14 | | | | | |
| Aroclor 1016 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.8 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *71* | *33-113* | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101020** | | | | | |
| Laboratory ID: | 10-130-15 | | | | | |
| Aroclor 1016 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 4.9 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *70* | *33-113* | | | | |

MN 10-30-09

Date of Report: October 19, 2009
Samples Submitted: October 16, 2009
Lab Traveler: 0910-130
Project: 10HD-10/15/09-0002

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101015** | | | | | |
| Laboratory ID: | 10-130-10 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.22 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ~~ND~~ | 0.22 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ~~ND~~ | 0.22 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | **0.96** | 0.22 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ~~ND~~ | 0.22 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | **2.9** | 0.22 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ~~ND~~ | 0.22 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *69* | *33-122* | | | | |

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101016** | | | | | |
| Laboratory ID: | 10-130-11 | | | | | |
| Aroclor 1016 | ~~ND~~ | 2.6 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ~~ND~~ | 2.6 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ~~ND~~ | 2.6 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | **11** | 2.6 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ~~ND~~ | 2.6 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | **4.2** | 2.6 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ~~ND~~ | 2.6 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *80* | *33-122* | | | | |

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101017** | | | | | |
| Laboratory ID: | 10-130-12 | | | | | |
| Aroclor 1016 | ~~ND~~ | 2.2 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ~~ND~~ | 2.2 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ~~ND~~ | 2.2 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | **11** | 2.2 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ~~ND~~ | 2.2 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | **17** | 2.2 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ~~ND~~ | 2.2 U | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *100* | *33-122* | | | | |

MW 10-30-09

Date of Report: October 19, 2009
Samples Submitted: October 16, 2009
Lab Traveler: 0910-130
Project: 10HD-10/15/09-0002

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101018** | | | | | |
| Laboratory ID: | 10-130-13 | | | | | |
| Aroclor 1016 | ND | 2.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1221 | ND | 2.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1232 | ND | 2.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1242 | 3.4 | 2.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1248 | ND | 2.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1254 | 5.6 | 2.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| Aroclor 1260 | ND | 2.0 | EPA 8082 | 10-16-09 | 10-16-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *80* | *33-122* | | | | |

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: November 22, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Chlorinated Pesticides (EPA Method 8081) and Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The samples were numbered:

| | | | |
|---|---|---|---|
| 09101021 | 09101022 | 09101023 | 09101024 |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained at < 4°C. The samples were collected on October 15 or 16, 2009, extracted by October 21, 2009, and were analyzed by October 26, 2009, therefore meeting QC criteria of less than 7 days between collection and water sample extraction and less than 40 days between extraction and analysis.

**2. Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

**3. Initial and Continuing Calibration: Satisfactory.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column and all continuing calibration results were within QC limits except heptachlor, endosulfan I, and dieldrin with low recoveries in the ICV, endrin with a high recovery associated with sample 09101021, endosulfan I and methoxychlor with low recoveries associated with all samples, and alpha BHC, delta BHC, gamma BHC, and methoxychlor with low recoveries associated with sample 09101022, 09101023, and 09101024. Associated positive results were qualified as estimated quantities (J) for high recovery outliers. Positive sample results and sample quantitation limits were qualified as estimated quantities (J or UJ) for low recovery outliers.

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

6. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

7. **System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

8. **Blank Spike and Matrix Spike Analyses: Satisfactory.**

Recoveries of all spiked analytes were within the appropriate control limits except aldrin with low recoveries in the water matrix spike and matrix spike duplicate (sample 09101021; associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]).

9. **Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

10. **Compound Identification: Acceptable.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

11. **Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

12. **Laboratory Contact**

No laboratory contact was required.

13. **Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

<u>Data Qualifiers and Definitions</u>

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## PCB's by EPA 8082

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101021** | | | | | |
| Laboratory ID: | 10-136-01 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *93* | *39-128* | | | | |
| **Client ID:** | **09101022** | | | | | |
| Laboratory ID: | 10-136-02 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *97* | *39-128* | | | | |
| **Client ID:** | **09101023** | | | | | |
| Laboratory ID: | 10-136-03 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *39-128* | | | | |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## PCB's by EPA 8082

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101024** | | | | | |
| Laboratory ID: | 10-136-04 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 10-21-09 | 10-23-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *40* | *39-128* | | | | |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101021** | | | | | |
| Laboratory ID: | 10-136-01 | | | | | |
| alpha-BHC | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-BHC | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| beta-BHC | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| delta-BHC | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Aldrin | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor Epoxide | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-Chlordane | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| alpha-Chlordane | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDE | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan I | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Dieldrin | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDD | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan II | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDT | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Aldehyde | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Methoxychlor | ND | 0.0098 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endsulfan Sulfate | ND | 0.0049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Ketone | ND | 0.020 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Toxaphene | ND | 0.049 | EPA 8081 | 10-20-09 | 10-26-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *68* | *30-93* | | | | |
| *DCB* | *77* | *40-107* | | | | |

MW 11-2-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101022** | | | | | |
| Laboratory ID: | 10-136-02 | | | | | |
| alpha-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| beta-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| delta-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Aldrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor Epoxide | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-Chlordane | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| alpha-Chlordane | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDE | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan I | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Dieldrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDD | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan II | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDT | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Aldehyde | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Methoxychlor | ND | 0.0097 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endsulfan Sulfate | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Ketone | ND | 0.019 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Toxaphene | ND | 0.048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *68* | *30-93* | | | | |
| *DCB* | *84* | *40-107* | | | | |

JMW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101023** | | | | | |
| Laboratory ID: | 10-136-03 | | | | | |
| alpha-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| beta-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| delta-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Aldrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor Epoxide | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-Chlordane | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| alpha-Chlordane | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDE | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan I | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Dieldrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDD | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan II | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDT | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Aldehyde | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Methoxychlor | ND | 0.0097 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endsulfan Sulfate | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Ketone | ND | 0.019 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Toxaphene | ND | 0.048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *73* | *30-93* | | | | |
| *DCB* | *86* | *40-107* | | | | |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## ORGANOCHLORINE PESTICIDES by EPA 8081

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101024** | | | | | |
| Laboratory ID: | 10-136-04 | | | | | |
| alpha-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| beta-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| delta-BHC | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Aldrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Heptachlor Epoxide | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| gamma-Chlordane | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| alpha-Chlordane | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDE | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan I | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Dieldrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDD | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endosulfan II | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| 4,4'-DDT | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Aldehyde | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Methoxychlor | ND | 0.0096 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endsulfan Sulfate | ND | 0.0048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Endrin Ketone | ND | 0.019 | EPA 8081 | 10-20-09 | 10-26-09 | |
| Toxaphene | ND | 0.048 | EPA 8081 | 10-20-09 | 10-26-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *TCMX* | *72* | *30-93* | | | | |
| *DCB* | *82* | *40-107* | | | | |

MW 11-22-09

**ecology and environment, inc.**
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**MEMORANDUM**

DATE: November 25, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 1 soil sample collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The sample was numbered: 09101047

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The sample was received at 15°C; no action was taken based on this receipt temperature since these compounds are known to be stable at this temperature. The sample was collected on October 17, 2009, extracted by October 23, 2009, and was analyzed by October 26, 2009, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis.

**2. Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was $\leq$ 0.3% for capillary column analyses.

**3. Initial and Continuing Calibration: Acceptable.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column. All continuing calibration % differences (% D) were less than 15% and were within QC limits.

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

6. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

7. **System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

8. **Matrix Spike and Matrix Spike Duplicates: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

9. **Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

10. **Compound Identification: Acceptable.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

11. **Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

12. **Laboratory Contact**

No laboratory contact was required.

13. **Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 13, 2009
Samples Submitted: October 21, 2009
Lab Traveler: 0910-172
Project: 10HD-10/21/09-0005

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101047** | | | | | |
| Laboratory ID: | 10-172-01 | | | | | |
| Aroclor 1016 | ND | 0.66 U | EPA 8082 | 10-23-09 | 10-26-09 | |
| Aroclor 1221 | ND | 0.66 | EPA 8082 | 10-23-09 | 10-26-09 | |
| Aroclor 1232 | ND MW | 0.66 | EPA 8082 | 10-23-09 | 10-26-09 | |
| Aroclor 1242 | 4.0 | 0.66 | EPA 8082 | 10-23-09 | 10-26-09 | |
| Aroclor 1248 | ~~ND~~ MW | 0.66 U | EPA 8082 | 10-23-09 | 10-26-09 | |
| Aroclor 1254 | 2.6 | 0.66 | EPA 8082 | 10-23-09 | 10-26-09 | |
| Aroclor 1260 | ~~ND~~ MW | 0.66 U | EPA 8082 | 10-23-09 | 10-26-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *100* | *33-122* | | | | |

MW 11-25-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: November 22, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Diesel Range total petroleum hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The samples were numbered:

09101021 09101022 09101023 09101024

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected on October 15 or 16, 2009, extracted by October 22, 2009, and analyzed by October 22, 2009, therefore meeting QC criteria of less than 7 days between collection and extraction for water samples, and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. **System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria.

7. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

8. **Blank Spikes: Acceptable.**

Applicable blank spike results were within QC limits.

9. **Duplicates: Acceptable.**

Duplicate results were acceptable.

10. **Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

11. **Laboratory Contact: Not Required.**

No laboratory contact was required.

12. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## NWTPH-Dx

Date Extracted: 10-22-09
Date Analyzed: 10-22-09

Matrix: Water
Units: mg/L (ppm)

| **Client ID:** | **09101021** | **09101022** | **09101023** |
|---|---|---|---|
| Lab ID: | 10-136-01 | 10-136-02 | 10-136-03 |
| Diesel Range: | ~~ND~~ | ~~ND~~ | ~~ND~~ |
| PQL: | 0.24 U | 0.25 U | 0.24 U |
| Identification: | --- | --- | --- |
| Lube Oil Range: | ~~ND~~ | ~~ND~~ | ~~ND~~ |
| PQL: | 0.39 U | 0.40 U | 0.39 U |
| Identification: | --- | --- | --- |
| Surrogate Recovery | | | |
| o-Terphenyl: | 96% | 94% | 93% |
| Flags: | Y | Y | Y |

11-2-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**NWTPH-Dx**

| | |
|---|---|
| Date Extracted: | 10-22-09 |
| Date Analyzed: | 10-22-09 |

| | |
|---|---|
| Matrix: | Water |
| Units: | mg/L (ppm) |

| | |
|---|---|
| **Client ID:** | **09101024** |
| Lab ID: | 10-136-04 |

| | |
|---|---|
| Diesel Range: | ~~ND~~ |
| PQL: | 0.25 U |
| Identification: | --- |

| | |
|---|---|
| Lube Oil Range: | ~~ND~~ |
| PQL: | 0.40 U |
| Identification: | --- |

| | |
|---|---|
| Surrogate Recovery | |
| o-Terphenyl: | 99% |
| Flags: | |

MW 11-22-09

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**MEMORANDUM**

DATE: November 25, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 1 soil sample collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Diesel Range total petroleum hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The sample was numbered: 09101047

**Data Qualifications:**

1. **Sample Holding Times: Satisfactory.**

The sample was received at 15°C; associated sample results were qualified as estimated quantities (J or UJ). The sample was collected on October 17, 2009, extracted by October 23, 2009, and analyzed by October 26, 2009, therefore meeting QC criteria of less than 14 days between collection and extraction for soil samples, and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were greater than or equal to 0.995.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All applicable percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. **System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria except when diluted out due to high analyte concentrations in the sample; no action was taken based on these outliers.

7. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

8. **Blank Spikes: Acceptable.**

Applicable blank spike results were within QC limits.

9. **Duplicates: Acceptable.**

Duplicate results were acceptable.

10. **Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

11. **Laboratory Contact: Not Required.**

No laboratory contact was required.

12. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 13, 2009
Samples Submitted: October 21, 2009
Laboratory Reference: 0910-172
Project: 10HD-10/21/09-0005

## NWTPH-Dx

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | | PQL | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-172-01 | | | | | |
| **Client ID:** | **09101047** | | | | | |
| Diesel Range Organics | **12000** | J | 330 | 10-23-09 | 10-26-09 | Y |
| Lube Oil | **18000** | J | 660 | 10-23-09 | 10-26-09 | Y |
| Surrogate: o-terphenyl | --- | | 50-150 | | | S |

MW

MW
11-25-09

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**MEMORANDUM**

DATE: November 22, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Semivolatile Organic Compounds (EPA Method 8270) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The samples were numbered:

09101021 09101022 09101023 09101024

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected on October 15 or 16, 2009, were extracted by October 21, 2009, and were analyzed by October 21, 2009, therefore meeting holding time criteria of less than 7 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 1,4-dinitrobenzene, 2,4-dinitrophenol, and benzoic acid; associated positive results were qualified as estimated quantities (J).

4. **Continuing Calibration: Acceptable.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 %.

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101021** | | | | | |
| Laboratory ID: | 10-136-01 | | | | | |
| N-Nitrosodimethylamine | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyridine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Aniline | ND | 4.9 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethyl)ether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzyl alcohol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachloroethane | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Nitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Isophorone | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitrophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dimethylphenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dichlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Naphthalene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Chloroaniline | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobutadiene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chloro-3-methylphenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylnaphthalene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 1-Methylnaphthalene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,6-Trichlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3-Dichloroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,5-Trichlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chloronaphthalene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dinitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dimethylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dinitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,6-Dinitrotoluene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dinitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthylene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 3-Nitroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |

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MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101021** | | | | | |
| Laboratory ID: | 10-136-01 | | | | | |
| 2,4-Dinitrophenol | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Nitrophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dinitrotoluene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dibenzofuran | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Diethylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Nitroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluorene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.9 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitrosodiphenylamine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Diphenylhydrazine | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Bromophenyl-phenylether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pentachlorophenol | ND | 4.9 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenanthrene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Anthracene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Carbazole | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-butylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluoranthene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzidine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyrene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Butylbenzylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis-2-Ethylhexyladipate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 3,3'-Dichlorobenzidine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[a]anthracene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Chrysene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-octylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[b]fluoranthene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[a]pyrene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[g,h,i]perylene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *20* | *12 - 91* | | | | |
| *Phenol-d6* | *14* | *10 - 102* | | | | |
| *Nitrobenzene-d5* | *28* | *27 - 115* | | | | |
| *2-Fluorobiphenyl* | *31* | *37 - 111* | | | | * |
| *2,4,6-Tribromophenol* | *82* | *48 - 121* | | | | |
| *Terphenyl-d14* | *82* | *47 - 116* | | | | |

JMW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101022** | | | | | |
| Laboratory ID: | 10-136-02 | | | | | |
| N-Nitrosodimethylamine | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyridine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Aniline | ND | 4.9 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethyl)ether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzyl alcohol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachloroethane | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Nitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Isophorone | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitrophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dimethylphenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dichlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Naphthalene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Chloroaniline | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobutadiene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chloro-3-methylphenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylnaphthalene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 1-Methylnaphthalene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,6-Trichlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3-Dichloroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,5-Trichlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chloronaphthalene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dinitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dimethylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dinitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,6-Dinitrotoluene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dinitrobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthylene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 3-Nitroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101022** | | | | | |
| Laboratory ID: | 10-136-02 | | | | | |
| 2,4-Dinitrophenol | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Nitrophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dinitrotoluene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dibenzofuran | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Diethylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Nitroaniline | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluorene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.9 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitrosodiphenylamine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Diphenylhydrazine | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Bromophenyl-phenylether | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobenzene | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pentachlorophenol | ND | 4.9 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenanthrene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Anthracene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Carbazole | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-butylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluoranthene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzidine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyrene | ND | 0.098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Butylbenzylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis-2-Ethylhexyladipate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 3,3'-Dichlorobenzidine | ND | 9.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[a]anthracene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Chrysene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-octylphthalate | ND | 0.98 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[b]fluoranthene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[a]pyrene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[g,h,i]perylene | ND | 0.0098 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *35* | *12 - 91* | | | | |
| *Phenol-d6* | *25* | *10 - 102* | | | | |
| *Nitrobenzene-d5* | *49* | *27 - 115* | | | | |
| *2-Fluorobiphenyl* | *60* | *37 - 111* | | | | |
| *2,4,6-Tribromophenol* | *97* | *48 - 121* | | | | |
| *Terphenyl-d14* | *79* | *47 - 116* | | | | |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101023** | | | | | |
| Laboratory ID: | 10-136-03 | | | | | |
| N-Nitrosodimethylamine | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyridine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Aniline | ND | 4.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethyl)ether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzyl alcohol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachloroethane | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Nitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Isophorone | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitrophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dimethylphenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dichlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Naphthalene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Chloroaniline | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobutadiene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chloro-3-methylphenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 1-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,6-Trichlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3-Dichloroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,5-Trichlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chloronaphthalene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dinitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dimethylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dinitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,6-Dinitrotoluene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dinitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthylene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 3-Nitroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |

MW 11-7-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101023** | | | | | |
| Laboratory ID: | 10-136-03 | | | | | |
| 2,4-Dinitrophenol | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Nitrophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dinitrotoluene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dibenzofuran | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Diethylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Nitroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluorene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitrosodiphenylamine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Diphenylhydrazine | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Bromophenyl-phenylether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pentachlorophenol | ND | 4.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenanthrene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Anthracene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Carbazole | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-butylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluoranthene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzidine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyrene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Butylbenzylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis-2-Ethylhexyladipate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 3,3'-Dichlorobenzidine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[a]anthracene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Chrysene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-octylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[b]fluoranthene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[a]pyrene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[g,h,i]perylene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *40* | *12 - 91* |
| *Phenol-d6* | *28* | *10 - 102* |
| *Nitrobenzene-d5* | *57* | *27 - 115* |
| *2-Fluorobiphenyl* | *66* | *37 - 111* |
| *2,4,6-Tribromophenol* | *98* | *48 - 121* |
| *Terphenyl-d14* | *80* | *47 - 116* |

MW 11-12-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101024** | | | | | |
| Laboratory ID: | 10-136-04 | | | | | |
| N-Nitrosodimethylamine | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyridine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Aniline | ND | 4.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethyl)ether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzyl alcohol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylphenol (o-Cresol) | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroisopropyl)ether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitroso-di-n-propylamine | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachloroethane | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Nitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Isophorone | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitrophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dimethylphenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis(2-Chloroethoxy)methane | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dichlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2,4-Trichlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Naphthalene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Chloroaniline | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobutadiene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chloro-3-methylphenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 1-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Hexachlorocyclopentadiene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,6-Trichlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3-Dichloroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4,5-Trichlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Chloronaphthalene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2-Nitroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,4-Dinitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dimethylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,3-Dinitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,6-Dinitrotoluene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Dinitrobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthylene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 3-Nitroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |

MW 11-12-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101024** | | | | | |
| Laboratory ID: | 10-136-04 | | | | | |
| 2,4-Dinitrophenol | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Acenaphthene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4-Nitrophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,4-Dinitrotoluene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Dibenzofuran | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Diethylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Chlorophenyl-phenylether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Nitroaniline | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluorene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| N-Nitrosodiphenylamine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 1,2-Diphenylhydrazine | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 4-Bromophenyl-phenylether | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Hexachlorobenzene | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pentachlorophenol | ND | 4.8 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Phenanthrene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Anthracene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Carbazole | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-butylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Fluoranthene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzidine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Pyrene | ND | 0.096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Butylbenzylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| bis-2-Ethylhexyladipate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| 3,3'-Dichlorobenzidine | ND | 9.6 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[a]anthracene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Chrysene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Di-n-octylphthalate | ND | 0.96 | EPA 8270 | 10-21-09 | 10-21-09 | |
| Benzo[b]fluoranthene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[k]fluoranthene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[a]pyrene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Dibenz[a,h]anthracene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| Benzo[g,h,i]perylene | ND | 0.0096 | EPA 8270/SIM | 10-21-09 | 10-21-09 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *22* | *12 - 91* | | | | |
| *Phenol-d6* | *17* | *10 - 102* | | | | |
| *Nitrobenzene-d5* | *48* | *27 - 115* | | | | |
| *2-Fluorobiphenyl* | *57* | *37 - 111* | | | | |
| *2,4,6-Tribromophenol* | *90* | *48 - 121* | | | | |
| *Terphenyl-d14* | *74* | *47 - 116* | | | | |

MW 11-2-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: November 25, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 1 soil sample collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Semivolatile Organic Compounds (EPA Methods 8270 and 8270 SIM) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The sample was numbered: 09101047

**Data Qualifications:**

**1. Sample Holding Times: Satisfactory.**

The sample was received at 15°C; associated sample results were qualified as estimated quantities (J or UJ). The sample was collected on October 17, 2009, was extracted by October 26, 2009, and was analyzed by October 28, 2009, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

**2. Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

**3. Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 1,4-dinitrobenzene, 2,4-dinitrophenol, and benzoic acid in the 10-16-09 calibration and 2,4-dinitrophenol and benzidine in the 10-29-09 calibration; associated positive results were qualified as estimated quantities (J).

**4. Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except hexachlorocyclopentadiene with a low recovery (associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]) and n-decane, 2,3-dichloroaniline, benzoic acid, Benzidine, and butylbenzylphthalate with high recoveries (associated positive results and sample quantitation limits were qualified as estimated quantities [J or UJ]).

5. **Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank that affected sample results.

6. **System Monitoring Compounds (SMCs): Satisfactory.**

All SMC recoveries were within QC limits except one high base/neutral SMC; no action was taken based on one outlier per sample per fraction.

7. **Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

8. **Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

9. **Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

10. **Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

11. **Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

12. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 13, 2009
Samples Submitted: October 21, 2009
Laboratory Reference: 0910-172
Project: 10HD-10/21/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101047** | | | | | |
| Laboratory ID: | 10-172-01 | | | | | |
| N-Nitrosodimethylamine | ND | 2.2 UJ | EPA 8270 | 10-26-09 | 10-28-09 | |
| Pyridine | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Phenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Aniline | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| bis(2-Chloroethyl)ether | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2-Chlorophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,3-Dichlorobenzene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,4-Dichlorobenzene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Benzyl alcohol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,2-Dichlorobenzene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2-Methylphenol (o-Cresol) | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| bis(2-Chloroisopropyl)ether | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| N-Nitroso-di-n-propylamine | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Hexachloroethane | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Nitrobenzene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Isophorone | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2-Nitrophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,4-Dimethylphenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| bis(2-Chloroethoxy)methane | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,4-Dichlorophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,2,4-Trichlorobenzene | ND m | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Naphthalene | 0.053 J | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| 4-Chloroaniline | ND | 2.2 UJ | EPA 8270 | 10-26-09 | 10-28-09 | |
| Hexachlorobutadiene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 4-Chloro-3-methylphenol | ND m | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2-Methylnaphthalene | 0.097 J | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| 1-Methylnaphthalene | 0.066 J | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| Hexachlorocyclopentadiene | ND | 2.2 UJ | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,4,6-Trichlorophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,3-Dichloroaniline | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,4,5-Trichlorophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2-Chloronaphthalene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2-Nitroaniline | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,4-Dinitrobenzene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Dimethylphthalate | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,3-Dinitrobenzene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,6-Dinitrotoluene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,2-Dinitrobenzene | ND m | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Acenaphthylene | 0.061 J | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| 3-Nitroaniline | ~~ND~~ m | 2.2 UJ | EPA 8270 | 10-26-09 | 10-28-09 | |

 MW 11-25-09

Date of Report: November 13, 2009
Samples Submitted: October 21, 2009
Laboratory Reference: 0910-172
Project: 10HD-10/21/09-0005

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **09101047** | | | | | |
| Laboratory ID: | 10-172-01 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 11 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Acenaphthene | **0.18** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| 4-Nitrophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,4-Dinitrotoluene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Dibenzofuran | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,3,5,6-Tetrachlorophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 2,3,4,6-Tetrachlorophenol | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Diethylphthalate | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 4-Chlorophenyl-phenylether | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 4-Nitroaniline | ~~ND~~ | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Fluorene | **0.13** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| 4,6-Dinitro-2-methylphenol | ND | 11 | EPA 8270 | 10-26-09 | 10-28-09 | |
| N-Nitrosodiphenylamine | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 1,2-Diphenylhydrazine | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 4-Bromophenyl-phenylether | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Hexachlorobenzene | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Pentachlorophenol | ~~ND~~ | 11 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Phenanthrene | **0.96** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| Anthracene | **0.53** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| Carbazole | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Di-n-butylphthalate | ~~ND~~ | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Fluoranthene | **7.8** | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Benzidine | ~~ND~~ | 22 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Pyrene | **7.6** | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Butylbenzylphthalate | **3.6** | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| bis-2-Ethylhexyladipate | ND | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 22 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Benzo[a]anthracene | **2.5** | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Chrysene | **2.8** | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| bis(2-Ethylhexyl)phthalate | **12** | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Di-n-octylphthalate | ~~ND~~ | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Benzo[b]fluoranthene | **2.6** | 2.2 | EPA 8270 | 10-26-09 | 10-28-09 | |
| Benzo[k]fluoranthene | **0.86** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| Benzo[a]pyrene | **1.2** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| Indeno[1,2,3-cd]pyrene | **0.51** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| Dibenz[a,h]anthracene | **0.18** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |
| Benzo[g,h,i]perylene | **0.57** | 0.035 | EPA 8270/SIM | 10-26-09 | 10-28-09 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *63* | *19 - 97* |
| *Phenol-d6* | *85* | *22 - 108* |
| *Nitrobenzene-d5* | *82* | *21 - 106* |
| *2-Fluorobiphenyl* | *89* | *29 - 107* |
| *2,4,6-Tribromophenol* | *104* | *44 - 121* |
| *Terphenyl-d14* | *123* | *37 - 120* |

11-25-09

**ecology and environment, inc.**
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**MEMORANDUM**

DATE: November 22, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Removal Oversight Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 8 water samples collected from the Stubblefield Salvage Removal Oversight site located in Walla Walla, Washington, has been completed. Analysis for Volatile Organic Compounds (EPA Method 8260) was performed by OnSite Environmental Laboratory, Inc., Redmond, Washington.

The samples were numbered:

| | | | | | |
|---|---|---|---|---|---|
| 09101021 | 09101022 | 09101023 | 09101024 | 09101025 | 09101026 |
| 09101027 | 09101028 | | | | |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of <6°C. The samples were collected between October 15 and 17, 2009, and were analyzed by October 22, 2009, therefore meeting QC criteria of less than 14 days between collection and analysis for preserved water samples.

**2. Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

**3. Initial Calibration: Acceptable.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limits of 30% except acetone and iodomethane; associated positive sample results were qualified as estimated quantities (J).

**4. Continuing Calibration: Acceptable.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limits of 25%.

5. **Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

6. **System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

7. **Matrix Spike (MS)/MS Duplicate (MSD)/Blank Spike (BS)/BS Duplicate (BSD) Analysis: Acceptable.**

MS, MSD, BS, and BSD analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within QC limits.

8. **Duplicate Analysis: Acceptable.**

Laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

9. **Internal Standards: Acceptable.**

All internal standards were within $\pm$ 30 seconds of the continuing calibration internal standard retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

10. **Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

11. **Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

12. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## VOLATILES by EPA 8260B

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| | |
|---|---|
| Date Extracted: | 10-22-09 |
| Date Analyzed: | 10-22-09 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-136-01 |
| **Client ID:** | **09101021** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| 2-Chloroethyl Vinyl Ether | ND | | 1.0 |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

MN

MN 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-01
**Client ID: 09101021**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 85 | 71-126 |
| Toluene-d8 | 87 | 76-116 |
| 4-Bromofluorobenzene | 84 | 70-123 |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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| | |
|---|---|
| Date Extracted: | 10-22-09 |
| Date Analyzed: | 10-22-09 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-136-02 |
| **Client ID:** | **09101022** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| 2-Chloroethyl Vinyl Ether | ND | | 1.0 |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-02
**Client ID: 09101022**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 89 | 71-126 |
| Toluene-d8 | 90 | 76-116 |
| 4-Bromofluorobenzene | 88 | 70-123 |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## VOLATILES by EPA 8260B



Date Extracted: 10-22-09
Date Analyzed: 10-22-09

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-136-03
**Client ID: 09101023**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| 2-Chloroethyl Vinyl Ether | ND | | 1.0 |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-03
**Client ID: 09101023**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 93 | 71-126 |
| Toluene-d8 | 90 | 76-116 |
| 4-Bromofluorobenzene | 88 | 70-123 |

mw 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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| | |
|---|---|
| Date Extracted: | 10-22-09 |
| Date Analyzed: | 10-22-09 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-136-04 |
| **Client ID:** | **09101024** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| 2-Chloroethyl Vinyl Ether | ND | | 1.0 |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-04
**Client ID: 09101024**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 91 | 71-126 |
| Toluene-d8 | 91 | 76-116 |
| 4-Bromofluorobenzene | 89 | 70-123 |

JMW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

## VOLATILES by EPA 8260B

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| | |
|---|---|
| Date Extracted: | 10-22-09 |
| Date Analyzed: | 10-22-09 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-136-05 |
| **Client ID:** | **09101025** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| 2-Chloroethyl Vinyl Ether | ND | | 1.0 |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

MW 11-2-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-05
**Client ID: 09101025**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 90 | 71-126 |
| Toluene-d8 | 91 | 76-116 |
| 4-Bromofluorobenzene | 90 | 70-123 |





11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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| | |
|---|---|
| Date Extracted: | 10-22-09 |
| Date Analyzed: | 10-22-09 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-136-06 |
| **Client ID:** | **09101026** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| 2-Chloroethyl Vinyl Ether | ND | | 1.0 |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |





MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-06
**Client ID: 09101026**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 93 | 71-126 |
| Toluene-d8 | 91 | 76-116 |
| 4-Bromofluorobenzene | 87 | 70-123 |





MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-07
**Client ID: 09101027**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 90 | 71-126 |
| Toluene-d8 | 93 | 76-116 |
| 4-Bromofluorobenzene | 88 | 70-123 |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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| | |
|---|---|
| Date Extracted: | 10-22-09 |
| Date Analyzed: | 10-22-09 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-136-08 |
| **Client ID:** | **09101028** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| 2-Chloroethyl Vinyl Ether | ND | | 1.0 |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

MW 11-22-09

Date of Report: November 9, 2009
Samples Submitted: October 19, 2009
Laboratory Reference: 0910-136
Project: 10HD-10/17/09-0003

**VOLATILES by EPA 8260B**
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Lab ID: 10-136-08
**Client ID: 09101028**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

MW

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 91 | 71-126 |
| Toluene-d8 | 91 | 76-116 |
| 4-Bromofluorobenzene | 88 | 70-123 |

MW 11-22-09

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: October 30, 2009

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Geotechnical Analyses Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-09-0010 PAN: 002233.0493.01RA

The data quality assurance review of 1 soil sample collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Soil classification (ASTM method D2487), atterberg limits (ASTM method D4318), moisture content (ASTM method D2216), and grain size distribution (ASTM methods D421/D422) analyses were performed by Analytical Resources, Inc., Tukwila, Washington.

The sample was numbered: 09101048

The sample was collected on October 17, 2009, and was analyzed by October 29, 2009. No QA/QC information was required for these analyses.

**Data Qualifications:**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Ecology and Environment, Inc.
10HD-10/21/09-0006

Percent Finer (Passing) Than the Indicated Size

| Sieve Size (microns) | 3" | 2" | 1 1/2" | 1" | 3/4" | 1/2" | 3/8" | #4 (4750) | #10 (2000) | #20 (850) | #40 (425) | #60 (250) | #100 (150) | #200 (75) | 32 | 22 | 13 | 9 | 7 | 3.2 | 1.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9101048 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 99.3 | 98.4 | 97.3 | 95.1 | 90.0 | 79.2 | 52.1 | 41.3 | 29.8 | 24.4 | 18.9 | 12.9 | 8.1 |

Testing performed according to ASTM D421/D422

PT66

MW 10-30-09

Ecology and Environment, Inc.
10HD-10/21/09-0006

Percent Retained In Each Size Fraction

| Description | %Coarse Gravel | | | | % Gravel | | | % Coarse Sand | % Medium Sand | | % Fine Sand | | | % Very Coarse Silt | % Coarse Silt | % Medium Silt | % Fine Silt | % Fine Silt | % Very Fine Silt | % Clay |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Particle Size (microns) | 3-2" | 2-1 1/2" | 1 1/2"-1" | 1-3/4" | 3/4-1/2" | 1/2-3/8" | 3/8"-4750 | 4750-2000 | 2000-850 | 850-425 | 425-250 | 250-150 | 150-75 | 75-32 | 32-22 | 22-13 | 13-9 | 9-7 | 7-3.2 | <3.2 |
| 9101048 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.9 | 1.1 | 2.2 | 5.1 | 10.8 | 27.1 | 10.8 | 11.5 | 5.4 | 5.4 | 6.1 | 12.9 |

PT66

MW 10-28-09

A

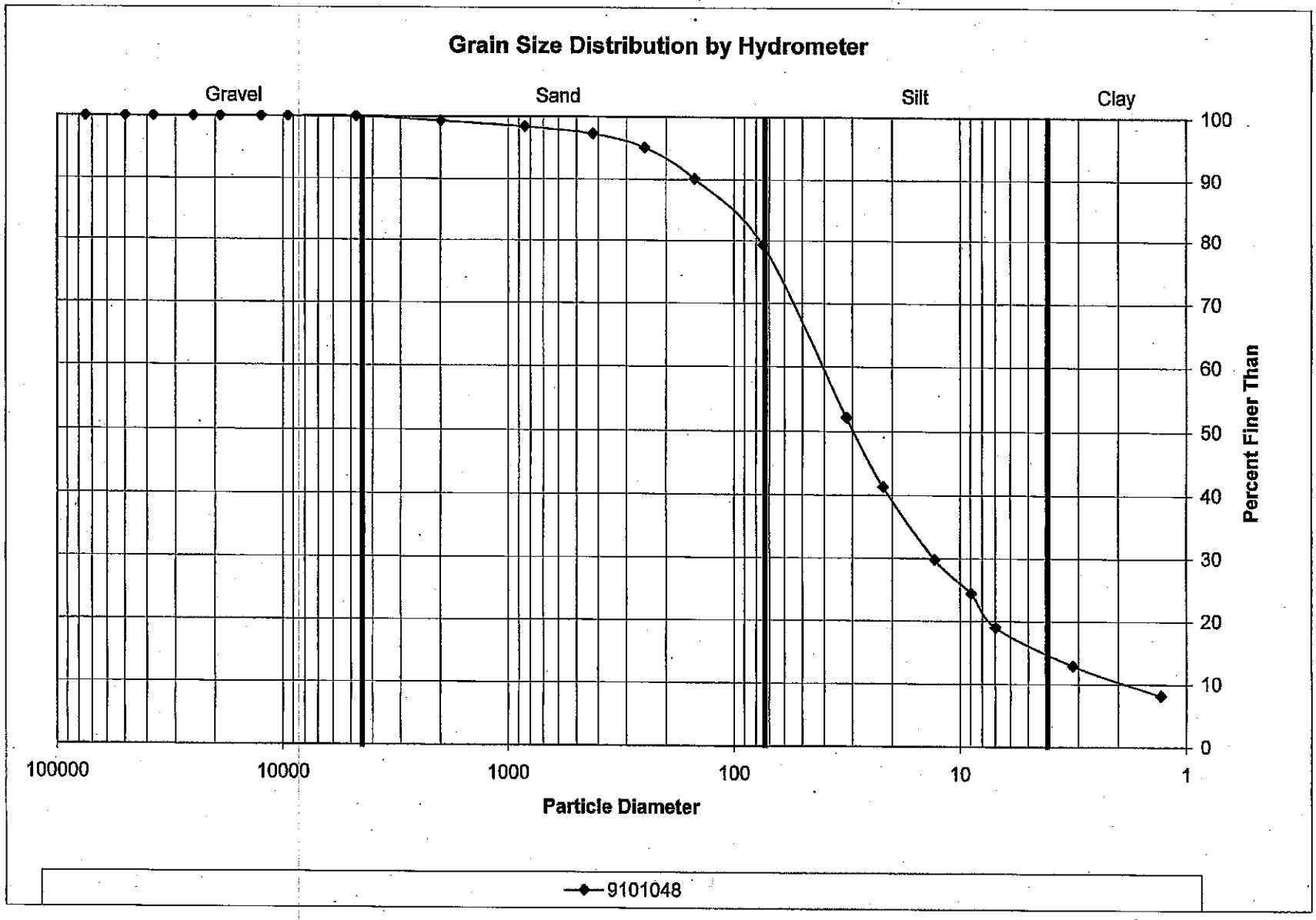
| Sample Number: | 9101046 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 99.34 | 98.43 | 97.33 | 95.13 | 90.05 | 79.24 | 52.09 | 41.27 | 29.77 | 24.36 | 18.94 | 12.85 | 8.12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 125000 | 75000 | 50000 | 37500 | 25000 | 19000 | 12500 | 9500 | 4750 | 2000 | 850 | 425 | 250 | 150 | 75 | 28.9 | 19.6 | 12.0 | 8.7 | 6.3 | 3.2 | 1.36 |
| Test Temperature | 20 | 5" | 3" | 2" | 1.5" | 1" | 3/4" | 1/2" | 3/8" | 4 | 10 | 20 | 40 | 60 | 100 | 200 | | | | | | | |
| Specific Gravity | 2.65 | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---|---|
| Wet Wt & Tare | 23.34 |
| Dry Wt & Tare | 22.58 |
| Wt Moisture | 0.76 |
| Wt Tare | 1.56 |
| Dry Soil | 21.02 |
| Moisture Content | 0.036156042 |
| Air Dry Total Sample | 153.37 |
| Oven Dry Total Samp | 148.0520937 |
| Air Dry Hydro Sample | 76.18 |
| Oven Dry Wt Hydro | 73.52174472 |
| Amount Plus #10 | 0.97 |
| W (14.2) = | 74.00861742 |

| Sieve Analysis Portion | | | | | |
|---|---|---|---|---|---|
| Sieve Size | Weight of Soil + Tare | Total Weight of Soil | | Percent Retained | Percent Passing |
| 5" | 10.02 | 0.00 | | 0.00 | 100.00 |
| 3" | 10.02 | 0.00 | | 0.00 | 100.00 |
| 2" | 10.02 | 0.00 | | 0.00 | 100.00 |
| 1.5" | 10.02 | 0.00 | | 0.00 | 100.00 |
| 1 | 10.02 | 0.00 | | 0.00 | 100.00 |
| 3/4 | 10.02 | 0.00 | | 0.00 | 100.00 |
| 1/2 | 10.02 | 0.00 | | 0.00 | 100.00 |
| 3/8 | 10.02 | 0.00 | | 0.00 | 100.00 |
| 4 | 10.02 | 0.00 | | 0.00 | 100.00 |
| 10 | 10.99 | 0.97 | | 0.66 | 99.34 |
| 20 | 11.67 | 0.68 | 0.92 | 1.57 | 98.43 |
| 40 | 12.48 | 1.49 | 2.01 | 2.67 | 97.33 |
| 60 | 14.11 | 3.12 | 4.22 | 4.87 | 95.13 |
| 100 | 17.87 | 6.86 | 9.30 | 9.95 | 90.05 |
| 200 | 25.87 | 14.88 | 20.11 | 20.76 | 79.24 |

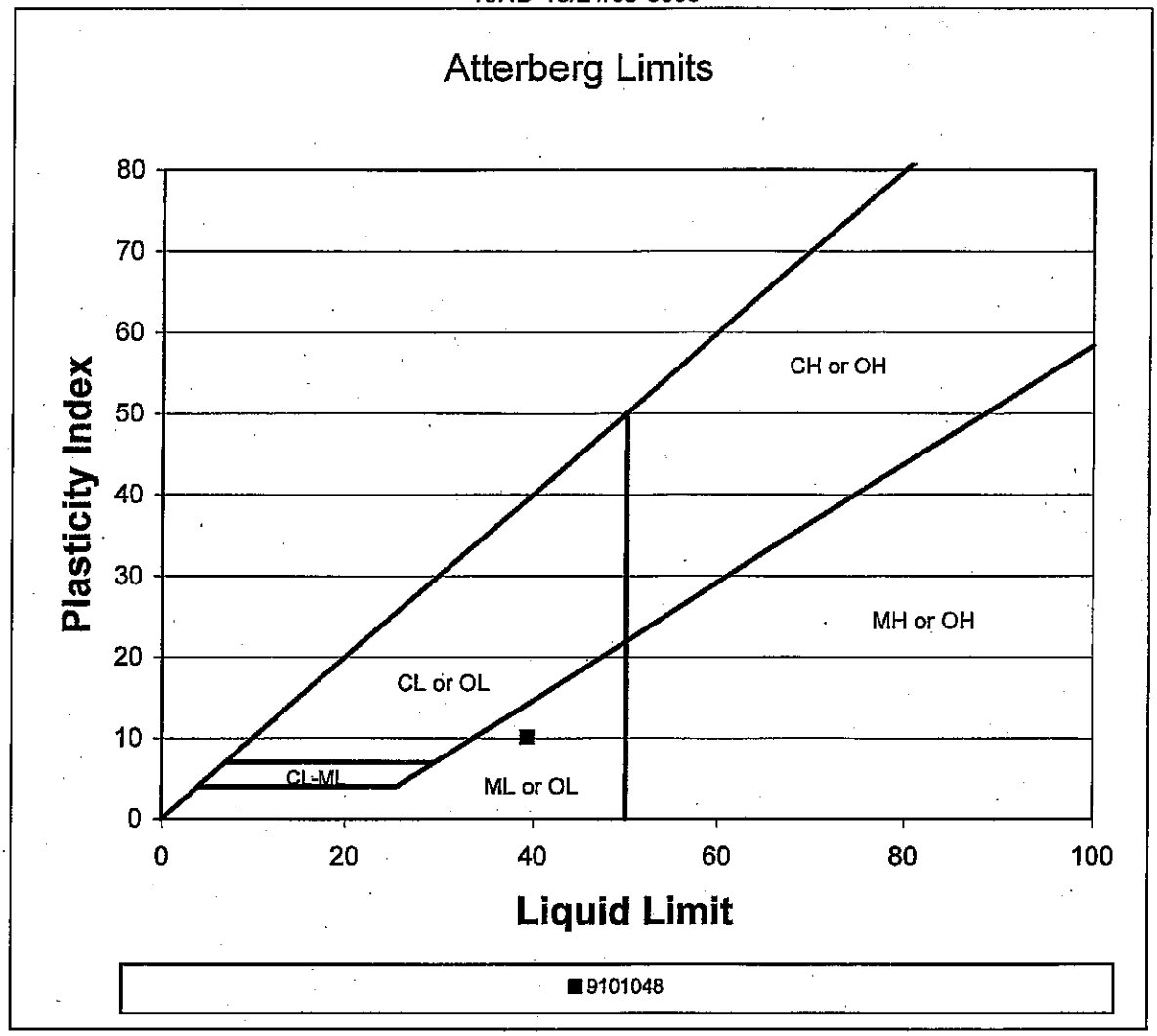
| Hydrometer Analysis Portion | | | | | | | |
|---|---|---|---|---|---|---|---|
| Time | Hydro Reading | Comp Correct | Percent Finer | "L" | D | K | a |
| 1 | 50 | 6.0 | 59.54 | 8.1 | 38.78134 | 0.013624 | 1.001385 |
| 2 | 44.5 | 6.0 | 52.09 | 9.0 | 28.90769 | 0.013624 | 1.001385 |
| 5 | 36.5 | 6.0 | 41.27 | 10.3 | 19.56875 | 0.013624 | 1.001385 |
| 15 | 28 | 6.0 | 29.77 | 11.7 | 12.03678 | 0.013624 | 1.001385 |
| 30 | 24 | 6.0 | 24.36 | 12.4 | 8.746328 | 0.013624 | 1.001385 |
| 60 | 20 | 6.0 | 18.94 | 13.0 | 6.346433 | 0.013624 | 1.001385 |
| 250 | 15 | 5.5 | 12.85 | 13.8 | 3.205458 | 0.013624 | 1.001385 |
| 1440 | 12 | 6.0 | 8.12 | 14.3 | 1.359127 | 0.013624 | 1.001385 |

MW 10-30-09


Grain Size Distribution by Hydrometer
Gravel
Sand
Silt
Clay
100
90
80
70
60
50
40
30
20
10
0
Percent Finer Than
100000
10000
1000
100
10
1
Particle Diameter
9101048

MW 10-30-08

Ecology and Environment, Inc.
10HD-10/21/09-0006




| Sample Number | As-Received Moisture Content | Plasticity Index | Liquid Limit | Plastic Limit | USCS |
|---|---|---|---|---|---|
| 9101048 | 30.91 | 10.1 | 39.4 | 29.3 | ML |

PT66

MW 10-30-09

Ecology and Environment, Inc.
10HD-10/21/09-0006

Soil Classification
ASTM D2487

| Client ID | ARI ID | Soil Classification | | D15 (µm) | D50 (µm) | D85 (µm) |
|---|---|---|---|---|---|---|
| | | Group Symbol | Group Name | | | |
| 9101048 | A | ML | Silt with Sand | 4 | 30 | 100 |

PT66

MW 10-30-09

ANALYTICAL RESOURCES INCORPORATED

**GEOTECHNICAL ANALYSIS DATA SHEET**
**Moisture Content by Method ASTM D2216**

Data Release Authorized: BL
Reported: 10/29/09
Date Received: 10/21/09
Page 1 of 1

QC Report No: PT66-Ecology and Enviroment, Inc.
Project: 10HD-10/21/09-0006

| Client/ ARI ID | Date Sampled | Matrix | Analysis Date | Result |
|---|---|---|---|---|
| 09101048 PT66A 09-24716 | 10/17/09 | Soil | 10/29/09 10:45 | 30.91 |

**Reported in Percent**

MW 10-30-09

# G March 2010 Data Memoranda

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**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: April 21, 2010

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 11 soil and 4 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 200.8, 6010, 6020, and 7471) were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| Soil | 10030001 | 10030002 | 10030003 | 10030004 |
| | 10030005 | 10030006 | 10030007 | 10030008 |
| | 10030009 | 10030010 | 10030011 | |
| Water | 10030012 | 10030013 | 10030014 | 10030015 |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected between March 16 and 19, 2010, and were analyzed by April 2, 2010, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%.

**3. Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. No positive blank results affected the sample results.

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of each sequence. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. Matrix Spike Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits.

**8. Duplicate Analysis: Satisfactory.**

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except selenium in the soil duplicate; associated sample results were qualified as estimated quantities (J or UJ).

**9. Serial Dilution Analysis: Acceptable.**

A serial dilution analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All serial dilution results were within QC limits.

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-01 | | | | | |
| **Client ID:** | **10030001** | | | | | |
| Aluminum | **8700** | 3.4 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 6.8 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 14 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **100** | 3.4 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.68 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.68 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **4400** | 68 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **7.5** | 0.68 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **15** | 0.68 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **16** | 1.4 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **64000** | 140 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **9.4** | 6.8 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **2100** | 68 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **670** | 14 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.34 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **5.9** | 3.4 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1000** | 68 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 14 UJ | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.68 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **240** | 68 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 6.8 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **97** | 0.68 | 6010B | 3-31-10 | 4-2-10 | |
| ~~Zinc~~ | ~~**56**~~ | ~~3.4~~ | ~~6010B~~ | ~~3-31-10~~ | ~~4-2-10~~ | |

JMW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-02 | | | | | |
| **Client ID:** | **10030002** | | | | | |
| Aluminum | **3900** | 2.7 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 5.4 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 11 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **67** | 2.7 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.54 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.54 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **3200** | 54 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **4.5** | 0.54 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **6.0** | 0.54 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **11** | 1.1 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **54000** | 1100 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **36** | 5.4 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **1000** | 54 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **510** | 11 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.27 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **3.4** | 2.7 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **460** | 54 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 11 U | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.54 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **170** | 54 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 5.4 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **38** | 0.54 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **28** | 2.7 | 6010B | 3-31-10 | 4-2-10 | |

MW
4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-03 | | | | | |
| **Client ID:** | **10030003** | | | | | |
| Aluminum | **9700** | 3.2 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 6.5 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 13 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **120** | 3.2 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.65 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.65 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **5200** | 65 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **9.4** | 0.65 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **10** | 0.65 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **730** | 13 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **47000** | 1300 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **46** | 6.5 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **2400** | 65 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **660** | 13 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.32 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **12** | 3.2 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1900** | 65 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 13 U | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.65 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **280** | 65 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 6.5 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **68** | 0.65 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **110** | 3.2 | 6010B | 3-31-10 | 4-2-10 | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-04 | | | | | |
| **Client ID:** | **10030004** | | | | | |
| Aluminum | **12000** | 4.6 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 9.3 | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 19 | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **130** | 4.6 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.93 | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.93 | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **4700** | 93 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **11** | 0.93 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **9.1** | 0.93 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **39** | 1.9 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **57000** | 1900 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **17** | 9.3 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **2500** | 93 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **330** | 19 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.46 | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **7.2** | 4.6 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1300** | 93 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 19 | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.93 | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **260** | 93 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 9.3 | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **140** | 0.93 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **91** | 4.6 | 6010B | 3-31-10 | 4-2-10 | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-05 | | | | | |
| **Client ID:** | **10030005** | | | | | |
| Aluminum | **7500** | 3.0 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 6.1 B | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 12 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **110** | 3.0 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.61 B | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.61 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **8800** | 610 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **6.2** | 0.61 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **9.4** | 0.61 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **16** | 1.2 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **46000** | 1200 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **20** | 6.1 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **4100** | 61 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **610** | 12 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.30 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **6.1** | 3.0 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **2800** | 61 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 12 UJ | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.61 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **250** | 61 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 6.1 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **57** | 0.61 | 6010B | 3-31-10 | 4-2-10 | |
| ~~Zinc~~ | ~~**66**~~ | ~~3.0~~ | ~~6010B~~ | ~~3-31-10~~ | ~~4-2-10~~ | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-06 | | | | | |
| **Client ID:** | **10030006** | | | | | |
| Aluminum | **10000** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 6.7 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 13 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **120** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.67 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.67 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **8100** | 670 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **7.2** | 0.67 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **12** | 0.67 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **17** | 1.3 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **56000** | 1300 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **8.1** | 6.7 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **4200** | 67 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **590** | 13 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.33 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **6.8** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1900** | 67 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 13 UJ | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.67 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **450** | 67 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 6.7 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **90** | 0.67 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **57** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-07 | | | | | |
| **Client ID:** | **10030007** | | | | | |
| Aluminum | **9500** | 3.9 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 7.7 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 15 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **110** | 3.9 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.77 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.77 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **3000** | 77 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **6.0** | 0.77 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **4.6** | 0.77 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **12** | 1.5 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **18000** | 1500 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **ND** | 7.7 U | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **1800** | 77 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **150** | 15 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.39 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **5.2** | 3.9 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **900** | 77 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 15 UJ | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.77 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **640** | 77 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 7.7 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **30** | 0.77 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **24** | 3.9 | 6010B | 3-31-10 | 4-2-10 | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-08 | | | | | |
| **Client ID:** | **10030008** | | | | | |
| Aluminum | **8600** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 6.6 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 13 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **89** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.66 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.66 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **3500** | 66 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **7.7** | 0.66 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **8.6** | 0.66 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **13** | 1.3 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **51000** | 1300 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **ND** | 6.6 U | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **3200** | 66 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **300** | 13 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.33 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **5.2** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1100** | 66 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 13 UJ | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.66 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **940** | 66 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 6.6 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **81** | 0.66 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **47** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |

MW 4-9-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-09 | | | | | |
| **Client ID:** | **10030009** | | | | | |
| Aluminum | **11000** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 6.7 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 13 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **130** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.67 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.67 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **4900** | 67 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **11** | 0.67 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **15** | 0.67 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **17** | 1.3 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **72000** | 1300 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **11** | 6.7 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **3400** | 67 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **560** | 13 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.33 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **8.0** | 3.3 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1100** | 67 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 13 UJ | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.67 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **260** | 67 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 6.7 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **63** | 0.67 | 6010B | 3-31-10 | 4-2-10 | |
| ~~Zinc~~ | ~~57~~ | ~~3.3~~ | ~~6010B~~ | ~~3-31-10~~ | ~~4-2-10~~ | |

MW 4/7/10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-10 | | | | | |
| **Client ID:** | **10030010** | | | | | |
| Aluminum | **8600** | 3.6 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 7.3 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 15 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **100** | 3.6 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.73 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.73 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **5000** | 73 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **9.2** | 0.73 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **10** | 0.73 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **21** | 1.5 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **67000** | 1500 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **ND** | 7.3 U | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **2700** | 73 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **390** | 15 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.36 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **5.2** | 3.6 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1300** | 73 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 15 U | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.73 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **270** | 73 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 7.3 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **69** | 0.73 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **100** | 3.6 | 6010B | 3-31-10 | 4-2-10 | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 6010B/6020/7471A

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-11 | | | | | |
| **Client ID:** | **10030011** | | | | | |
| Aluminum | **12000** | 3.8 | 6010B | 3-31-10 | 4-2-10 | |
| Antimony | **ND** | 7.6 U | 6010B | 4-2-10 | 4-2-10 | |
| Arsenic | **ND** | 15 U | 6010B | 3-31-10 | 4-2-10 | |
| Barium | **120** | 3.8 | 6010B | 3-31-10 | 4-2-10 | |
| Beryllium | **ND** | 0.76 U | 6010B | 3-31-10 | 4-2-10 | |
| Cadmium | **ND** | 0.76 U | 6010B | 3-31-10 | 4-2-10 | |
| Calcium | **5400** | 76 | 6010B | 3-31-10 | 4-2-10 | |
| Chromium | **11** | 0.76 | 6010B | 3-31-10 | 4-2-10 | |
| Cobalt | **15** | 0.76 | 6010B | 3-31-10 | 4-2-10 | |
| Copper | **21** | 1.5 | 6010B | 3-31-10 | 4-2-10 | |
| Iron | **76000** | 1500 | 6010B | 4-2-10 | 4-2-10 | |
| Lead | **7.7** | 7.6 | 6010B | 3-31-10 | 4-2-10 | |
| Magnesium | **3600** | 76 | 6010B | 3-31-10 | 4-2-10 | |
| Manganese | **620** | 15 | 6010B | 4-5-10 | 4-5-10 | |
| Mercury | **ND** | 0.38 U | 7471A | 3-31-10 | 3-31-10 | |
| Nickel | **8.2** | 3.8 | 6010B | 3-31-10 | 4-2-10 | |
| Potassium | **1300** | 76 | 6010B | 3-31-10 | 4-2-10 | |
| Selenium | **ND** | 15 U,J | 6010B | 3-31-10 | 4-2-10 | |
| Silver | **ND** | 0.76 U | 6010B | 3-31-10 | 4-2-10 | |
| Sodium | **360** | 76 | 6010B | 3-31-10 | 4-2-10 | |
| Thallium | **ND** | 7.6 U | 6020 | 3-31-10 | 4-2-10 | |
| Vanadium | **97** | 0.76 | 6010B | 3-31-10 | 4-2-10 | |
| Zinc | **80** | 3.8 | 6010B | 3-31-10 | 4-2-10 | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-12 | | | | | |
| **Client ID:** | **10030012** | | | | | |
| Aluminum | **ND** | 56 U | 6010B | 3-30-10 | 4-2-10 | |
| Antimony | **ND** | 5.6 | 200.8 | 3-30-10 | 3-30-10 | |
| Arsenic | **ND** | 3.3 | 200.8 | 3-30-10 | 3-30-10 | |
| Barium | **ND** | 28 | 200.8 | 3-30-10 | 3-30-10 | |
| Beryllium | **ND** | 11 | 200.8 | 3-30-10 | 4-1-10 | |
| Cadmium | **ND** | 4.4 | 200.8 | 3-30-10 | 3-30-10 | |
| Calcium | **17000** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Chromium | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Cobalt | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Copper | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Iron | **88** | 56 | 6010B | 3-30-10 | 4-2-10 | |
| Lead | **ND** | 1.1 U | 200.8 | 3-30-10 | 4-1-10 | |
| Magnesium | **6600** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Manganese | **45** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Mercury | **ND** | 0.50 U | 7470A | 3-23-10 | 3-23-10 | |
| Nickel | **ND** | 22 U | 200.8 | 3-30-10 | 3-30-10 | |
| Potassium | **3800** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Selenium | **ND** | 5.6 U | 200.8 | 3-30-10 | 3-30-10 | |
| Silver | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Sodium | **12000** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Thallium | **ND** | 5.6 U | 200.8 | 3-30-10 | 3-30-10 | |
| Vanadium | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Zinc | **ND** | 56 | 200.8 | 3-30-10 | 3-30-10 | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-13 | | | | | |
| **Client ID:** | **10030013** | | | | | |
| Aluminum | **ND** | 56 | 6010B | 3-30-10 | 4-2-10 | |
| Antimony | **ND** | 5.6 | 200.8 | 3-30-10 | 3-30-10 | |
| Arsenic | **ND** | 3.3 | 200.8 | 3-30-10 | 3-30-10 | |
| Barium | **ND** | 28 | 200.8 | 3-30-10 | 3-30-10 | |
| Beryllium | **ND** | 11 | 200.8 | 3-30-10 | 4-1-10 | |
| Cadmium | **ND** | 4.4 | 200.8 | 3-30-10 | 3-30-10 | |
| Calcium | **21000** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Chromium | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Cobalt | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Copper | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Iron | **160** | 56 | 6010B | 3-30-10 | 4-2-10 | |
| Lead | **ND** | 1.1 | 200.8 | 3-30-10 | 4-1-10 | |
| Magnesium | **8300** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Manganese | **34** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Mercury | **ND** | 0.50 | 7470A | 3-23-10 | 3-23-10 | |
| Nickel | **ND** | 22 | 200.8 | 3-30-10 | 3-30-10 | |
| Potassium | **4100** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Selenium | **ND** | 5.6 | 200.8 | 3-30-10 | 3-30-10 | |
| Silver | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Sodium | **9300** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Thallium | **ND** | 5.6 | 200.8 | 3-30-10 | 3-30-10 | |
| Vanadium | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Zinc | **ND** | 56 | 200.8 | 3-30-10 | 3-30-10 | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-14 | | | | | |
| **Client ID:** | **10030014** | | | | | |
| Aluminum | **1300** | 56 | 6010B | 3-30-10 | 4-2-10 | |
| Antimony | **ND** | 5.6 U | 200.8 | 3-30-10 | 3-30-10 | |
| Arsenic | **ND** | 3.3 U | 200.8 | 3-30-10 | 3-30-10 | |
| Barium | **51** | 28 | 200.8 | 3-30-10 | 3-30-10 | |
| Beryllium | **ND** | 11 U | 200.8 | 3-30-10 | 4-1-10 | |
| Cadmium | **ND** | 4.4 U | 200.8 | 3-30-10 | 3-30-10 | |
| Calcium | **31000** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Chromium | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Cobalt | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Copper | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Iron | **2900** | 56 | 6010B | 3-30-10 | 4-2-10 | |
| Lead | **ND** | 1.1 U | 200.8 | 3-30-10 | 4-1-10 | |
| Magnesium | **12000** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Manganese | **91** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Mercury | **ND** | 0.50 U | 7470A | 3-23-10 | 3-23-10 | |
| Nickel | **ND** | 22 U | 200.8 | 3-30-10 | 3-30-10 | |
| Potassium | **6200** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Selenium | **ND** | 5.6 U | 200.8 | 3-30-10 | 3-30-10 | |
| Silver | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Sodium | **28000** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Thallium | **ND** | 5.6 U | 200.8 | 3-30-10 | 3-30-10 | |
| Vanadium | **14** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Zinc | **ND** | 56 U | 200.8 | 3-30-10 | 3-30-10 | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 03-150-15 | | | | | |
| **Client ID:** | **10030015** | | | | | |
| Aluminum | **ND** | 56 U | 6010B | 3-30-10 | 4-2-10 | |
| Antimony | **ND** | 5.6 | 200.8 | 3-30-10 | 3-30-10 | |
| Arsenic | **ND** | 3.3 | 200.8 | 3-30-10 | 3-30-10 | |
| Barium | **ND** | 28 | 200.8 | 3-30-10 | 3-30-10 | |
| Beryllium | **ND** | 11 | 200.8 | 3-30-10 | 4-1-10 | |
| Cadmium | **ND** | 4.4 | 200.8 | 3-30-10 | 3-30-10 | |
| Calcium | **16000** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Chromium | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Cobalt | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Copper | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Iron | **59** | 56 | 6010B | 3-30-10 | 4-2-10 | |
| Lead | **ND** | 1.1 U | 200.8 | 3-30-10 | 4-1-10 | |
| Magnesium | **6100** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Manganese | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Mercury | **ND** | 0.50 | 7470A | 3-23-10 | 3-23-10 | |
| Nickel | **ND** | 22 | 200.8 | 3-30-10 | 3-30-10 | |
| Potassium | **3300** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Selenium | **ND** | 5.6 U | 200.8 | 3-30-10 | 3-30-10 | |
| Silver | **ND** | 11 U | 200.8 | 3-30-10 | 3-30-10 | |
| Sodium | **5900** | 1100 | 6010B | 3-30-10 | 4-2-10 | |
| Thallium | **ND** | 5.6 U | 200.8 | 3-30-10 | 3-30-10 | |
| Vanadium | **ND** | 11 | 200.8 | 3-30-10 | 3-30-10 | |
| Zinc | **ND** | 56 | 200.8 | 3-30-10 | 3-30-10 | |

MW 4-21-10

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: April 21, 2010

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 11 soil and 4 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Polychlorinated biphenyl analyses (EPA Method 8082) were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| Soil | 10030001 | 10030002 | 10030003 | 10030004 |
| | 10030005 | 10030006 | 10030007 | 10030008 |
| | 10030009 | 10030010 | 10030011 | |
| Water | 10030012 | 10030013 | 10030014 | 10030015 |

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected between March 16 and 19, 2010, extracted by March 31, 2010, and were analyzed by April 1, 2010, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction (7 days for water) and less than 40 days between extraction and analysis.

2. **Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

3. **Initial and Continuing Calibration: Acceptable.**

All initial calibration relative standard deviations (RSDs) were less than 15% on at least one column. All continuing calibration % differences (% D) were less than 15% and were within QC limits.

4. **Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the

flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

**8. Matrix Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

**9. Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**10. Compound Identification: Acceptable.**

Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities (J).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Lab Traveler: 1003-150
Project: 10HD-03-2010-1

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030001** | | | | | |
| Laboratory ID: | 03-150-01 | | | | | |
| Aroclor 1016 | **ND** | 0.068 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.068 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.068 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.068 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.068 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.068 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.068 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *46-122* | | | | |
| **Client ID:** | **10030002** | | | | | |
| Laboratory ID: | 03-150-02 | | | | | |
| Aroclor 1016 | **ND** | 0.054 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.054 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.054 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.054 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.054 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.054 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.054 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *100* | *46-122* | | | | |
| **Client ID:** | **10030003** | | | | | |
| Laboratory ID: | 03-150-03 | | | | | |
| Aroclor 1016 | **ND** | 0.065 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.065 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.065 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.065 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.065 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.065 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.065 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *76* | *46-122* | | | | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Lab Traveler: 1003-150
Project: 10HD-03-2010-1

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030004** | | | | | |
| Laboratory ID: | 03-150-04 | | | | | |
| Aroclor 1016 | **ND** | 0.093 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.093 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.093 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.093 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.093 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.093 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.093 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *77* | *46-122* | | | | |
| **Client ID:** | **10030005** | | | | | |
| Laboratory ID: | 03-150-05 | | | | | |
| Aroclor 1016 | **ND** | 0.061 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.061 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.061 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.061 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.061 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.061 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.061 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *79* | *46-122* | | | | |
| **Client ID:** | **10030006** | | | | | |
| Laboratory ID: | 03-150-06 | | | | | |
| Aroclor 1016 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *81* | *46-122* | | | | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Lab Traveler: 1003-150
Project: 10HD-03-2010-1

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030007** | | | | | |
| Laboratory ID: | 03-150-07 | | | | | |
| Aroclor 1016 | **ND** | 0.077 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.077 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.077 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.077 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.077 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.077 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.077 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *87* | *46-122* | | | | |
| **Client ID:** | **10030008** | | | | | |
| Laboratory ID: | 03-150-08 | | | | | |
| Aroclor 1016 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *89* | *46-122* | | | | |
| **Client ID:** | **10030009** | | | | | |
| Laboratory ID: | 03-150-09 | | | | | |
| Aroclor 1016 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.067 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *89* | *46-122* | | | | |

AW
4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Lab Traveler: 1003-150
Project: 10HD-03-2010-1

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030010** | | | | | |
| Laboratory ID: | 03-150-10 | | | | | |
| Aroclor 1016 | **ND** | 0.072 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.072 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.072 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **0.22** | 0.072 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.072 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.072 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.072 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *72* | *46-122* | | | | |
| **Client ID:** | **10030011** | | | | | |
| Laboratory ID: | 03-150-11 | | | | | |
| Aroclor 1016 | **ND** | 0.076 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1221 | **ND** | 0.076 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1232 | **ND** | 0.076 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1242 | **ND** | 0.076 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1248 | **ND** | 0.076 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1254 | **ND** | 0.076 | EPA 8082 | 3-24-10 | 3-24-10 | |
| Aroclor 1260 | **ND** | 0.076 | EPA 8082 | 3-24-10 | 3-24-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *80* | *46-122* | | | | |

AW
4/2/10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Lab Traveler: 1003-150
Project: 10HD-03-2010-1

## PCBs by EPA 8082

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030012** | | | | | |
| Laboratory ID: | 04-150-12 | | | | | |
| Aroclor 1016 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1221 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1232 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1242 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1248 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1254 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1260 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *76* | *39-126* | | | | |
| **Client ID:** | **10030013** | | | | | |
| Laboratory ID: | 04-150-13 | | | | | |
| Aroclor 1016 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1221 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1232 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1242 | **0.088** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1248 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1254 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1260 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *72* | *39-126* | | | | |
| **Client ID:** | **10030014** | | | | | |
| Laboratory ID: | 04-150-14 | | | | | |
| Aroclor 1016 | **ND** | 0.048 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1221 | **ND** | 0.048 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1232 | **ND** | 0.048 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1242 | **ND** | 0.048 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1248 | **ND** | 0.048 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1254 | **ND** | 0.048 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1260 | **ND** | 0.048 | EPA 8082 | 3-31-10 | 4-1-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *74* | *39-126* | | | | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Lab Traveler: 1003-150
Project: 10HD-03-2010-1

## PCBs by EPA 8082

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030015** | | | | | |
| Laboratory ID: | 04-150-15 | | | | | |
| Aroclor 1016 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1221 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1232 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1242 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1248 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1254 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| Aroclor 1260 | **ND** | 0.047 | EPA 8082 | 3-31-10 | 4-1-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *75* | *39-126* | | | | |

MW
4-21-10

**ecology and environment, inc.**
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: April 21, 2010

TO: Josh Hancock, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Site, Walla Walla, Washington**

REF: TDD: 09-05-0006 PAN: 002233.0458.01SF

The data quality assurance review of 11 soil and 4 water samples collected from the Stubblefield Salvage site located in Walla Walla, Washington has been completed. Semivolatile organic compound analyses (EPA Methods 8270 and 8270SIM) were performed by OnSite Environmental, Inc., Redmond, Washington. The samples were numbered:

| | | | | |
|---|---|---|---|---|
| Soil | 10030001 | 10030002 | 10030003 | 10030004 |
| | 10030005 | 10030006 | 10030007 | 10030008 |
| | 10030009 | 10030010 | 10030011 | |
| Water | 10030012 | 10030013 | 10030014 | 10030015 |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected between March 16 and 19, 2010, were extracted by March 23, 2010, and were analyzed by March 26, 2010, therefore meeting holding time criteria of less than 14 days between collection and extraction (7 days for water) and less than 40 days between extraction and analysis.

**2. Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

**3. Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol and benzidine associated with all samples. Associated positive results were qualified as estimated quantities (J).

**4. Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except 2,4-dinitrophenol and hexachlorocyclopentadiene with low recoveries and di-n-octylphthalate and butylbenzylphthalate with high recoveries on March 26, 2010 (associated with all soil samples), hexachlorocyclopentadiene, 2,4-dinitrophenol, 2,3,5,6-tetrachlorophenol, 4,6-dinitro-2-methylphenol, 2,4,6-tribromophenol, and pentachlorophenol with low recoveries and benzidine with a high recovery on March 26, 2010 (2240) associated with the diluted analysis of sample 10030002, and 2,4-dimethylphenol and hexachlorocyclopentadiene with low recoveries on March 25, 2010 (0422; associated with all water samples) and nitrobenzene-d5 on March 25, 2010 (0955; no action was taken

based on the surrogate outlier). Positive sample results associated with high recoveries were qualified as estimated quantities (J) and positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD)/Blank Spike (BS) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

## 12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030001** | | | | | |
| Laboratory ID: | 03-150-01 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | ND | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | ND | 0.23 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | ND | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | ND | 0.46 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | ND | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | ND | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 0.46 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | ND | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030001** | | | | | |
| Laboratory ID: | 03-150-01 | | | | | |
| Benzo[a]pyrene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.23 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | **ND** | 0.046 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **ND** | 0.0091 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | **ND** | 0.46 | EPA 8270 | 3-23-10 | 3-26-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *70* | *22 - 107* | | | | |
| *Phenol-d6* | *71* | *28 - 116* | | | | |
| *Nitrobenzene-d5* | *66* | *25 - 111* | | | | |
| *2-Fluorobiphenyl* | *71* | *35 - 108* | | | | |
| *2,4,6-Tribromophenol* | *77* | *42 - 118* | | | | |
| *Terphenyl-d14* | *83* | *44 - 121* | | | | |

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
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Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030002** | | | | | |
| Laboratory ID: | 03-150-02 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | **ND** | 0.18 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | **ND** | 0.36 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | **ND** | 0.18 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | **ND** | 0.36 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | **0.0072** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

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Date of Report: April 6, 2010
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## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030002** | | | | | |
| Laboratory ID: | 03-150-02 | | | | | |
| Benzo[a]pyrene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **2.5** | 0.18 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **0.0075** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **0.010** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.18 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **ND** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | **ND** | 0.036 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **0.013** | 0.0072 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | **ND** | 0.36 | EPA 8270 | 3-23-10 | 3-26-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *71* | *22 - 107* | | | | |
| *Phenol-d6* | *73* | *28 - 116* | | | | |
| *Nitrobenzene-d5* | *69* | *25 - 111* | | | | |
| *2-Fluorobiphenyl* | *73* | *35 - 108* | | | | |
| *2,4,6-Tribromophenol* | *72* | *42 - 118* | | | | |
| *Terphenyl-d14* | *82* | *44 - 121* | | | | |

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030003** | | | | | |
| Laboratory ID: | 03-150-03 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | **ND** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | **ND** | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | **ND** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | **ND** | 0.43 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | **ND** | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | **ND** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | **0.011** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | **0.023** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | **ND** | 0.43 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | **0.093** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030003** | | | | | |
| Laboratory ID: | 03-150-03 | | | | | |
| Benzo[a]pyrene | **0.094** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[b]fluoranthene | **0.055** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **0.051** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[k]fluoranthene | **0.071** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.043 U | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **0.090** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dibenz[a,h]anthracene | **0.015** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.043 U | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **0.15** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluorene | **ND** | 0.0087 U | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.043 U | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.043 J | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **0.048** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Isophorone | **ND** | 0.043 U | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **ND** | 0.0087 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **ND** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **0.055** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenol | **ND** | 0.043 U | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **0.16** | 0.043 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyridine | **ND** | 0.43 U | EPA 8270 | 3-23-10 | 3-26-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *64* | *22 - 107* | | | | |
| *Phenol-d6* | *70* | *28 - 116* | | | | |
| *Nitrobenzene-d5* | *63* | *25 - 111* | | | | |
| *2-Fluorobiphenyl* | *70* | *35 - 108* | | | | |
| *2,4,6-Tribromophenol* | *69* | *42 - 118* | | | | |
| *Terphenyl-d14* | *79* | *44 - 121* | | | | |

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Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030004** | | | | | |
| Laboratory ID: | 03-150-04 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | **ND** | 0.31 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | **ND** | 0.62 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | **ND** | 0.31 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | **ND** | 0.62 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | **0.015** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030004** | | | | | |
| Laboratory ID: | 03-150-04 | | | | | |
| Benzo[a]pyrene | **0.016** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **0.015** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **0.013** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.31 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **ND** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | **ND** | 0.062 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **0.017** | 0.012 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | **ND** | 0.62 | EPA 8270 | 3-23-10 | 3-26-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *61* | *22 - 107* | | | | |
| *Phenol-d6* | *65* | *28 - 116* | | | | |
| *Nitrobenzene-d5* | *59* | *25 - 111* | | | | |
| *2-Fluorobiphenyl* | *65* | *35 - 108* | | | | |
| *2,4,6-Tribromophenol* | *62* | *42 - 118* | | | | |
| *Terphenyl-d14* | *70* | *44 - 121* | | | | |

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Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030005** | | | | | |
| Laboratory ID: | 03-150-05 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | ND | 0.41 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | ND | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | ND | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 0.41 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | **0.0097** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

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Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030005** | | | | | |
| Laboratory ID: | 03-150-05 | | | | | |
| Benzo[a]pyrene | **ND** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | **0.0098** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | **ND** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **0.14** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **0.012** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **0.016** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | **ND** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **ND** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.20 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **0.011** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | **ND** | 0.041 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **0.018** | 0.0081 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | **ND** | 0.41 | EPA 8270 | 3-23-10 | 3-26-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *44* | *22 - 107* | | | | |
| *Phenol-d6* | *53* | *28 - 116* | | | | |
| *Nitrobenzene-d5* | *45* | *25 - 111* | | | | |
| *2-Fluorobiphenyl* | *62* | *35 - 108* | | | | |
| *2,4,6-Tribromophenol* | *57* | *42 - 118* | | | | |
| *Terphenyl-d14* | *65* | *44 - 121* | | | | |

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Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030006** | | | | | |
| Laboratory ID: | 03-150-06 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

JW 4/8/10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030006** | | | | | |
| Laboratory ID: | 03-150-06 | | | | | |
| Benzo[a]pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | 0.11 | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *73* | *22 - 107* |
| *Phenol-d6* | *73* | *28 - 116* |
| *Nitrobenzene-d5* | *68* | *25 - 111* |
| *2-Fluorobiphenyl* | *74* | *35 - 108* |
| *2,4,6-Tribromophenol* | *65* | *42 - 118* |
| *Terphenyl-d14* | *79* | *44 - 121* |

MW 4-24-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030007** | | | | | |
| Laboratory ID: | 03-150-07 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | ND | 0.26 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | ND | 0.51 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 0.51 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

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MW 4/2/10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030007** | | | | | |
| Laboratory ID: | 03-150-07 | | | | | |
| Benzo[a]pyrene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.26 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | **ND** | 0.51 | EPA 8270 | 3-23-10 | 3-26-10 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *68* | *22 - 107* |
| *Phenol-d6* | *71* | *28 - 116* |
| *Nitrobenzene-d5* | *67* | *25 - 111* |
| *2-Fluorobiphenyl* | *67* | *35 - 108* |
| *2,4,6-Tribromophenol* | *66* | *42 - 118* |
| *Terphenyl-d14* | *77* | *44 - 121* |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030008** | | | | | |
| Laboratory ID: | 03-150-08 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030008** | | | | | |
| Laboratory ID: | 03-150-08 | | | | | |
| Benzo[a]pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *56* | *22 - 107* | | | | |
| *Phenol-d6* | *61* | *28 - 116* | | | | |
| *Nitrobenzene-d5* | *56* | *25 - 111* | | | | |
| *2-Fluorobiphenyl* | *61* | *35 - 108* | | | | |
| *2,4,6-Tribromophenol* | *60* | *42 - 118* | | | | |
| *Terphenyl-d14* | *72* | *44 - 121* | | | | |

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030009** | | | | | |
| Laboratory ID: | 03-150-09 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030009** | | | | | |
| Laboratory ID: | 03-150-09 | | | | | |
| Benzo[a]pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **0.047** | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | ND | 0.044 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | ND | 0.0089 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | ND | 0.44 | EPA 8270 | 3-23-10 | 3-26-10 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *61* | *22 - 107* |
| *Phenol-d6* | *64* | *28 - 116* |
| *Nitrobenzene-d5* | *60* | *25 - 111* |
| *2-Fluorobiphenyl* | *62* | *35 - 108* |
| *2,4,6-Tribromophenol* | *63* | *42 - 118* |
| *Terphenyl-d14* | *74* | *44 - 121* |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030010** | | | | | |
| Laboratory ID: | 03-150-10 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | **0.070** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,4,6-Tetrachlorophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | **ND** | 0.24 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | **0.097** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | **ND** | 0.48 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | **ND** | 0.24 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | **0.016** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | **ND** | 0.48 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

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Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030010** | | | | | |
| Laboratory ID: | 03-150-10 | | | | | |
| Benzo[a]pyrene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **0.32** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **1.4** J | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | **0.017** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.048 J | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **0.012** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **0.070** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.24 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **0.061** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenol | **ND** | 0.048 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **ND** | 0.0097 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | **ND** | 0.48 | EPA 8270 | 3-23-10 | 3-26-10 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *41* | *22 - 107* |
| *Phenol-d6* | *53* | *28 - 116* |
| *Nitrobenzene-d5* | *49* | *25 - 111* |
| *2-Fluorobiphenyl* | *67* | *35 - 108* |
| *2,4,6-Tribromophenol* | *64* | *42 - 118* |
| *Terphenyl-d14* | *73* | *44 - 121* |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030011** | | | | | |
| Laboratory ID: | 03-150-11 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Dinitrobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,2-Diphenylhydrazine | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,3-Dinitrobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dichlorobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1,4-Dinitrobenzene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 1-Methylnaphthalene | **0.013** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,3-Dichloroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,5-Trichlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4,6-Trichlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dichlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dimethylphenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,4-Dinitrotoluene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2,6-Dinitrotoluene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chloronaphthalene | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Chlorophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 2-Nitrophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3,3'-Dichlorobenzidine | ND | 0.51 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 3-Nitroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Bromophenyl-phenylether | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloro-3-methylphenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chloroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitroaniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| 4-Nitrophenol | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 0.51 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

MW 4-21-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030011** | | | | | |
| Laboratory ID: | 03-150-11 | | | | | |
| Benzo[a]pyrene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis(2-Ethylhexyl)phthalate | **0.15** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Butylbenzylphthalate | **0.72** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Carbazole | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Chrysene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Diethylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Dimethylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-butylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Di-n-octylphthalate | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | **0.013** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorobutadiene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Hexachloroethane | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Naphthalene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodimethylamine | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| N-Nitrosodiphenylamine | **0.054** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pentachlorophenol | **ND** | 0.25 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Phenanthrene | **0.034** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | **ND** | 0.051 | EPA 8270 | 3-23-10 | 3-26-10 | |
| Pyrene | **ND** | 0.010 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | **ND** | 0.51 | EPA 8270 | 3-23-10 | 3-26-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *43* | *22 - 107* | | | | |
| *Phenol-d6* | *50* | *28 - 116* | | | | |
| *Nitrobenzene-d5* | *46* | *25 - 111* | | | | |
| *2-Fluorobiphenyl* | *66* | *35 - 108* | | | | |
| *2,4,6-Tribromophenol* | *69* | *42 - 118* | | | | |
| *Terphenyl-d14* | *73* | *44 - 121* | | | | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030012** | | | | | |
| Laboratory ID: | 03-150-12 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Diphenylhydrazine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1-Methylnaphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3-Dichloroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,5-Trichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,6-Trichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dimethylphenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrophenol | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrotoluene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,6-Dinitrotoluene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chloronaphthalene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Methylnaphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitrophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3,3'-Dichlorobenzidine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Bromophenyl-phenylether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloro-3-methylphenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloroaniline | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitrophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Acenaphthene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Acenaphthylene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Aniline | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Anthracene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzidine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Benzo[a]anthracene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |

MW 4/2/10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030012** | | | | | |
| Laboratory ID: | 03-150-12 | | | | | |
| Benzo[a]pyrene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[b]fluoranthene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[g,h,i]perylene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[k]fluoranthene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzyl alcohol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethoxy)methane | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethyl)ether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroisopropyl)ether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis-2-Ethylhexyladipate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Butylbenzylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Carbazole | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Chrysene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Dibenz[a,h]anthracene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Dibenzofuran | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Diethylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Dimethylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-butylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-octylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Fluoranthene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Fluorene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Hexachlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorobutadiene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorocyclopentadiene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachloroethane | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Isophorone | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Naphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Nitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodimethylamine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitroso-di-n-propylamine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodiphenylamine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pentachlorophenol | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Phenanthrene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Phenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pyrene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Pyridine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *41* | *14 - 95* | | | | |
| *Phenol-d6* | *29* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *63* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *67* | *42 - 111* | | | | |
| *2,4,6-Tribromophenol* | *83* | *52 - 117* | | | | |
| *Terphenyl-d14* | *84* | *57 - 114* | | | | |

MW 4/2/10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030013** | | | | | |
| Laboratory ID: | 03-150-13 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Diphenylhydrazine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1-Methylnaphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3-Dichloroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,5-Trichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,6-Trichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dimethylphenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrophenol | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrotoluene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,6-Dinitrotoluene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chloronaphthalene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Methylnaphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitrophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3,3'-Dichlorobenzidine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Bromophenyl-phenylether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloro-3-methylphenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloroaniline | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitrophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Acenaphthene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Acenaphthylene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Aniline | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Anthracene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzidine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Benzo[a]anthracene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |

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Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030013** | | | | | |
| Laboratory ID: | 03-150-13 | | | | | |
| Benzo[a]pyrene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[b]fluoranthene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[g,h,i]perylene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[k]fluoranthene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzyl alcohol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethoxy)methane | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethyl)ether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroisopropyl)ether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis-2-Ethylhexyladipate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Butylbenzylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Carbazole | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Chrysene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Dibenz[a,h]anthracene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Dibenzofuran | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Diethylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Dimethylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-butylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-octylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Fluoranthene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Fluorene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Hexachlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorobutadiene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorocyclopentadiene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachloroethane | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Isophorone | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Naphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Nitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodimethylamine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitroso-di-n-propylamine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodiphenylamine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pentachlorophenol | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Phenanthrene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Phenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pyrene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Pyridine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *43* | *14 - 95* | | | | |
| *Phenol-d6* | *31* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *65* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *72* | *42 - 111* | | | | |
| *2,4,6-Tribromophenol* | *78* | *52 - 117* | | | | |
| *Terphenyl-d14* | *81* | *57 - 114* | | | | |

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030014** | | | | | |
| Laboratory ID: | 03-150-14 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dichlorobenzene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dinitrobenzene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Diphenylhydrazine | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dichlorobenzene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dinitrobenzene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dichlorobenzene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dinitrobenzene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1-Methylnaphthalene | ND | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3-Dichloroaniline | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,5-Trichlorophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,6-Trichlorophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dichlorophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dimethylphenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrophenol | ND | 9.5 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrotoluene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,6-Dinitrotoluene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chloronaphthalene | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chlorophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Methylnaphthalene | ND | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitroaniline | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitrophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3,3'-Dichlorobenzidine | ND | 9.5 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3-Nitroaniline | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Bromophenyl-phenylether | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloro-3-methylphenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloroaniline | ND | 9.5 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitroaniline | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitrophenol | ND | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Acenaphthene | ND | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Acenaphthylene | ND | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Aniline | ND | 4.8 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Anthracene | ND | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzidine | ND | 9.5 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Benzo[a]anthracene | ND | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |

MW 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030014** | | | | | |
| Laboratory ID: | 03-150-14 | | | | | |
| Benzo[a]pyrene | **ND** | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[b]fluoranthene | **ND** | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzo[k]fluoranthene | **ND** | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Benzyl alcohol | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethyl)ether | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Ethylhexyl)phthalate | **6.5** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis-2-Ethylhexyladipate | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Butylbenzylphthalate | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Carbazole | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Chrysene | **ND** | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Dibenzofuran | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Diethylphthalate | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Dimethylphthalate | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-butylphthalate | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-octylphthalate | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Fluoranthene | **ND** | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Fluorene | **ND** | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Hexachlorobenzene | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorobutadiene | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorocyclopentadiene | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachloroethane | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.0095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Isophorone | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Naphthalene | **ND** | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Nitrobenzene | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodimethylamine | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitroso-di-n-propylamine | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodiphenylamine | **ND** | 9.5 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pentachlorophenol | **ND** | 4.8 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Phenanthrene | **ND** | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Phenol | **ND** | 0.95 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pyrene | **ND** | 0.095 | EPA 8270/SIM | 3-23-10 | 3-23-10 | |
| Pyridine | **ND** | 9.5 | EPA 8270 | 3-23-10 | 3-25-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *38* | *14 - 95* | | | | |
| *Phenol-d6* | *30* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *63* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *72* | *42 - 111* | | | | |
| *2,4,6-Tribromophenol* | *79* | *52 - 117* | | | | |
| *Terphenyl-d14* | *78* | *57 - 114* | | | | |

JMW 4-7-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030015** | | | | | |
| Laboratory ID: | 03-150-15 | | | | | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2,4-Trichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,2-Diphenylhydrazine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,3-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dichlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1,4-Dinitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 1-Methylnaphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,3-Dichloroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,5-Trichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4,6-Trichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dichlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dimethylphenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrophenol | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,4-Dinitrotoluene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2,6-Dinitrotoluene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chloronaphthalene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Chlorophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Methylnaphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| 2-Methylphenol (o-Cresol) | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 2-Nitrophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3,3'-Dichlorobenzidine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 3-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Bromophenyl-phenylether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloro-3-methylphenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chloroaniline | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Chlorophenyl-phenylether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitroaniline | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| 4-Nitrophenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Acenaphthene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Acenaphthylene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Aniline | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Anthracene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzidine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Benzo[a]anthracene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |

MN 4-2-10

Date of Report: April 6, 2010
Samples Submitted: March 19, 2010
Laboratory Reference: 1003-150
Project: 10HD-03-2010-1

## SEMIVOLATILES by EPA 8270D/SIM

page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10030015** | | | | | |
| Laboratory ID: | 03-150-15 | | | | | |
| Benzo[a]pyrene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[b]fluoranthene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[g,h,i]perylene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzo[k]fluoranthene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Benzyl alcohol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethoxy)methane | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroethyl)ether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Chloroisopropyl)ether | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| bis-2-Ethylhexyladipate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Butylbenzylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Carbazole | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Chrysene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenz[a,h]anthracene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Dibenzofuran | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Diethylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Dimethylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-butylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Di-n-octylphthalate | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Fluoranthene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Fluorene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Hexachlorobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorobutadiene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachlorocyclopentadiene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Hexachloroethane | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Isophorone | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Naphthalene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Nitrobenzene | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodimethylamine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitroso-di-n-propylamine | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| N-Nitrosodiphenylamine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pentachlorophenol | ND | 4.7 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Phenanthrene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Phenol | ND | 0.94 | EPA 8270 | 3-23-10 | 3-25-10 | |
| Pyrene | ND | 0.094 | EPA 8270/SIM | 3-23-10 | 3-25-10 | |
| Pyridine | ND | 9.4 | EPA 8270 | 3-23-10 | 3-25-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *58* | *14 - 95* | | | | |
| *Phenol-d6* | *40* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *90* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *90* | *42 - 111* | | | | |
| *2,4,6-Tribromophenol* | *92* | *52 - 117* | | | | |
| *Terphenyl-d14* | *91* | *57 - 114* | | | | |

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# H October 2010 Data Memorandum

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ecology and environment, inc.
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: November 1, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage-Phase 2 Source Removal Site, Walla Walla, Washington**

REF: TDD: 10-09-0009 PAN: 002233.0605.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage-Phase 2 Source Removal Site located in Walla Walla, Washington, has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 200.8, 6010, and 7471) were performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered: 10100001 10100002 10100003 10100004

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

All liquid samples were preserved to a pH < 2. The samples were maintained at < 6°C. The samples were collected on October 7, 2010, and were analyzed by October 18, 2010, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

3. **Blanks: Acceptable**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. There were no detections in any blanks.

4. **ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning and end of each sequence or at least twice every 8 hours, whichever was more frequent. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

5. **Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. ICP Serial Dilution: Acceptable.**

A serial dilution analysis was performed per matrix per concentration or per sample delivery group, whichever was more frequent. All serial dilution results were within QC limits.

**8. Matrix Spike Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits.

**9. Duplicate Analysis: Satisfactory.**

A laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except iron. Associated sample results were qualified as estimated quantities (J or UJ).

**10. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample detection limits but greater than the instrument detection limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**TOTAL METALS**
**EPA 200.8/6010B/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-090-01 | | | | | |
| **Client ID:** | **10100001** | | | | | |
| Aluminum | **940** | 56 | 6010B | 10-18-10 | 10-18-10 | |
| Antimony | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Arsenic | ND m | 3.3 U | 200.8 | 10-15-10 | 10-15-10 | |
| Barium | **33** | 28 | 200.8 | 10-15-10 | 10-15-10 | |
| Beryllium | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Cadmium | ND m | 4.4 U | 200.8 | 10-15-10 | 10-15-10 | |
| Calcium | **21000** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Chromium | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Cobalt | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Copper | ND m | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Iron | **1800** J | 56 | 6010B | 10-18-10 | 10-18-10 | |
| Lead | **1.5** | 1.1 | 200.8 | 10-15-10 | 10-15-10 | |
| Magnesium | **8000** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Manganese | **42** | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Mercury | ND | 0.50 U | 7470A | 10-14-10 | 10-14-10 | |
| Nickel | ND m | 22 U | 200.8 | 10-15-10 | 10-15-10 | |
| Potassium | **4700** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Selenium | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Silver | ND m | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Sodium | **9700** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Thallium | ND m | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Vanadium | **12** | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Zinc | ND m | 56 U | 200.8 | 10-15-10 | 10-15-10 | |

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Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

## TOTAL METALS
## EPA 200.8/6010B/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-090-02 | | | | | |
| **Client ID:** | **10100002** | | | | | |
| Aluminum | **130** | 56 | 6010B | 10-18-10 | 10-18-10 | |
| Antimony | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Arsenic | ND | 3.3 | 200.8 | 10-15-10 | 10-15-10 | |
| Barium | ND | 28 | 200.8 | 10-15-10 | 10-15-10 | |
| Beryllium | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Cadmium | ND | 4.4 | 200.8 | 10-15-10 | 10-15-10 | |
| Calcium | **20000** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Chromium | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Cobalt | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Copper | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Iron | **260** J | 56 | 6010B | 10-18-10 | 10-18-10 | |
| Lead | ND | 1.1 U | 200.8 | 10-15-10 | 10-15-10 | |
| Magnesium | **7800** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Manganese | **20** | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Mercury | ND | 0.50 U | 7470A | 10-14-10 | 10-14-10 | |
| Nickel | ND | 22 U | 200.8 | 10-15-10 | 10-15-10 | |
| Potassium | **4200** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Selenium | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Silver | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Sodium | **7900** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Thallium | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Vanadium | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Zinc | ND | 56 | 200.8 | 10-15-10 | 10-15-10 | |

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**TOTAL METALS**
**EPA 200.8/6010B/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-090-03 | | | | | |
| **Client ID:** | **10100003** | | | | | |
| Aluminum | ND | 56 U | 6010B | 10-18-10 | 10-18-10 | |
| Antimony | ND | 5.6 | 200.8 | 10-15-10 | 10-15-10 | |
| Arsenic | ND | 3.3 | 200.8 | 10-15-10 | 10-15-10 | |
| Barium | ND | 28 | 200.8 | 10-15-10 | 10-15-10 | |
| Beryllium | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Cadmium | ND m | 4.4 | 200.8 | 10-15-10 | 10-15-10 | |
| Calcium | **17000** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Chromium | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Cobalt | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Copper | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Iron | ND | 56 J | 6010B | 10-18-10 | 10-18-10 | |
| Lead | ND m | 1.1 | 200.8 | 10-15-10 | 10-15-10 | |
| Magnesium | **6500** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Manganese | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Mercury | ND | 0.50 | 7470A | 10-14-10 | 10-14-10 | |
| Nickel | ND m | 22 | 200.8 | 10-15-10 | 10-15-10 | |
| Potassium | **3700** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Selenium | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Silver | ND m | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Sodium | **6000** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Thallium | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Vanadium | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Zinc | ND m | 56 | 200.8 | 10-15-10 | 10-15-10 | |

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Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**TOTAL METALS**
**EPA 200.8/6010B/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 10-090-04 | | | | | |
| **Client ID:** | **10100004** | | | | | |
| Aluminum | ND | 56 U | 6010B | 10-18-10 | 10-18-10 | |
| Antimony | ND | 5.6 | 200.8 | 10-15-10 | 10-15-10 | |
| Arsenic | ND | 3.3 | 200.8 | 10-15-10 | 10-15-10 | |
| Barium | ND | 28 | 200.8 | 10-15-10 | 10-15-10 | |
| Beryllium | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Cadmium | ND m | 4.4 | 200.8 | 10-15-10 | 10-15-10 | |
| Calcium | **15000** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Chromium | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Cobalt | ND | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Copper | ND m | 11 | 200.8 | 10-15-10 | 10-15-10 | |
| Iron | **94** J | 56 | 6010B | 10-18-10 | 10-18-10 | |
| Lead | ND m | 1.1 U | 200.8 | 10-15-10 | 10-15-10 | |
| Magnesium | **5700** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Manganese | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Mercury | ND | 0.50 U | 7470A | 10-14-10 | 10-14-10 | |
| Nickel | ND m | 22 U | 200.8 | 10-15-10 | 10-15-10 | |
| Potassium | **3900** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Selenium | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Silver | ND m | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Sodium | **6700** | 1100 | 6010B | 10-18-10 | 10-18-10 | |
| Thallium | ND | 5.6 U | 200.8 | 10-15-10 | 10-15-10 | |
| Vanadium | ND | 11 U | 200.8 | 10-15-10 | 10-15-10 | |
| Zinc | ND m | 56 U | 200.8 | 10-15-10 | 10-15-10 | |

MW 11-10

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**MEMORANDUM**

DATE: November 1, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage-Phase 2 Source Removal Site, Walla Walla, Washington**

REF: TDD: 10-09-0009 PAN: 002233.0605.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage-Phase 2 Source Removal Site located in Walla Walla, Washington, has been completed. Analysis for Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered: 10100001 10100002 10100003 10100004

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected on October 7, 2010, extracted on October 12, 2010, and were analyzed by October 13, 2010, therefore meeting QC criteria of less than 7 days between collection and water sample extraction (14 days for soils) and less than 40 days between extraction and analysis.

2. **Initial and Continuing Calibration: Acceptable.**

All initial calibration relative standard deviations (RSDs) were less than 15%. All continuing calibration % differences (% D) were less than 15% and were within QC limits.

3. **Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

4. **Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

5. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

**7. Matrix Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

**8. Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**9. Compound Identification: Acceptable.**

All positive results were dual-column confirmed with differences between the columns less than 25%.

**10. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**11. Laboratory Contact**

No laboratory contact was required.

**12. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan,, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**PCBs by EPA 8082**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100001** | | | | | |
| Laboratory ID: | 10-090-01 | | | | | |
| Aroclor 1016 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1221 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1232 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1242 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1248 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1254 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1260 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *79* | *39-126* | | | | |
| **Client ID:** | **10100002** | | | | | |
| Laboratory ID: | 10-090-02 | | | | | |
| Aroclor 1016 | **ND** | 0.052 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1221 | **ND** | 0.052 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1232 | **ND** | 0.052 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1242 | **ND** | 0.052 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1248 | **ND** | 0.052 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1254 | **ND** | 0.052 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1260 | **ND** | 0.052 | EPA 8082 | 10-12-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *39-126* | | | | |
| **Client ID:** | **10100003** | | | | | |
| Laboratory ID: | 10-090-03 | | | | | |
| Aroclor 1016 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1221 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1232 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1242 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1248 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1254 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1260 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *39-126* | | | | |

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Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**PCBs by EPA 8082**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100004** | | | | | |
| Laboratory ID: | 10-090-04 | | | | | |
| Aroclor 1016 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1221 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1232 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1242 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1248 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1254 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| Aroclor 1260 | **ND** | 0.051 | EPA 8082 | 10-12-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *82* | *39-126* | | | | |

MW 11-1-10

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**MEMORANDUM**

DATE: November 1, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage-Phase 2 Source Removal Site, Walla Walla, Washington**

REF: TDD: 10-09-0009 PAN: 002233.0605.01RA

The data quality assurance review of 5 water samples collected from the Stubblefield Salvage-Phase 2 Source Removal Site located in Walla Walla, Washington, has been completed. Analysis for Extended Gasoline Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Gx) analyses was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered: 10100001 10100002 10100003 10100004 10100005

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 4°C. The samples were collected on October 7, 2010, and were analyzed on October 15, 2010, therefore meeting QC criteria of less than 14 days between collection and analysis for preserved water samples.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All relative percent differences (RPDs) were less than or equal to the laboratory control limits of 15%.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All percent differences were less than or equal to the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed at the required frequency of every 12 hours for each matrix, preparation technique, and analysis system. Gasoline-range TPHs were not detected in any blank.

**6. System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria.

**7. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**8. Duplicates: Acceptable.**

Laboratory duplicate results were within laboratory QC limits.

**9. Quantitation and Quantitation Limits: Acceptable.**

Sample quantitation and sample quantitation limits were correctly calculated.

**10. Laboratory Contact: Not Required.**

No laboratory contact was required.

**11. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the site-specific sampling plan Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**NWTPH-Gx**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100001** | | | | | |
| Laboratory ID: | 10-090-01 | | | | | |
| Gasoline | ~~ND~~ | 100 | NWTPH-Gx | 10-15-10 | 10-15-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *Fluorobenzene* | *90* | *74-121* | | | | |
| **Client ID:** | **10100002** | | | | | |
| Laboratory ID: | 10-090-02 | | | | | |
| Gasoline | ~~ND~~ | 100 | NWTPH-Gx | 10-15-10 | 10-15-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *Fluorobenzene* | *90* | *74-121* | | | | |
| **Client ID:** | **10100003** | | | | | |
| Laboratory ID: | 10-090-03 | | | | | |
| Gasoline | ~~ND~~ | 100 | NWTPH-Gx | 10-15-10 | 10-15-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *Fluorobenzene* | *91* | *74-121* | | | | |
| **Client ID:** | **10100004** | | | | | |
| Laboratory ID: | 10-090-04 | | | | | |
| Gasoline | ~~ND~~ | 100 | NWTPH-Gx | 10-15-10 | 10-15-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *Fluorobenzene* | *91* | *74-121* | | | | |
| **Client ID:** | **10100005** | | | | | |
| Laboratory ID: | 10-090-05 | | | | | |
| Gasoline | ~~ND~~ | 100 | NWTPH-Gx | 10-15-10 | 10-15-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *Fluorobenzene* | *91* | *74-121* | | | | |

MW 11-1-10

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**MEMORANDUM**

DATE: November 1, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage-Phase 2 Source Removal Site, Walla Walla, Washington**

REF: TDD: 10-09-0009 PAN: 002233.0605.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage-Phase 2 Source Removal Site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered: 10100001 10100002 10100003 10100004

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected on October 7, 2010, extracted on October 13, 2010, and analyzed on October 13, 2010, therefore meeting QC criteria of less than 7 days between collection and extraction for water samples, and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All relative percent differences (RPDs) were less than or equal to the laboratory control limits.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. **System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria.

7. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

8. **Duplicates: Acceptable.**

Duplicate results were acceptable.

9. **Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

10. **Laboratory Contact: Not Required.**

No laboratory contact was required.

11. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Water
Units: mg/L (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100001** | | | | | |
| Laboratory ID: | 10-090-01 | | | | | |
| Diesel Range Organics | ND | 0.28 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| Lube Oil Range Organics | ND m | 0.44 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *100* | *50-150* | | | | |
| **Client ID:** | **10100002** | | | | | |
| Laboratory ID: | 10-090-02 | | | | | |
| Diesel Range Organics | ND | 0.27 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| Lube Oil Range Organics | ND m | 0.44 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *107* | *50-150* | | | | |
| **Client ID:** | **10100003** | | | | | |
| Laboratory ID: | 10-090-03 | | | | | |
| Diesel Range Organics | ND | 0.24 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| Lube Oil Range Organics | ND m | 0.38 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *98* | *50-150* | | | | |
| **Client ID:** | **10100004** | | | | | |
| Laboratory ID: | 10-090-04 | | | | | |
| Diesel Range Organics | ND | 0.27 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| Lube Oil Range Organics | ND m | 0.43 U | NWTPH-Dx | 10-13-10 | 10-13-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *104* | *50-150* | | | | |

mw 11-10

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**MEMORANDUM**

DATE: November 1, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage-Phase 2 Source Removal Site, Walla Walla, Washington**

REF: TDD: 10-09-0009 PAN: 002233.0605.01RA

The data quality assurance review of 4 water samples collected from the Stubblefield Salvage-Phase 2 Source Removal Site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered: 10100001 10100002 10100003 10100004

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected on October 7, 2010, were extracted on October 12, 2010, and were analyzed on October 13, 2010, therefore meeting holding time criteria of less than 7 days between collection and extraction (14 days for soil) and less than 40 days between extraction and analysis.

**2. Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

**3. Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol, benzidine, and benzoic acid; no action was taken based on these outliers as they were not detected in any sample.

**4. Continuing Calibration: Acceptable.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 %.

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Blank spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100001** | | | | | |
| Laboratory ID: | 10-090-01 | | | | | |
| n-Nitrosodimethylamine | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyridine | **ND** | 12 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Aniline | **ND** | 5.8 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethyl)ether | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chlorophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dichlorobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dichlorobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzyl alcohol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dichlorobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitroso-di-n-propylamine | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachloroethane | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Nitrobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Isophorone | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitrophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dimethylphenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dichlorophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Naphthalene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Chloroaniline | **ND** | 12 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobutadiene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chloro-3-methylphenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylnaphthalene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 1-Methylnaphthalene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Hexachlorocyclopentadiene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,6-Trichlorophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3-Dichloroaniline | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,5-Trichlorophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chloronaphthalene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitroaniline | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dinitrobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dimethylphthalate | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dinitrobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,6-Dinitrotoluene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dinitrobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthylene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 3-Nitroaniline | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |





MW 11/10

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100001** | | | | | |
| Laboratory ID: | 10-090-01 | | | | | |
| 2,4-Dinitrophenol | **ND** | 12 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Nitrophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dinitrotoluene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dibenzofuran | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,5,6-Tetrachlorophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,4,6-Tetrachlorophenol | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Diethylphthalate | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chlorophenyl-phenylether | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Nitroaniline | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluorene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4,6-Dinitro-2-methylphenol | **ND** | 5.8 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitrosodiphenylamine | **ND** | 12 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Diphenylhydrazine | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Bromophenyl-phenylether | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobenzene | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pentachlorophenol | **ND** | 5.8 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenanthrene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Anthracene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Carbazole | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-butylphthalate | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluoranthene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzidine | **ND** | 12 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyrene | **ND** | 0.12 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Butylbenzylphthalate | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis-2-Ethylhexyladipate | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 3,3'-Dichlorobenzidine | **ND** | 12 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[a]anthracene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Chrysene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| bis(2-Ethylhexyl)phthalate | **3.2** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-octylphthalate | **ND** | 1.2 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[b]fluoranthene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[k]fluoranthene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[a]pyrene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.012 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *56* | *14 - 95* | | | | |
| *Phenol-d6* | *44* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *80* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *76* | *40 - 111* | | | | |
| *2,4,6-Tribromophenol* | *85* | *52 - 117* | | | | |
| *Terphenyl-d14* | *95* | *57 - 114* | | | | |

MW 11-1-10

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100002** | | | | | |
| Laboratory ID: | 10-090-02 | | | | | |
| n-Nitrosodimethylamine | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyridine | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Aniline | **ND** | 5.3 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethyl)ether | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzyl alcohol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitroso-di-n-propylamine | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachloroethane | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Nitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Isophorone | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitrophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dimethylphenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dichlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Naphthalene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Chloroaniline | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobutadiene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chloro-3-methylphenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylnaphthalene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 1-Methylnaphthalene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Hexachlorocyclopentadiene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,6-Trichlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3-Dichloroaniline | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,5-Trichlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chloronaphthalene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitroaniline | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dinitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dimethylphthalate | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dinitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,6-Dinitrotoluene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dinitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthylene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 3-Nitroaniline | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |

MW. 11-1-10

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**SEMIVOLATILES by EPA 8270D/SIM**
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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100002** | | | | | |
| Laboratory ID: | 10-090-02 | | | | | |
| 2,4-Dinitrophenol | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Nitrophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dinitrotoluene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dibenzofuran | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,5,6-Tetrachlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,4,6-Tetrachlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Diethylphthalate | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chlorophenyl-phenylether | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Nitroaniline | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluorene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4,6-Dinitro-2-methylphenol | **ND** | 5.3 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitrosodiphenylamine | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Diphenylhydrazine | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Bromophenyl-phenylether | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pentachlorophenol | **ND** | 5.3 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenanthrene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Anthracene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Carbazole | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-butylphthalate | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluoranthene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzidine | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyrene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Butylbenzylphthalate | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis-2-Ethylhexyladipate | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 3,3'-Dichlorobenzidine | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[a]anthracene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Chrysene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| bis(2-Ethylhexyl)phthalate | **20** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-octylphthalate | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[b]fluoranthene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[k]fluoranthene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[a]pyrene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *54* | *14 - 95* | | | | |
| *Phenol-d6* | *40* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *77* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *75* | *40 - 111* | | | | |
| *2,4,6-Tribromophenol* | *85* | *52 - 117* | | | | |
| *Terphenyl-d14* | *96* | *57 - 114* | | | | |

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**SEMIVOLATILES by EPA 8270D/SIM**
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Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100003** | | | | | |
| Laboratory ID: | 10-090-03 | | | | | |
| n-Nitrosodimethylamine | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyridine | **ND** | 10 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Aniline | **ND** | 5.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethyl)ether | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chlorophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dichlorobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dichlorobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzyl alcohol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dichlorobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitroso-di-n-propylamine | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachloroethane | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Nitrobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Isophorone | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitrophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dimethylphenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dichlorophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Naphthalene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Chloroaniline | **ND** | 10 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobutadiene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chloro-3-methylphenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylnaphthalene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 1-Methylnaphthalene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Hexachlorocyclopentadiene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,6-Trichlorophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3-Dichloroaniline | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,5-Trichlorophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chloronaphthalene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitroaniline | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dinitrobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dimethylphthalate | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dinitrobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,6-Dinitrotoluene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dinitrobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthylene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 3-Nitroaniline | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |

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**SEMIVOLATILES by EPA 8270D/SIM**
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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100003** | | | | | |
| Laboratory ID: | 10-090-03 | | | | | |
| 2,4-Dinitrophenol | **ND** | 10 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Nitrophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dinitrotoluene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dibenzofuran | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,5,6-Tetrachlorophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,4,6-Tetrachlorophenol | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Diethylphthalate | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chlorophenyl-phenylether | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Nitroaniline | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluorene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4,6-Dinitro-2-methylphenol | **ND** | 5.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitrosodiphenylamine | **ND** | 10 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Diphenylhydrazine | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Bromophenyl-phenylether | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobenzene | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pentachlorophenol | **ND** | 5.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenanthrene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Anthracene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Carbazole | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-butylphthalate | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluoranthene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzidine | **ND** | 10 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyrene | **ND** | 0.10 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Butylbenzylphthalate | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis-2-Ethylhexyladipate | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 3,3'-Dichlorobenzidine | **ND** | 10 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[a]anthracene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Chrysene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| bis(2-Ethylhexyl)phthalate | **5.2** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-octylphthalate | **ND** | 1.0 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[b]fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[k]fluoranthene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[a]pyrene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Indeno[1,2,3-cd]pyrene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Dibenz[a,h]anthracene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[g,h,i]perylene | **ND** | 0.010 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *53* | *14 - 95* | | | | |
| *Phenol-d6* | *38* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *77* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *75* | *40 - 111* | | | | |
| *2,4,6-Tribromophenol* | *87* | *52 - 117* | | | | |
| *Terphenyl-d14* | *92* | *57 - 114* | | | | |

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**SEMIVOLATILES by EPA 8270D/SIM**
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Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100004** | | | | | |
| Laboratory ID: | 10-090-04 | | | | | |
| n-Nitrosodimethylamine | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyridine | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Aniline | **ND** | 5.3 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethyl)ether | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzyl alcohol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylphenol (o-Cresol) | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroisopropyl)ether | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| (3+4)-Methylphenol (m,p-Cresol) | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitroso-di-n-propylamine | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachloroethane | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Nitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Isophorone | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitrophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dimethylphenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis(2-Chloroethoxy)methane | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dichlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2,4-Trichlorobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Naphthalene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Chloroaniline | **ND** | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobutadiene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chloro-3-methylphenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Methylnaphthalene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 1-Methylnaphthalene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Hexachlorocyclopentadiene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,6-Trichlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3-Dichloroaniline | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4,5-Trichlorophenol | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Chloronaphthalene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2-Nitroaniline | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,4-Dinitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dimethylphthalate | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,3-Dinitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,6-Dinitrotoluene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Dinitrobenzene | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthylene | **ND** | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 3-Nitroaniline | **ND** | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |

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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **10100004** | | | | | |
| Laboratory ID: | 10-090-04 | | | | | |
| 2,4-Dinitrophenol | ND | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Acenaphthene | ND | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4-Nitrophenol | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,4-Dinitrotoluene | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Dibenzofuran | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Diethylphthalate | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Chlorophenyl-phenylether | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Nitroaniline | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluorene | ND | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.3 | EPA 8270 | 10-12-10 | 10-13-10 | |
| n-Nitrosodiphenylamine | ND | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 1,2-Diphenylhydrazine | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 4-Bromophenyl-phenylether | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Hexachlorobenzene | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pentachlorophenol | ND | 5.3 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Phenanthrene | ND | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Anthracene | ND | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Carbazole | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-butylphthalate | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Fluoranthene | ND | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzidine | ND | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Pyrene | ND | 0.11 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Butylbenzylphthalate | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| bis-2-Ethylhexyladipate | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| 3,3'-Dichlorobenzidine | ND | 11 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[a]anthracene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Chrysene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| bis(2-Ethylhexyl)phthalate | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Di-n-octylphthalate | ND | 1.1 | EPA 8270 | 10-12-10 | 10-13-10 | |
| Benzo[b]fluoranthene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[k]fluoranthene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[a]pyrene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Dibenz[a,h]anthracene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| Benzo[g,h,i]perylene | ND | 0.011 | EPA 8270/SIM | 10-12-10 | 10-12-10 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *64* | *14 - 95* | | | | |
| *Phenol-d6* | *48* | *10 - 94* | | | | |
| *Nitrobenzene-d5* | *91* | *34 - 118* | | | | |
| *2-Fluorobiphenyl* | *88* | *40 - 111* | | | | |
| *2,4,6-Tribromophenol* | *93* | *52 - 117* | | | | |
| *Terphenyl-d14* | *104* | *57 - 114* | | | | |

MW 11-1-10

ecology and environment, inc.
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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: November 1, 2010

TO: Steve Hall, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage-Phase 2 Source Removal Site, Walla Walla, Washington**

REF: TDD: 10-09-0009 PAN: 002233.0605.01RA

The data quality assurance review of 5 water samples collected from the Stubblefield Salvage-Phase 2 Source Removal Site located in Walla Walla, Washington, has been completed. Volatile Organic Compound (VOC) analysis (EPA Method 8260) was performed by OnSite Environmental, Inc., Redmond, Washington.

The samples were numbered: 10100001 10100002 10100003 10100004 10100005

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected on October 7, 2010, and were analyzed on October 14, 2010, therefore meeting QC criteria of less than 14 days between collection and analysis for preserved water samples.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050 except 2-chloroethylvinylether; associated sample quantitation limits were rejected (R). All water Relative Standard Deviations (RSDs) were less than the QC limits of 30%.

4. **Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25% except 2-butanone, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, naphthalene, and 1,2,3-trichlorobenzene with low recoveries; associated positive results and sample quantitation limits were qualified as estimated quantities (J or UJ).

5. **Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Analysis: Acceptable.**

MS and MSD analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within QC limits.

**8. Duplicate Analysis: Acceptable.**

Laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards were within $\pm$ 30 seconds of the continuing calibration internal standard retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**VOLATILES by EPA 8260B**
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| | |
|---|---|
| Date Extracted: | 10-14-10 |
| Date Analyzed: | 10-14-10 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-090-01 |
| **Client ID:** | **10100001** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-Dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| ~~2-Chloroethyl Vinyl Ether~~ | ~~ND~~ | | ~~1.0~~ |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

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Lab ID: 10-090-01
**Client ID: 10100001**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 83 | 71-126 |
| Toluene-d8 | 84 | 76-116 |
| 4-Bromofluorobenzene | 81 | 70-123 |

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

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| | |
|---|---|
| Date Extracted: | 10-14-10 |
| Date Analyzed: | 10-14-10 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-090-02 |
| **Client ID:** | **10100002** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-Dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| ~~2-Chloroethyl Vinyl Ether~~ | ~~ND~~ | | ~~1.0~~ |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

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Lab ID: 10-090-02
**Client ID: 10100002**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ~~ND~~ | | 0.20 |
| Tetrachloroethene | 0.25 | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 84 | 71-126 |
| Toluene-d8 | 82 | 76-116 |
| 4-Bromofluorobenzene | 83 | 70-123 |

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

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| | |
|---|---|
| Date Extracted: | 10-14-10 |
| Date Analyzed: | 10-14-10 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-090-03 |
| **Client ID:** | **10100003** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-Dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| ~~2-Chloroethyl Vinyl Ether~~ | ~~ND~~ | | ~~1.0~~ |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

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Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

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Lab ID: 10-090-03
**Client ID: 10100003**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ~~ND~~ m | | 0.20 U |
| Tetrachloroethene | 0.36 | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 U |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 J |
| 1,2,4-Trichlorobenzene | ND | | 0.20 J |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 J |
| 1,2,3-Trichlorobenzene | ND m | | 0.20 J |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 92 | 71-126 |
| Toluene-d8 | 88 | 76-116 |
| 4-Bromofluorobenzene | 89 | 70-123 |

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Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

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| | |
|---|---|
| Date Extracted: | 10-14-10 |
| Date Analyzed: | 10-14-10 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-090-04 |
| **Client ID:** | **10100004** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-Dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| ~~2-Chloroethyl Vinyl Ether~~ | ~~ND~~ | | ~~1.0~~ |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

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Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
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Lab ID: 10-090-04
**Client ID: 10100004**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 82 | 71-126 |
| Toluene-d8 | 82 | 76-116 |
| 4-Bromofluorobenzene | 81 | 70-123 |

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

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| | |
|---|---|
| Date Extracted: | 10-14-10 |
| Date Analyzed: | 10-14-10 |
| Matrix: | Water |
| Units: | ug/L (ppb) |
| Lab ID: | 10-090-05 |
| **Client ID:** | **10100005** |

| **Compound** | **Results** | **Flags** | **PQL** |
|---|---|---|---|
| Dichlorodifluoromethane | ND | | 0.20 |
| Chloromethane | ND | | 1.0 |
| Vinyl Chloride | ND | | 0.20 |
| Bromomethane | ND | | 0.20 |
| Chloroethane | ND | | 1.0 |
| Trichlorofluoromethane | ND | | 0.20 |
| 1,1-Dichloroethene | ND | | 0.20 |
| Acetone | ND | | 5.0 |
| Iodomethane | ND | | 1.0 |
| Carbon Disulfide | ND | | 0.20 |
| Methylene Chloride | ND | | 1.0 |
| (trans) 1,2-Dichloroethene | ND | | 0.20 |
| Methyl t-Butyl Ether | ND | | 0.20 |
| 1,1-Dichloroethane | ND | | 0.20 |
| Vinyl Acetate | ND | | 2.0 |
| 2,2-Dichloropropane | ND | | 0.20 |
| (cis) 1,2-Dichloroethene | ND | | 0.20 |
| 2-Butanone | ND | | 5.0 |
| Bromochloromethane | ND | | 0.20 |
| Chloroform | ND | | 0.20 |
| 1,1,1-Trichloroethane | ND | | 0.20 |
| Carbon Tetrachloride | ND | | 0.20 |
| 1,1-Dichloropropene | ND | | 0.20 |
| Benzene | ND | | 0.20 |
| 1,2-Dichloroethane | ND | | 0.20 |
| Trichloroethene | ND | | 0.20 |
| 1,2-Dichloropropane | ND | | 0.20 |
| Dibromomethane | ND | | 0.20 |
| Bromodichloromethane | ND | | 0.20 |
| ~~2-Chloroethyl Vinyl Ether~~ | ~~ND~~ | | ~~1.0~~ |
| (cis) 1,3-Dichloropropene | ND | | 0.20 |
| Methyl Isobutyl Ketone | ND | | 2.0 |
| Toluene | ND | | 1.0 |
| (trans) 1,3-Dichloropropene | ND | | 0.20 |

Date of Report: October 20, 2010
Samples Submitted: October 11, 2010
Laboratory Reference: 1010-090
Project: 10HD-10/08/10-0001

**VOLATILES by EPA 8260B**
page 2 of 2

Lab ID: 10-090-05
**Client ID: 10100005**

| Compound | Results | Flags | PQL |
|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 0.20 |
| Tetrachloroethene | ND | | 0.20 |
| 1,3-Dichloropropane | ND | | 0.20 |
| 2-Hexanone | ND | | 2.0 |
| Dibromochloromethane | ND | | 0.20 |
| 1,2-Dibromoethane | ND | | 0.20 |
| Chlorobenzene | ND | | 0.20 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.20 |
| Ethylbenzene | ND | | 0.20 |
| m,p-Xylene | ND | | 0.40 |
| o-Xylene | ND | | 0.20 |
| Styrene | ND | | 0.20 |
| Bromoform | ND | | 1.0 |
| Isopropylbenzene | ND | | 0.20 |
| Bromobenzene | ND | | 0.20 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.20 |
| 1,2,3-Trichloropropane | ND | | 0.20 |
| n-Propylbenzene | ND | | 0.20 |
| 2-Chlorotoluene | ND | | 0.20 |
| 4-Chlorotoluene | ND | | 0.20 |
| 1,3,5-Trimethylbenzene | ND | | 0.20 |
| tert-Butylbenzene | ND | | 0.20 |
| 1,2,4-Trimethylbenzene | ND | | 0.20 |
| sec-Butylbenzene | ND | | 0.20 |
| 1,3-Dichlorobenzene | ND | | 0.20 |
| p-Isopropyltoluene | ND | | 0.20 |
| 1,4-Dichlorobenzene | ND | | 0.20 |
| 1,2-Dichlorobenzene | ND | | 0.20 |
| n-Butylbenzene | ND | | 0.20 |
| 1,2-Dibromo-3-chloropropane | ND | | 1.0 |
| 1,2,4-Trichlorobenzene | ND | | 0.20 |
| Hexachlorobutadiene | ND | | 0.20 |
| Naphthalene | ND | | 1.0 |
| 1,2,3-Trichlorobenzene | ND | | 0.20 |

| Surrogate | Percent Recovery | Control Limits |
|---|---|---|
| Dibromofluoromethane | 82 | 71-126 |
| Toluene-d8 | 83 | 76-116 |
| 4-Bromofluorobenzene | 83 | 70-123 |

# I June 2011 Data Memoranda

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**MEMORANDUM**

DATE: July 22, 2011

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 7 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 200.8, 6010B, and 7470A) were performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | | | |
|---|---|---|---|---|---|---|
| MW-1 | MW-2 | MW-3 | MW-4 | P202 | P207 | P208 |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

All liquid samples were preserved to a pH < 2. The samples were maintained at < 6°C. The samples were collected between June 26 and 28, 2011, and were analyzed by July 8, 2011, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Satisfactory.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. There were no detections in any blanks that affected sample results except aluminum (108 ug/L) associated with sample MW-1; the aluminum result in sample MW-1 was qualified as not detected (U).

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of each sequence. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. ICP Serial Dilution: Acceptable.**

A serial dilution analysis was performed per matrix per concentration or per sample delivery group, whichever was more frequent. All serial dilution results were within QC limits.

**8. Matrix Spike Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits.

**9. Duplicate Analysis: Acceptable.**

A laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits.

**10. Laboratory Control Sample Analysis: Acceptable.**

A Laboratory Control Sample (LCS) was analyzed per SDG per matrix. All LCS results were within the established control limits.

**11. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 06-241-01 | | | | | |
| **Client ID:** | **MW-1** | | | | | |
| Aluminum | **140** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Arsenic | ND | 3.3 | 200.8 | 7-1-11 | 7-7-11 | |
| Barium | **33** | 28 | 200.8 | 7-1-11 | 7-7-11 | |
| Beryllium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cadmium | ND | 4.4 | 200.8 | 7-1-11 | 7-7-11 | |
| Calcium | **20000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cobalt | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Copper | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Iron | **250** | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ND | 1.1 | 200.8 | 7-1-11 | 7-7-11 | |
| Magnesium | **8500** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Mercury | ND | 0.50 | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ND | 22 | 200.8 | 7-1-11 | 7-7-11 | |
| Potassium | **4400** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Silver | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Sodium | **7900** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Vanadium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Zinc | ND | 56 | 200.8 | 7-1-11 | 7-7-11 | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 06-241-02 | | | | | |
| **Client ID:** | **MW-2** | | | | | |
| Aluminum | ~~ND~~ | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Arsenic | ~~ND~~ | 3.3 | 200.8 | 7-1-11 | 7-7-11 | |
| Barium | **34** | 28 | 200.8 | 7-1-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cadmium | ~~ND~~ | 4.4 | 200.8 | 7-1-11 | 7-7-11 | |
| Calcium | **22000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cobalt | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Copper | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Iron | **190** | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ~~ND~~ | 1.1 | 200.8 | 7-1-11 | 7-7-11 | |
| Magnesium | **9600** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Mercury | ~~ND~~ | 0.50 | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ~~ND~~ | 22 | 200.8 | 7-1-11 | 7-7-11 | |
| Potassium | **4500** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Silver | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Sodium | **8800** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Vanadium | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Zinc | ~~ND~~ | 56 | 200.8 | 7-1-11 | 7-7-11 | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

## TOTAL METALS
## EPA 6010B/200.8/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 06-241-03 | | | | | |
| **Client ID:** | **MW-3** | | | | | |
| Aluminum | ND | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Arsenic | ND | 3.3 | 200.8 | 7-1-11 | 7-7-11 | |
| Barium | ND | 28 | 200.8 | 7-1-11 | 7-7-11 | |
| Beryllium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cadmium | ND | 4.4 | 200.8 | 7-1-11 | 7-7-11 | |
| Calcium | **16000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cobalt | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Copper | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Iron | ND | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ND | 1.1 | 200.8 | 7-1-11 | 7-7-11 | |
| Magnesium | **6500** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Mercury | ND | 0.50 | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ND | 22 | 200.8 | 7-1-11 | 7-7-11 | |
| Potassium | **3700** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Silver | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Sodium | **6000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Vanadium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Zinc | ND | 56 | 200.8 | 7-1-11 | 7-7-11 | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 06-241-04 | | | | | |
| **Client ID:** | **MW-4** | | | | | |
| Aluminum | **270** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Arsenic | ~~ND~~ | 3.3 U | 200.8 | 7-1-11 | 7-7-11 | |
| Barium | **31** | 28 | 200.8 | 7-1-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Cadmium | ~~ND~~ | 4.4 U | 200.8 | 7-1-11 | 7-7-11 | |
| Calcium | **21000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Cobalt | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Copper | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Iron | **520** | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ~~ND~~ | 1.1 U | 200.8 | 7-1-11 | 7-7-11 | |
| Magnesium | **8600** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **11** | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Mercury | ~~ND~~ | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ~~ND~~ | 22 U | 200.8 | 7-1-11 | 7-7-11 | |
| Potassium | **4600** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Silver | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Sodium | **8300** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Vanadium | **12** | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Zinc | ~~ND~~ | 56 U | 200.8 | 7-1-11 | 7-7-11 | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

## TOTAL METALS
## EPA 6010B/200.8/7470A

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 06-241-05 | | | | | |
| **Client ID:** | **P202** | | | | | |
| Aluminum | **2400** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Arsenic | ~~ND~~ | 3.3 | 200.8 | 7-1-11 | 7-7-11 | |
| Barium | **92** | 28 | 200.8 | 7-1-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Cadmium | ~~ND~~ | 4.4 U | 200.8 | 7-1-11 | 7-7-11 | |
| Calcium | **37000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Cobalt | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Copper | ~~ND~~ | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Iron | **5200** | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ~~ND~~ | 1.1 U | 200.8 | 7-1-11 | 7-7-11 | |
| Magnesium | **16000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **210** | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Mercury | ~~ND~~ | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ~~ND~~ | 22 U | 200.8 | 7-1-11 | 7-7-11 | |
| Potassium | **7100** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Silver | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Sodium | **59000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Vanadium | **22** | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Zinc | ~~ND~~ | 56 U | 200.8 | 7-1-11 | 7-7-11 | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 06-241-06 | | | | | |
| **Client ID:** | **P207** | | | | | |
| Aluminum | ND | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Arsenic | ND | 3.3 | 200.8 | 7-1-11 | 7-7-11 | |
| Barium | **28** | 28 | 200.8 | 7-1-11 | 7-7-11 | |
| Beryllium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cadmium | ND | 4.4 | 200.8 | 7-1-11 | 7-7-11 | |
| Calcium | **20000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Cobalt | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Copper | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Iron | **190** | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | **2.9** | 1.1 | 200.8 | 7-1-11 | 7-7-11 | |
| Magnesium | **8400** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Mercury | ND | 0.50 | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ND | 22 | 200.8 | 7-1-11 | 7-7-11 | |
| Potassium | **4400** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Silver | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Sodium | **7800** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ND | 5.6 | 200.8 | 7-1-11 | 7-7-11 | |
| Vanadium | ND | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Zinc | ND | 56 | 200.8 | 7-1-11 | 7-7-11 | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 06-241-07 | | | | | |
| **Client ID:** | **P208** | | | | | |
| Aluminum | **8400** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Arsenic | ~~ND~~ | 3.3 U | 200.8 | 7-1-11 | 7-7-11 | |
| Barium | **82** | 28 | 200.8 | 7-1-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Cadmium | ~~ND~~ | 4.4 U | 200.8 | 7-1-11 | 7-7-11 | |
| Calcium | **22000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Cobalt | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Copper | **41** | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Iron | **13000** | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | **42** | 1.1 | 200.8 | 7-1-11 | 7-7-11 | |
| Magnesium | **9200** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **190** | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Mercury | ~~ND~~ | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ~~ND~~ | 22 U | 200.8 | 7-1-11 | 7-7-11 | |
| Potassium | **5400** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Silver | ~~ND~~ | 11 U | 200.8 | 7-1-11 | 7-7-11 | |
| Sodium | **8300** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ | 5.6 U | 200.8 | 7-1-11 | 7-7-11 | |
| Vanadium | **45** | 11 | 200.8 | 7-1-11 | 7-7-11 | |
| Zinc | **100** | 56 | 200.8 | 7-1-11 | 7-7-11 | |





MW 7-22-11

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**MEMORANDUM**

DATE: July 28, 2011

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 32 soil and 8 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Target Analyte List (TAL) metals analyses (EPA Methods 200.8, 6010B, and 7470A) and hexavalent chromium analyses (modified EPA Method 7196A) were performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 11060006 | 11060007 | 11060008 | 11060009 | 11060010 |
| 11060011 | 11060012 | 11060013 | 11060014 | 11060015 |
| 11060016 | 11060017 | 11060018 | 11060019 | 11060022 |
| 11060023 | 11060024 | 11060025 | 11060026 | 11060027 |
| 11060028 | 11060029 | 11060030 | 11060031 | 11060032 |
| 11060033 | 11060034 | 11060035 | 11060036 | 11060037 |
| 11060045 | 11060046 | 11060052 | 11060053 | 11060054 |
| 11060055 | 11060056 | 11060058 | 11060059 | 11060060 |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

All liquid samples were preserved to a pH < 2. The samples were maintained at < 6°C. The samples were collected between June 26 and 28, 2011, and were analyzed by July 14, 2011, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

**2. Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP

analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

**3. Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. There were no detections in any blanks that affected sample results.

**4. ICP Interference Check Sample: Acceptable.**

An Interference Check Sample (ICS) was analyzed at the beginning of each sequence. All ICS (solution AB) results were within QC limits of 80% - 120% recovery.

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. ICP Serial Dilution: Acceptable.**

A serial dilution analysis was performed per matrix per concentration or per sample delivery group, whichever was more frequent. All serial dilution results were within QC limits.

**8. Matrix Spike Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Spike and spike duplicate recoveries were within the QC limits.

**9. Duplicate Analysis: Satisfactory.**

A laboratory duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except the iron duplicate result associated with the water samples; associated iron results were qualified as estimated quantities with an unknown bias (JK or UJK).

**10. Laboratory Control Sample Analysis: Acceptable.**

A Laboratory Control Sample (LCS) was analyzed per SDG per matrix. All LCS results were within the established control limits.

**11. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency

and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-01 | | | | | |
| **Client ID:** | **11060006** | | | | | |
| Aluminum | **11000** | 61 | 6010B | 7-14-11 | 7-14-11 | |
| Antimony | ~~ND~~ | 6.1 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ U | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **95** | 3.0 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.61 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ U | 0.61 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **15000** | 1200 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **7.2** | 0.61 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **14** | 0.61 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **11** | 1.2 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **44000** | 160 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **12** | 6.1 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **5400** | 610 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **550** | 12 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ U | 0.30 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **7.5** | 3.0 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **2800** | 610 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ U | 0.61 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **910** | 61 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ U | 3.0 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **230** | 0.61 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **65** | 3.0 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-02 | | | | | |
| **Client ID:** | **11060007** | | | | | |
| Aluminum | **16000** | 70 | 6010B | 7-14-11 | 7-14-11 | |
| Antimony | ~~ND~~ | 7.0 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 14 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **120** | 3.5 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.70 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.70 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5100** | 1400 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **8.8** | 0.70 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **21** | 0.70 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **11** | 1.4 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **54000** | 180 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | ~~ND~~ | 7.0 U | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **4400** | 700 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **440** | 14 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.35 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **8.2** | 3.5 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1600** | 700 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 14 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.70 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **1500** | 70 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.5 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **140** | 0.70 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **61** | 3.5 | 6010B | 7-14-11 | 7-14-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-03 | | | | | |
| **Client ID:** | **11060008** | | | | | |
| Aluminum | **13000** | 79 | 6010B | 7-14-11 | 7-14-11 | |
| Antimony | ~~ND~~ | 7.9 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 16 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **75** | 4.0 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.79 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.79 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **2900** | 1600 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **5.7** | 0.79 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **3.4** | 0.79 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **15** | 1.6 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **12000** | 210 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | ~~ND~~ | 7.9 U | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **2000** | 790 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **80** | 16 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.40 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **6.5** | 4.0 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1200** | 790 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 16 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.79 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **1100** | 79 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 4.0 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **38** | 0.79 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **28** | 4.0 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-04 | | | | | |
| **Client ID:** | **11060009** | | | | | |
| Aluminum | **12000** | 66 | 6010B | 7-14-11 | 7-14-11 | |
| Antimony | ~~ND~~ | 6.6 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **110** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5500** | 1300 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **8.9** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **13** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **12** | 1.3 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **37000** | 170 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **14** | 6.6 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **3900** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **380** | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.33 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **7.4** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **2400** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **610** | 66 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.3 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **140** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **59** | 3.3 | 6010B | 7-14-11 | 7-14-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-05 | | | | | |
| **Client ID:** | **11060010** | | | | | |
| Aluminum | **13000** | 73 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 7.3 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **120** | 3.7 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.73 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.73 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5100** | 1500 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **9.3** | 0.73 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **19** | 0.73 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **12** | 1.5 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **53000** | 190 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | ~~ND~~ | 7.3 U | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **4200** | 730 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **460** | 15 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.37 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **8.1** | 3.7 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1800** | 730 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.73 | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **770** | 73 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.7 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **140** | 0.73 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **58** | 3.7 | 6010B | 7-14-11 | 7-14-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-06 | | | | | |
| **Client ID:** | **11060011** | | | | | |
| Aluminum | **14000** | 75 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 7.5 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **130** | 3.7 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.75 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.75 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **4500** | 1500 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **9.1** | 0.75 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **7.6** | 0.75 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **14** | 1.5 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **26000** | 190 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | ~~ND~~ | 7.5 U | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **2900** | 750 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **150** | 15 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.37 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **6.3** | 3.7 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1200** | 750 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.75 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **1100** | 75 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.7 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **130** | 0.75 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **43** | 3.7 | 6010B | 7-14-11 | 7-14-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-07 | | | | | |
| **Client ID:** | **11060012** | | | | | |
| Aluminum | **11000** | 63 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.3 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **200** | 3.2 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.63 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | **3.6** | 0.63 | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **12000** | 1300 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **18** | 0.63 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **15** | 0.63 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **280** | 1.3 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **45000** | 160 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **220** | 6.3 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **4900** | 630 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **500** | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | **1.5** | 0.63 | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **21** | 3.2 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **2900** | 630 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.63 | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **770** | 63 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.2 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **160** | 0.63 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **1200** | 3.2 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-08 | | | | | |
| **Client ID:** | **11060013** | | | | | |
| Aluminum | **9800** | 60 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~**ND**~~ | 6.0 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~**ND**~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **120** | 3.0 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~**ND**~~ | 0.60 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~**ND**~~ | 0.60 | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **10000** | 1200 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **8.4** | 0.60 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **13** | 0.60 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **15** | 1.2 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **37000** | 160 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **76** | 6.0 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **5300** | 600 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **560** | 12 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~**ND**~~ | 0.30 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **7.2** | 3.0 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **3800** | 600 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~**ND**~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~**ND**~~ | 0.60 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **570** | 60 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~**ND**~~ | 3.0 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **150** | 0.60 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **150** | 3.0 | 6010B | 7-14-11 | 7-14-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-09 | | | | | |
| **Client ID:** | **11060014** | | | | | |
| Aluminum | **11000** | 66 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.6 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **110** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **6100** | 1300 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **8.6** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **15** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **12** | 1.3 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **47000** | 170 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | ~~ND~~ | 6.6 U | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **4600** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **470** | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.33 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **7.3** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **2700** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **690** | 66 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.3 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **190** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **63** | 3.3 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-10 | | | | | |
| **Client ID:** | **11060015** | | | | | |
| Aluminum | **16000** | 74 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 7.4 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **110** | 3.7 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.74 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.74 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5500** | 1500 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **12** | 0.74 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **17** | 0.74 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **11** | 1.5 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **55000** | 190 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | ~~ND~~ | 7.4 U | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **3200** | 740 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **410** | 15 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.37 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **7.9** | 3.7 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1100** | 740 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.74 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **1300** | 74 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.7 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **270** | 0.74 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **95** | 3.7 | 6010B | 7-14-11 | 7-14-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-11 | | | | | |
| **Client ID:** | **11060016** | | | | | |
| Aluminum | **9700** | 62 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.2 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **160** | 3.1 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.62 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | **2.4** | 0.62 | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **9500** | 1200 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **11** | 0.62 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **14** | 0.62 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **62** | 1.2 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **43000** | 160 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **110** | 6.2 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **4200** | 620 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **480** | 12 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.31 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **69** | 3.1 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **2800** | 620 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.62 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **630** | 62 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.1 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **160** | 0.62 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **1200** | 31 | 6010B | 7-14-11 | 7-15-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-12 | | | | | |
| **Client ID:** | **11060017** | | | | | |
| Aluminum | **16000** | 160 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 8.1 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 16 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **150** | 4.1 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.81 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.81 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **6600** | 1600 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **16** | 0.81 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **9.9** | 0.81 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **23** | 1.6 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **29000** | 210 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **9.9** | 8.1 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **3100** | 810 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **250** | 16 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.41 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **8.7** | 4.1 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1600** | 810 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 16 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.81 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **490** | 81 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 4.1 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **160** | 0.81 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **100** | 4.1 | 6010B | 7-14-11 | 7-14-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-13 | | | | | |
| **Client ID:** | **11060018** | | | | | |
| Aluminum | **11000** | 130 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | **25** | 6.4 | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **190** | 3.2 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.64 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | **1.2** | 0.64 | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **8800** | 1300 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **11** | 0.64 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **13** | 0.64 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **83** | 1.3 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **39000** | 170 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **4400** | 6.4 | 6010B | 7-8-11 | 7-2-11 | |
| Magnesium | **4000** | 640 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **460** | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.32 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **11** | 3.2 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **3000** | 640 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.64 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **550** | 64 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.2 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **160** | 0.64 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **530** | 3.2 | 6010B | 7-14-11 | 7-14-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-14 | | | | | |
| **Client ID:** | **11060019** | | | | | |
| Aluminum | **17000** | 140 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~**ND**~~ | 7.1 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~**ND**~~ MW | 14 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **140** | 3.6 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~**ND**~~ | 0.71 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~**ND**~~ MW | 0.71 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **6600** | 1400 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **12** | 0.71 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **17** | 0.71 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **16** | 1.4 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **46000** | 190 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **9.6** | 7.1 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **3700** | 710 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **610** | 14 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~**ND**~~ MW | 0.36 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **8.4** | 3.6 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1700** | 710 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~**ND**~~ | 14 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~**ND**~~ MW | 0.71 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **470** | 71 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~**ND**~~ MW | 3.6 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **200** | 0.71 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **78** | 3.6 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-15 | | | | | |
| **Client ID:** | **11060022** | | | | | |
| Aluminum | **14000** | 130 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.5 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **120** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.65 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.65 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5300** | 1300 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **12** | 0.65 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **15** | 0.65 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **20** | 1.3 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **34000** | 170 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **26** | 6.5 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **2900** | 650 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **560** | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.33 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **8.9** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1900** | 650 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.65 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **340** | 65 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.3 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **120** | 0.65 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **95** | 3.3 | 6010B | 7-14-11 | 7-14-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-16 | | | | | |
| **Client ID:** | **11060023** | | | | | |
| Aluminum | **12000** | 120 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.1 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ MU | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **130** | 3.1 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ MU | 0.61 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | **0.72** | 0.61 | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5300** | 1200 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **12** | 0.61 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **15** | 0.61 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **22** | 1.2 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **38000** | 160 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **310** | 6.1 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **2700** | 610 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **600** | 12 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ MU | 0.31 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **13** | 3.1 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1700** | 610 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ MU | 0.61 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **420** | 61 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ MU | 3.1 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **150** | 0.61 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **140** | 3.1 | 6010B | 7-14-11 | 7-14-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-19 | | | | | |
| **Client ID:** | **11060026** | | | | | |
| Aluminum | **11000** | 120 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.2 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **120** | 3.1 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.62 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.62 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5800** | 1200 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **12** | 0.62 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **15** | 0.62 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **18** | 1.2 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **38000** | 160 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **45** | 6.2 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **2600** | 620 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **610** | 12 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.31 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **8.3** | 3.1 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1100** | 620 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 12 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.62 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **350** | 62 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.1 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **150** | 0.62 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **88** | 3.1 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-21 | | | | | |
| **Client ID:** | **11060028** | | | | | |
| Aluminum | **12000** | 130 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.6 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ MW | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **130** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ MW | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **5900** | 1300 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **14** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **17** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **46** | 1.3 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **43000** | 170 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **30** | 6.6 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **3000** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **690** | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ MW | 0.33 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **50** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1500** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ MW | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **380** | 66 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ MW | 3.3 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **170** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **86** | 3.3 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-22 | | | | | |
| **Client ID:** | **11060029** | | | | | |
| Aluminum | **12000** | 130 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 6.6 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **120** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **7200** | 1300 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **9.6** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **14** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **14** | 1.3 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **42000** | 170 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **9.8** | 6.6 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **4200** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **510** | 13 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.33 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **9.2** | 3.3 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **2600** | 660 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 13 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.66 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **390** | 66 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.3 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **160** | 0.66 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **86** | 3.3 | 6010B | 7-14-11 | 7-14-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-23 | | | | | |
| **Client ID:** | **11060030** | | | | | |
| Aluminum | **12000** | 140 | 6010B | 7-14-11 | 7-15-11 | |
| Antimony | ~~ND~~ | 7.1 U | 6010B | 7-8-11 | 7-11-11 | |
| Arsenic | ~~ND~~ | 14 U | 6010B | 7-8-11 | 7-11-11 | |
| Barium | **110** | 3.6 | 6010B | 7-8-11 | 7-11-11 | |
| Beryllium | ~~ND~~ | 0.71 U | 6010B | 7-8-11 | 7-11-11 | |
| Cadmium | ~~ND~~ | 0.71 U | 6010B | 7-8-11 | 7-11-11 | |
| Calcium | **4100** | 1400 | 6010B | 7-8-11 | 7-11-11 | |
| Chromium | **9.9** | 0.71 | 6010B | 7-8-11 | 7-11-11 | |
| Cobalt | **13** | 0.71 | 6010B | 7-8-11 | 7-11-11 | |
| Copper | **15** | 1.4 | 6010B | 7-8-11 | 7-11-11 | |
| Iron | **36000** | 180 | 6010B | 7-8-11 | 7-11-11 | |
| Lead | **15** | 7.1 | 6010B | 7-8-11 | 7-11-11 | |
| Magnesium | **2400** | 710 | 6010B | 7-8-11 | 7-11-11 | |
| Manganese | **260** | 14 | 6010B | 7-8-11 | 7-11-11 | |
| Mercury | ~~ND~~ | 0.36 U | 7471A | 7-12-11 | 7-12-11 | |
| Nickel | **6.6** | 3.6 | 6010B | 7-8-11 | 7-11-11 | |
| Potassium | **1300** | 710 | 6010B | 7-8-11 | 7-11-11 | |
| Selenium | ~~ND~~ | 14 U | 6010B | 7-8-11 | 7-11-11 | |
| Silver | ~~ND~~ | 0.71 U | 6010B | 7-8-11 | 7-11-11 | |
| Sodium | **360** | 71 | 6010B | 7-14-11 | 7-14-11 | |
| Thallium | ~~ND~~ | 3.6 U | 6020 | 7-8-11 | 7-14-11 | |
| Vanadium | **180** | 0.71 | 6010B | 7-8-11 | 7-11-11 | |
| Zinc | **110** | 3.6 | 6010B | 7-14-11 | 7-14-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-24 | | | | | |
| **Client ID:** | **11060031** | | | | | |
| Aluminum | **12000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.4 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **60** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **2800** | 74 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **7.2** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **4.5** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **12** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **14000** | 190 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.4 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2100** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **120** | 37 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.37 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **6.0** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1100** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **1200** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.7 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **46** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **36** | 3.7 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-25 | | | | | |
| **Client ID:** | **11060032** | | | | | |
| Aluminum | **11000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~**ND**~~ | 7.6 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~**ND**~~ MW | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **110** | 3.8 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~**ND**~~ | 0.76 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~**ND**~~ MW | 0.76 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **1800** | 76 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **4.3** | 0.76 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **5.0** | 0.76 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **9.3** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **11000** | 200 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~**ND**~~ MW | 7.6 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **980** | 76 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **89** | 38 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~**ND**~~ MW | 0.38 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **6.3** | 3.8 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **530** | 76 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~**ND**~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~**ND**~~ MW | 0.76 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **760** | 76 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~**ND**~~ MW | 3.8 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **31** | 0.76 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **12** | 3.8 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-26 | | | | | |
| **Client ID:** | **11060033** | | | | | |
| Aluminum | **16000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.5 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ MW | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **120** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.75 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ MW | 0.75 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **5600** | 75 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **13** | 0.75 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **20** | 0.75 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **23** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **61000** | 190 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ MW | 7.5 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **4100** | 75 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **520** | 37 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ MW | 0.37 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **9.0** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1400** | 75 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ MW | 0.75 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **670** | 75 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ MW | 3.7 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **210** | 0.75 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **93** | 3.7 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-27 | | | | | |
| **Client ID:** | **11060034** | | | | | |
| Aluminum | **12000** | 160 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.8 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **100** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.78 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.78 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **2600** | 78 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **10** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **10** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **18** | 1.6 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **26000** | 200 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.8 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2600** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **180** | 39 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.39 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **8.4** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1300** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.78 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **2500** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.9 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **120** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **39** | 3.9 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-28 | | | | | |
| **Client ID:** | **11060035** | | | | | |
| Aluminum | **12000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~**ND**~~ | 7.4 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~**ND**~~ Mu | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **150** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~**ND**~~ | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~**ND**~~ Mu | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **3200** | 74 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **9.8** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **16** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **17** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **38000** | 190 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~**ND**~~ Mu | 7.4 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **3100** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **420** | 37 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~**ND**~~ Mu | 0.37 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **7.9** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1100** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~**ND**~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~**ND**~~ Mu | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **580** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~**ND**~~ Mu | 3.7 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **140** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **38** | 3.7 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-29 | | | | | |
| **Client ID:** | **11060036** | | | | | |
| Aluminum | **17000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.4 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **110** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **5600** | 74 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **12** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **21** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **21** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **55000** | 190 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.4 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **3700** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **510** | 37 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.37 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **9.2** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1300** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.74 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **630** | 74 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.7 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **200** | 0.74 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **94** | 3.7 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-30 | | | | | |
| **Client ID:** | **11060037** | | | | | |
| Aluminum | **12000** | 140 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~**ND**~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~**ND**~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **100** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~**ND**~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~**ND**~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **4000** | 70 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **9.7** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **11** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **17** | 1.4 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **30000** | 180 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~**ND**~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2900** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **200** | 35 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~**ND**~~ | 0.35 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **7.7** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1200** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~**ND**~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~**ND**~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **950** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~**ND**~~ | 3.5 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **150** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **54** | 3.5 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-31 | | | | | |
| **Client ID:** | **11060038** | | | | | |
| Aluminum | **13000** | 140 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **100** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **4800** | 70 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **13** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **21** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **23** | 1.4 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **86000** | 1800 | 6010B | 7-11-11 | 7-19-11 | |
| Lead | ~~ND~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **4100** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **760** | 35 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.35 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **9.8** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1200** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **790** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.5 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **290** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **82** | 3.5 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-32 | | | | | |
| **Client ID:** | **11060039** | | | | | |
| Aluminum | **11000** | 160 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.8 V | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 16 V | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **70** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.78 V | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.78 V | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **2400** | 78 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **6.5** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **2.8** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **10** | 1.6 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **11000** | 200 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.8 V | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **1800** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **73** | 39 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.39 V | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **5.2** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1100** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 16 V | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.78 V | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **480** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.9 V | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **37** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **25** | 3.9 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-33 | | | | | |
| **Client ID:** | **11060040** | | | | | |
| Aluminum | **14000** | 140 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 6.8 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **120** | 3.4 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.68 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.68 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **5100** | 68 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **13** | 0.68 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **24** | 0.68 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **22** | 1.4 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **59000** | 180 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 6.8 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **4200** | 68 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **920** | 34 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.34 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **10** | 3.4 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1900** | 68 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.68 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **570** | 68 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.4 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **240** | 0.68 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **89** | 3.4 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-34 | | | | | |
| **Client ID:** | **11060041** | | | | | |
| Aluminum | **13000** | 140 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **90** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **5100** | 70 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **10** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **18** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **20** | 1.4 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **49000** | 180 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **3200** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **600** | 35 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.35 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **7.3** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1400** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **350** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.5 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **210** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **89** | 3.5 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-35 | | | | | |
| **Client ID:** | **11060042** | | | | | |
| Aluminum | **21000** | 140 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **100** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **3100** | 70 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **8.1** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **9.6** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **15** | 1.4 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **23000** | 180 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2600** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **240** | 35 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.35 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **6.3** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1400** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.70 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **1700** | 70 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.5 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **100** | 0.70 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **45** | 3.5 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-36 | | | | | |
| **Client ID:** | **11060043** | | | | | |
| Aluminum | **12000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.3 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **130** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.73 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.73 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **2900** | 73 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **7.3** | 0.73 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **12** | 0.73 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **14** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **24000** | 190 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.3 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2000** | 73 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **290** | 37 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.37 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **6.1** | 3.7 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **920** | 73 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.73 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **900** | 73 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.7 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **88** | 0.73 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **33** | 3.7 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-37 | | | | | |
| **Client ID:** | **11060044** | | | | | |
| Aluminum | **15000** | 160 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.9 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **110** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.79 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.79 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **5200** | 79 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **11** | 0.79 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **23** | 0.79 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **21** | 1.6 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **57000** | 210 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.9 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **3800** | 79 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **600** | 39 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.39 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **7.7** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1300** | 79 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.79 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **570** | 79 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.9 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **230** | 0.79 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **87** | 3.9 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-40 | | | | | |
| **Client ID:** | **11060047** | | | | | |
| Aluminum | **16000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.6 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **130** | 3.8 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.76 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.76 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **5600** | 76 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **11** | 0.76 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **15** | 0.76 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **25** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **36000** | 200 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | **31** | 7.6 | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2400** | 76 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **440** | 38 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.38 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **9.0** | 3.8 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1600** | 76 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.76 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **250** | 76 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ | 3.8 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **170** | 0.76 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **150** | 3.8 | 6010B | 7-18-11 | 7-18-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-41 | | | | | |
| **Client ID:** | **11060048** | | | | | |
| Aluminum | **13000** | 140 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.1 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **120** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.71 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.71 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **5100** | 71 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **11** | 0.71 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **16** | 0.71 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **19** | 1.4 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **42000** | 180 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | **30** | 7.1 | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **3000** | 71 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **390** | 35 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.35 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **7.9** | 3.5 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1600** | 71 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 14 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.71 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **420** | 71 | 6010B | 7-11-11 | 7-19-11 | |
| Thallium | ~~ND~~ | 3.5 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **210** | 0.71 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **99** | 3.5 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-42 | | | | | |
| **Client ID:** | **11060049** | | | | | |
| Aluminum | **16000** | 160 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.8 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **130** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.78 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.78 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **4700** | 78 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **12** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **13** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **21** | 1.6 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **41000** | 200 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | **8.6** | 7.8 | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2900** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **270** | 39 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ | 0.39 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **6.7** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1400** | 78 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.78 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **420** | 78 | 6010B | 7-11-11 | 7-19-11 | |
| Thallium | ~~ND~~ | 3.9 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **230** | 0.78 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **70** | 3.9 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-43 | | | | | |
| **Client ID:** | **11060050** | | | | | |
| Aluminum | **13000** | 150 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 7.7 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **68** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ | 0.77 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~ND~~ | 0.77 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **2900** | 77 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **4.6** | 0.77 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **2.7** | 0.77 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **9.0** | 1.5 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **9200** | 200 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~ND~~ | 7.7 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **1400** | 77 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **53** | 39 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~<ND~~ | 0.39 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **4.0** | 3.9 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **880** | 77 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 15 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 0.77 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **1200** | 77 | 6010B | 7-11-11 | 7-19-11 | |
| Thallium | ~~<ND~~ | 3.9 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **27** | 0.77 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **21** | 3.9 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-44 | | | | | |
| **Client ID:** | **11060051** | | | | | |
| Aluminum | **7100** | 160 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~**ND**~~ | 8.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~**ND**~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **73** | 4.0 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~**ND**~~ | 0.80 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | ~~**ND**~~ | 0.80 U | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **2700** | 80 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **8.4** | 0.80 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **10** | 0.80 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **14** | 1.6 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **29000** | 210 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | ~~**ND**~~ | 8.0 U | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **2100** | 80 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **140** | 40 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~**ND**~~ | 0.40 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **5.9** | 4.0 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **1100** | 80 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~**ND**~~ | 16 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~**ND**~~ | 0.80 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **650** | 80 | 6010B | 7-11-11 | 7-19-11 | |
| Thallium | ~~**ND**~~ | 4.0 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **150** | 0.80 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **36** | 4.0 | 6010B | 7-18-11 | 7-18-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/6020/7471A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-50 | | | | | |
| **Client ID:** | **11060057** | | | | | |
| Aluminum | **14000** | 120 | 6010B | 7-18-11 | 7-18-11 | |
| Antimony | ~~ND~~ | 5.9 U | 6010B | 7-11-11 | 7-12-11 | |
| Arsenic | ~~ND~~ MW | 12 U | 6010B | 7-11-11 | 7-12-11 | |
| Barium | **140** | 2.9 | 6010B | 7-11-11 | 7-12-11 | |
| Beryllium | ~~ND~~ MW | 0.59 U | 6010B | 7-11-11 | 7-12-11 | |
| Cadmium | **1.3** | 0.59 | 6010B | 7-11-11 | 7-12-11 | |
| Calcium | **7600** | 590 | 6010B | 7-18-11 | 7-18-11 | |
| Chromium | **12** | 0.59 | 6010B | 7-11-11 | 7-12-11 | |
| Cobalt | **16** | 0.59 | 6010B | 7-11-11 | 7-12-11 | |
| Copper | **24** | 1.2 | 6010B | 7-11-11 | 7-12-11 | |
| Iron | **41000** | 150 | 6010B | 7-11-11 | 7-12-11 | |
| Lead | **210** | 5.9 | 6010B | 7-11-11 | 7-12-11 | |
| Magnesium | **3000** | 59 | 6010B | 7-11-11 | 7-12-11 | |
| Manganese | **540** | 29 | 6010B | 7-11-11 | 7-12-11 | |
| Mercury | ~~ND~~ MW | 0.29 U | 7471A | 7-11-11 | 7-11-11 | |
| Nickel | **8.7** | 2.9 | 6010B | 7-11-11 | 7-12-11 | |
| Potassium | **2100** | 59 | 6010B | 7-11-11 | 7-12-11 | |
| Selenium | ~~ND~~ | 12 U | 6010B | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ MW | 0.59 U | 6010B | 7-11-11 | 7-12-11 | |
| Sodium | **360** | 59 | 6010B | 7-11-11 | 7-12-11 | |
| Thallium | ~~ND~~ MW | 2.9 U | 6020 | 7-11-11 | 7-14-11 | |
| Vanadium | **170** | 0.59 | 6010B | 7-11-11 | 7-12-11 | |
| Zinc | **630** | 2.9 | 6010B | 7-18-11 | 7-18-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SOLUBLE HEXAVALENT CHROMIUM**
**WATER EXTRACTION**
**EPA 7196A**

Matrix: Soil
Units: mg/kg (ppm)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-52 | | | | | |
| **Client ID:** | **11060059** | | | | | |
| Hexavalent Chromium | ~~ND~~ | 1.1 U | 7196A mod | 7-14-11 | 7-14-11 | |
| Lab ID: | 07-002-53 | | | | | |
| **Client ID:** | **11060060** | | | | | |
| Hexavalent Chromium | ~~ND~~ | 1.3 U | 7196A mod | 7-14-11 | 7-14-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-38 | | | | | |
| **Client ID:** | **11060045** | | | | | |
| Aluminum | ND | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ND | 5.6 | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | ND | 3.3 | 200.8 | 7-11-11 | 7-12-11 | |
| Barium | ND | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ND | 4.4 | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | **120** JK | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ND | 1.1 | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ND | 0.50 | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ND | 22 | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ND | 5.6 | 200.8 | 7-11-11 | 7-12-11 | |
| Silver | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ND | 5.6 | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | ND | 56 | 200.8 | 7-7-11 | 7-7-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-39 | | | | | |
| **Client ID:** | **11060046** | | | | | |
| Aluminum | ND | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ND | 5.6 | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | ND | 3.3 | 200.8 | 7-11-11 | 7-12-11 | |
| Barium | ND | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ND | 4.4 | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | ND | 56 JK | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ND | 1.1 | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ND | 0.50 | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ND | 22 | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ND | 5.6 | 200.8 | 7-11-11 | 7-12-11 | |
| Silver | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ND | 5.6 | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | ND | 56 | 200.8 | 7-7-11 | 7-7-11 | |

NW





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-45 | | | | | |
| **Client ID:** | **11060052** | | | | | |
| Aluminum | **3100** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | ~~ND~~ | 3.3 U | 200.8 | 7-11-11 | 7-12-11 | |
| Barium | **97** | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ~~ND~~ | 4.4 U | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | **48000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | **7600** JK | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | ~~ND~~ | 1.1 U | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | **22000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **480** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ~~ND~~ | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ~~ND~~ | 22 U | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | **7500** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 5.6 U | 200.8 | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | **53000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | **34** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | ~~ND~~ | 56 U | 200.8 | 7-7-11 | 7-7-11 | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-46 | | | | | |
| **Client ID:** | **11060053** | | | | | |
| Aluminum | **7200** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | ~~ND~~ MU | 11 U | 200.8 | 7-11-11 | 7-12-11 | ~~U1~~ MU |
| Barium | **250** | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ~~ND~~ MU | 4.4 U | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | **93000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | **14** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | ~~ND~~ MU | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | **13** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | **19000** JK | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | **9.4** | 1.1 | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | **43000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **2500** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ~~ND~~ MU | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | **36** | 22 | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | **13000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 22 U | 200.8 | 7-11-11 | 7-12-11 | ~~U1~~ MU |
| Silver | ~~ND~~ MU | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | **150000** | 11000 | 6010B | 7-7-11 | 7-18-11 | |
| Thallium | ~~ND~~ MU | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | **53** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | **230** | 56 | 200.8 | 7-7-11 | 7-7-11 | |





MU 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-47 | | | | | |
| **Client ID:** | **11060054** | | | | | |
| Aluminum | ND | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ND | 5.6 | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | ND | 3.3 | 200.8 | 7-11-11 | 7-12-11 | |
| Barium | ND | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ND | 4.4 | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | ND | 56 | JK 6010B | 7-7-11 | 7-7-11 | |
| Lead | ND | 1.1 | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ND | 0.50 | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ND | 22 | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ND | 5.6 | 200.8 | 7-11-11 | 7-12-11 | |
| Silver | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | ND | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ND | 5.6 | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | ND | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | ND | 56 | 200.8 | 7-7-11 | 7-7-11 | |





JW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-48 | | | | | |
| **Client ID:** | **11060055** | | | | | |
| Aluminum | **1000** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | ~~ND~~ | 8.3 U | 200.8 | 7-11-11 | 7-12-11 | ~~U~~ |
| Barium | **190** | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ~~ND~~ | 4.4 U | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | **130000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | **15** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | **16** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | **45** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | **7100** JK | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | **380** | 1.1 | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | **63000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **4500** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ~~ND~~ | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | **24** | 22 | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | **9100** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 8.3 U | 200.8 | 7-11-11 | 7-12-11 | ~~U~~ |
| Silver | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | **30000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | **150** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | ~~ND~~ | 56 U | 200.8 | 7-7-11 | 7-7-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-49 | | | | | |
| **Client ID:** | **11060056** | | | | | |
| Aluminum | **6400** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | ~~ND~~ | 3.3 U | 200.8 | 7-11-11 | 7-12-11 | |
| Barium | **120** | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ~~ND~~ | 4.4 U | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | **37000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | **31** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | **12** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | **22** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | **24000** JK | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | **7.3** | 1.1 | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | **17000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **880** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ~~ND~~ | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | ~~ND~~ | 22 U | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | **6200** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 5.6 U | 200.8 | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | **16000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | **97** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | **100** | 56 | 200.8 | 7-7-11 | 7-7-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**TOTAL METALS**
**EPA 6010B/200.8/7470A**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | EPA Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| Lab ID: | 07-002-51 | | | | | |
| **Client ID:** | **11060058** | | | | | |
| Aluminum | **29000** | 110 | 6010B | 7-7-11 | 7-7-11 | |
| Antimony | ~~ND~~ MW | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Arsenic | **6.1** | 3.3 | 200.8 | 7-11-11 | 7-12-11 | |
| Barium | **360** | 28 | 200.8 | 7-7-11 | 7-7-11 | |
| Beryllium | ~~ND~~ | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Cadmium | ~~ND~~ MW | 4.4 U | 200.8 | 7-7-11 | 7-7-11 | |
| Calcium | **32000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Chromium | **36** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Cobalt | **29** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Copper | **180** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Iron | **68000** JK | 56 | 6010B | 7-7-11 | 7-7-11 | |
| Lead | **170** | 1.1 | 200.8 | 7-7-11 | 7-7-11 | |
| Magnesium | **12000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Manganese | **2300** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Mercury | ~~ND~~ MW | 0.50 U | 7470A | 7-8-11 | 7-8-11 | |
| Nickel | **33** | 22 | 200.8 | 7-7-11 | 7-7-11 | |
| Potassium | **13000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Selenium | ~~ND~~ | 5.6 U | 200.8 | 7-11-11 | 7-12-11 | |
| Silver | ~~ND~~ MW | 11 U | 200.8 | 7-7-11 | 7-7-11 | |
| Sodium | **10000** | 1100 | 6010B | 7-7-11 | 7-7-11 | |
| Thallium | ~~ND~~ MW | 5.6 U | 200.8 | 7-7-11 | 7-7-11 | |
| Vanadium | **300** | 11 | 200.8 | 7-7-11 | 7-7-11 | |
| Zinc | **1100** | 56 | 200.8 | 7-7-11 | 7-7-11 | |

MW 7-31-11

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# MEMORANDUM

DATE: July 22, 2011

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 7 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Analysis for Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | | | |
|---|---|---|---|---|---|---|
| MW-1 | MW-2 | MW-3 | MW-4 | P202 | P207 | P208 |

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected between June 26 and 28, 2011, extracted on July 7, 2011, and were analyzed by July 8, 2011, therefore meeting QC criteria of less than 7 days between collection and water sample extraction and less than 40 days between extraction and analysis.

2. **Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

3. **Initial and Continuing Calibration: Satisfactory.**

All initial calibration relative standard deviations (RSDs) were less than 15%. All continuing calibration % differences (% D) were less than 15% and were within QC limits except some Aroclor 1016 and 1260 second column high recovery results; associated positive sample results were qualified as estimated quantities with a high bias (JH).

**4. Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

**8. Matrix Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

**9. Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**10. Compound Identification: Satisfactory.**

All results were dual-column confirmed with differences between the columns less than 25% except Aroclor 1260 in sample P208. Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities with an unknown bias (JK).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

When more than one bias qualifier applied to an estimated sample result, professional judgment was used to determine which bias qualifier to apply.

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

## PCBs by EPA 8082

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-1** | | | | | |
| Laboratory ID: | 06-241-01 | | | | | |
| Aroclor 1016 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *93* | *36-127* | | | | |
| **Client ID:** | **MW-2** | | | | | |
| Laboratory ID: | 06-241-02 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *36-127* | | | | |
| **Client ID:** | **MW-3** | | | | | |
| Laboratory ID: | 06-241-03 | | | | | |
| Aroclor 1016 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *91* | *36-127* | | | | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

## PCBs by EPA 8082

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-4** | | | | | |
| Laboratory ID: | 06-241-04 | | | | | |
| Aroclor 1016 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *86* | *36-127* | | | | |
| **Client ID:** | **P202** | | | | | |
| Laboratory ID: | 06-241-05 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *88* | *36-127* | | | | |
| **Client ID:** | **P207** | | | | | |
| Laboratory ID: | 06-241-06 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *90* | *36-127* | | | | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**PCBs by EPA 8082**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **P208** | | | | | |
| Laboratory ID: | 06-241-07 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.049 U | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ~~ND~~ | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ~~ND~~ | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | **0.28** | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ~~ND~~ | 0.049 U | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ~~ND~~ | 0.049 U | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | **0.091** JK | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *58* | *36-127* | | | | |





JMW 7-22-11

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**MEMORANDUM**

DATE: July 28, 2011

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 30 soil and 8 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Analysis for Polychlorinated Biphenyls (PCBs - EPA Method 8082) was performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 11060006 | 11060007 | 11060008 | 11060009 | 11060010 |
| 11060011 | 11060012 | 11060013 | 11060014 | 11060015 |
| 11060016 | 11060017 | 11060018 | 11060019 | 11060022 |
| 11060023 | 11060024 | 11060025 | 11060026 | 11060027 |
| 11060028 | 11060029 | 11060030 | 11060031 | 11060032 |
| 11060033 | 11060034 | 11060035 | 11060036 | 11060037 |
| 11060045 | 11060046 | 11060052 | 11060053 | 11060054 |
| 11060055 | 11060056 | 11060058 | | |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected between June 26 and 28, 2011, extracted on July 7, 2011, and were analyzed by July 8, 2011, therefore meeting QC criteria of less than 7 days between collection and water sample extraction and less than 40 days between extraction and analysis.

**2. Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

3. **Initial and Continuing Calibration: Satisfactory.**

All initial calibration relative standard deviations (RSDs) were less than 15%. All continuing calibration % differences (% D) were less than 15% and were within QC limits except some Aroclor 1016 and 1260 second column high recovery results; associated positive sample results were qualified as estimated quantities with a high bias (JH).

4. **Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

6. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

7. **System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits except when diluted out due to high analyte concentrations in the sample.

8. **Matrix Spikes: Acceptable.**

Recoveries of all spiked analytes were within the appropriate control limits.

9. **Duplicates: Acceptable.**

Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

10. **Compound Identification: Satisfactory.**

All results were dual-column confirmed with differences between the columns less than 25% except Aroclor 1260 in sample 11060024, Aroclor 1242 in sample 11060030, Aroclor 1254 in samples 11060048 and 11060053. Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities with an unknown bias (JK).

11. **Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

12. **Laboratory Contact**

No laboratory contact was required.

## 13. Overall Assessment

When more than one bias qualifier applied to an estimated sample result, professional judgment was used to determine which bias qualifier to apply.

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060006** | | | | | |
| Laboratory ID: | 07-002-01 | | | | | |
| Aroclor 1016 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *92* | *42-123* | | | | |
| **Client ID:** | **11060007** | | | | | |
| Laboratory ID: | 07-002-02 | | | | | |
| Aroclor 1016 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *90* | *42-123* | | | | |
| **Client ID:** | **11060008** | | | | | |
| Laboratory ID: | 07-002-03 | | | | | |
| Aroclor 1016 | ND | 0.079 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.079 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.079 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.079 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.079 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.079 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.079 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *93* | *42-123* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060009** | | | | | |
| Laboratory ID: | 07-002-04 | | | | | |
| Aroclor 1016 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *102* | *42-123* | | | | |
| **Client ID:** | **11060010** | | | | | |
| Laboratory ID: | 07-002-05 | | | | | |
| Aroclor 1016 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *87* | *42-123* | | | | |
| **Client ID:** | **11060011** | | | | | |
| Laboratory ID: | 07-002-06 | | | | | |
| Aroclor 1016 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *93* | *42-123* | | | | |

Mw 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060012** | | | | | |
| Laboratory ID: | 07-002-07 | | | | | |
| Aroclor 1016 | ND | 6.3 | EPA 8082 | 7-8-11 | 7-14-11 | |
| Aroclor 1221 | ND | 6.3 | EPA 8082 | 7-8-11 | 7-14-11 | |
| Aroclor 1232 | ND | 6.3 | EPA 8082 | 7-8-11 | 7-14-11 | |
| Aroclor 1242 | **38** | 6.3 | EPA 8082 | 7-8-11 | 7-14-11 | |
| Aroclor 1248 | ND | 6.3 | EPA 8082 | 7-8-11 | 7-14-11 | |
| Aroclor 1254 | ND | 6.3 | EPA 8082 | 7-8-11 | 7-14-11 | |
| Aroclor 1260 | ND | 6.3 | EPA 8082 | 7-8-11 | 7-14-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | --- | *42-123* | | | | |
| **Client ID:** | **11060013** | | | | | |
| Laboratory ID: | 07-002-08 | | | | | |
| Aroclor 1016 | ND | 0.060 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.060 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.060 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.060 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.060 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.060 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.060 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *96* | *42-123* | | | | |
| **Client ID:** | **11060014** | | | | | |
| Laboratory ID: | 07-002-09 | | | | | |
| Aroclor 1016 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *86* | *42-123* | | | | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

## PCBs by EPA 8082

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060015** | | | | | |
| Laboratory ID: | 07-002-10 | | | | | |
| Aroclor 1016 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND MW | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *81* | *42-123* | | | | |
| **Client ID:** | **11060016** | | | | | |
| Laboratory ID: | 07-002-11 | | | | | |
| Aroclor 1016 | ND | 0.31 | EPA 8082 | 7-8-11 | 7-11-11 | U1 |
| Aroclor 1221 | ND | 0.31 | EPA 8082 | 7-8-11 | 7-11-11 | U1 |
| Aroclor 1232 | ND | 0.31 | EPA 8082 | 7-8-11 | 7-11-11 | U1 |
| Aroclor 1242 | ND | 0.31 | EPA 8082 | 7-8-11 | 7-11-11 | U1 |
| Aroclor 1248 | ND | 0.31 | EPA 8082 | 7-8-11 | 7-11-11 | U1 |
| Aroclor 1254 | ND | 0.31 | EPA 8082 | 7-8-11 | 7-11-11 | U1 |
| Aroclor 1260 | ND MW | 0.31 | EPA 8082 | 7-8-11 | 7-11-11 | U1 |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | MW |
| *DCB* | *83* | *42-123* | | | | |
| **Client ID:** | **11060017** | | | | | |
| Laboratory ID: | 07-002-12 | | | | | |
| Aroclor 1016 | ND | 0.081 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.081 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.081 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.081 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.081 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.081 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND MW | 0.081 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *66* | *42-123* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060018** | | | | | |
| Laboratory ID: | 07-002-13 | | | | | |
| Aroclor 1016 | ND | 0.064 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.064 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.064 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.064 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.064 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.064 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.064 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *77* | *42-123* | | | | |
| **Client ID:** | **11060019** | | | | | |
| Laboratory ID: | 07-002-14 | | | | | |
| Aroclor 1016 | ND | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *76* | *42-123* | | | | |
| **Client ID:** | **11060022** | | | | | |
| Laboratory ID: | 07-002-15 | | | | | |
| Aroclor 1016 | ND | 0.065 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.065 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.065 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.065 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.065 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.065 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.065 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *79* | *42-123* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060023** | | | | | |
| Laboratory ID: | 07-002-16 | | | | | |
| Aroclor 1016 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.061 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *87* | *42-123* | | | | |
| **Client ID:** | **11060024** | | | | | |
| Laboratory ID: | 07-002-17 | | | | | |
| Aroclor 1016 | ND | 0.058 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.058 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.058 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.058 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.058 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.29 | EPA 8082 | 7-11-11 | 7-12-11 | ~~U1~~ |
| Aroclor 1260 | **0.096** JK | 0.058 | EPA 8082 | 7-11-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *64* | *42-123* | | | | |
| **Client ID:** | **11060025** | | | | | |
| Laboratory ID: | 07-002-18 | | | | | |
| Aroclor 1016 | ND | 0.062 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.062 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.062 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.062 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.062 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.062 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.062 | EPA 8082 | 7-11-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *72* | *42-123* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060026** | | | | | |
| Laboratory ID: | 07-002-19 | | | | | |
| Aroclor 1016 | ND | 0.062 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.062 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.062 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.062 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.062 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.062 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.062 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *42-123* | | | | |
| **Client ID:** | **11060027** | | | | | |
| Laboratory ID: | 07-002-20 | | | | | |
| Aroclor 1016 | ND | 0.061 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.061 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.061 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.061 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.061 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.061 | EPA 8082 | 7-11-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.061 | EPA 8082 | 7-11-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *81* | *42-123* | | | | |
| **Client ID:** | **11060028** | | | | | |
| Laboratory ID: | 07-002-21 | | | | | |
| Aroclor 1016 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ND | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *90* | *42-123* | | | | |





JMW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060029** | | | | | |
| Laboratory ID: | 07-002-22 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.066 U | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ~~ND~~ | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ~~ND~~ | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | **0.12** | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ~~ND~~ | 0.066 U | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | **0.18** | 0.066 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ~~ND~~ | 0.066 U | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *42-123* | | | | |
| **Client ID:** | **11060030** | | | | | |
| Laboratory ID: | 07-002-23 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.071 U | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ~~ND~~ | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ~~ND~~ | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | **0.085** JK | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ~~ND~~ | 0.071 U | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ~~ND~~ | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ~~ND~~ | 0.071 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *78* | *42-123* | | | | |
| **Client ID:** | **11060031** | | | | | |
| Laboratory ID: | 07-002-24 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.074 U | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1221 | ~~ND~~ | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1232 | ~~ND~~ | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1242 | ~~ND~~ | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1248 | ~~ND~~ | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1254 | ~~ND~~ | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| Aroclor 1260 | ~~ND~~ | 0.074 | EPA 8082 | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *42-123* | | | | |

MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060032** | | | | | |
| Laboratory ID: | 07-002-25 | | | | | |
| Aroclor 1016 | ND | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *84* | *42-123* | | | | |
| **Client ID:** | **11060033** | | | | | |
| Laboratory ID: | 07-002-26 | | | | | |
| Aroclor 1016 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.075 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *95* | *42-123* | | | | |
| **Client ID:** | **11060034** | | | | | |
| Laboratory ID: | 07-002-27 | | | | | |
| Aroclor 1016 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *42-123* | | | | |

MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060035** | | | | | |
| Laboratory ID: | 07-002-28 | | | | | |
| Aroclor 1016 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | **0.074** | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *86* | *42-123* | | | | |
| **Client ID:** | **11060036** | | | | | |
| Laboratory ID: | 07-002-29 | | | | | |
| Aroclor 1016 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | **0.099** | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.074 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *80* | *42-123* | | | | |
| **Client ID:** | **11060037** | | | | | |
| Laboratory ID: | 07-002-30 | | | | | |
| Aroclor 1016 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *78* | *42-123* | | | | |

MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060038** | | | | | |
| Laboratory ID: | 07-002-31 | | | | | |
| Aroclor 1016 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *42-123* | | | | |
| **Client ID:** | **11060039** | | | | | |
| Laboratory ID: | 07-002-32 | | | | | |
| Aroclor 1016 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *80* | *42-123* | | | | |
| **Client ID:** | **11060040** | | | | | |
| Laboratory ID: | 07-002-33 | | | | | |
| Aroclor 1016 | ND | 0.068 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.068 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.068 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.068 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.068 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.068 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.068 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *81* | *42-123* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060041** | | | | | |
| Laboratory ID: | 07-002-34 | | | | | |
| Aroclor 1016 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *75* | *42-123* | | | | |
| **Client ID:** | **11060042** | | | | | |
| Laboratory ID: | 07-002-35 | | | | | |
| Aroclor 1016 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.070 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *74* | *42-123* | | | | |
| **Client ID:** | **11060043** | | | | | |
| Laboratory ID: | 07-002-36 | | | | | |
| Aroclor 1016 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.073 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *74* | *42-123* | | | | |

7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060044** | | | | | |
| Laboratory ID: | 07-002-37 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.079 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ~~ND~~ | 0.079 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ~~ND~~ | 0.079 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ~~ND~~ | 0.079 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ~~ND~~ | 0.079 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ~~ND~~ | 0.079 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ~~ND~~ MW | 0.079 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *69* | *42-123* | | | | |
| **Client ID:** | **11060047** | | | | | |
| Laboratory ID: | 07-002-40 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ~~ND~~ | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ~~ND~~ | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ~~ND~~ | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ~~ND~~ | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ~~ND~~ MW | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | **1.1** JH | 0.076 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *75* | *42-123* | | | | |
| **Client ID:** | **11060048** | | | | | |
| Laboratory ID: | 07-002-41 | | | | | |
| Aroclor 1016 | ~~ND~~ | 0.071 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ~~ND~~ | 0.071 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ~~ND~~ MW | 0.071 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | **0.29** | 0.071 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ~~ND~~ | 0.071 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | **0.14** JK | 0.071 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ~~ND~~ MW | 0.071 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *73* | *42-123* | | | | |

MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060049** | | | | | |
| Laboratory ID: | 07-002-42 | | | | | |
| Aroclor 1016 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | **1.5** | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ~~ND~~ | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | **0.21** | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ~~ND~~ | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *83* | *42-123* | | | | |
| **Client ID:** | **11060050** | | | | | |
| Laboratory ID: | 07-002-43 | | | | | |
| Aroclor 1016 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.078 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *72* | *42-123* | | | | |
| **Client ID:** | **11060051** | | | | | |
| Laboratory ID: | 07-002-44 | | | | | |
| Aroclor 1016 | ND | 0.080 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.080 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.080 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.080 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.080 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.080 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.080 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *67* | *42-123* | | | | |





MW 7/21/11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060057** | | | | | |
| Laboratory ID: | 07-002-50 | | | | | |
| Aroclor 1016 | ND | 0.059 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1221 | ND | 0.059 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1232 | ND | 0.059 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1242 | ND | 0.059 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1248 | ND | 0.059 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1254 | ND | 0.059 | EPA 8082 | 7-8-11 | 7-12-11 | |
| Aroclor 1260 | ND | 0.059 | EPA 8082 | 7-8-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *42-123* | | | | |





7/31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060045** | | | | | |
| Laboratory ID: | 07-002-38 | | | | | |
| Aroclor 1016 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *85* | *36-127* | | | | |
| **Client ID:** | **11060046** | | | | | |
| Laboratory ID: | 07-002-39 | | | | | |
| Aroclor 1016 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *84* | *36-127* | | | | |
| **Client ID:** | **11060052** | | | | | |
| Laboratory ID: | 07-002-45 | | | | | |
| Aroclor 1016 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *78* | *36-127* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060053** | | | | | |
| Laboratory ID: | 07-002-46 | | | | | |
| Aroclor 1016 | ND | 0.51 | EPA 8082 | 7-7-11 | 7-8-11 | U1 |
| Aroclor 1221 | ND | 0.51 | EPA 8082 | 7-7-11 | 7-8-11 | U1 |
| Aroclor 1232 | ND | 0.51 | EPA 8082 | 7-7-11 | 7-8-11 | U1 |
| Aroclor 1242 | ND | 0.51 | EPA 8082 | 7-7-11 | 7-8-11 | U1 |
| Aroclor 1248 | ND | 0.51 | EPA 8082 | 7-7-11 | 7-8-11 | U1 |
| Aroclor 1254 | **0.64** JK | 0.051 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.051 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *72* | *36-127* | | | | |
| **Client ID:** | **11060054** | | | | | |
| Laboratory ID: | 07-002-47 | | | | | |
| Aroclor 1016 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.048 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *87* | *36-127* | | | | |
| **Client ID:** | **11060055** | | | | | |
| Laboratory ID: | 07-002-48 | | | | | |
| Aroclor 1016 | ND | 200 | EPA 8082 | 7-7-11 | 7-15-11 | |
| Aroclor 1221 | ND | 200 | EPA 8082 | 7-7-11 | 7-15-11 | |
| Aroclor 1232 | ND | 200 | EPA 8082 | 7-7-11 | 7-15-11 | |
| Aroclor 1242 | **1500** | 200 | EPA 8082 | 7-7-11 | 7-15-11 | |
| Aroclor 1248 | ND | 200 | EPA 8082 | 7-7-11 | 7-15-11 | |
| Aroclor 1254 | ND | 200 | EPA 8082 | 7-7-11 | 7-15-11 | |
| Aroclor 1260 | ND | 200 | EPA 8082 | 7-7-11 | 7-15-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | --- | *36-127* | | | | |

7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**PCBs by EPA 8082**

Matrix: Water
Units: ug/L (ppb)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060056** | | | | | |
| Laboratory ID: | 07-002-49 | | | | | |
| Aroclor 1016 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.049 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *88* | *36-127* | | | | |

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060058** | | | | | |
| Laboratory ID: | 07-002-51 | | | | | |
| Aroclor 1016 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1221 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1232 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1242 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1248 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1254 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| Aroclor 1260 | ND | 0.050 | EPA 8082 | 7-7-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *DCB* | *93* | *36-127* | | | | |

7-31-11

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# MEMORANDUM

DATE: July 22, 2011

TO: Jake Moersen, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 7 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | | | |
|---|---|---|---|---|---|---|
| MW-1 | MW-2 | MW-3 | MW-4 | P202 | P207 | P208 |

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected between June 26 and 28, 2011, extracted on July 5, 2011, and analyzed on July 6, 2011, therefore meeting QC criteria of less than 7 days between collection and extraction for water samples and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All relative percent differences (RPDs) were less than or equal to the laboratory control limits.

3. **Continuing Calibration: Acceptable.**

Calculations were verified as correct. All percent differences (%Ds) were ≤ the laboratory control limits of 15%.

4. **Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and motor oil-range TPHs were not detected in any blank.

6. **System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria.

7. **Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

8. **Blank Spike: Acceptable.**

Blank spike results were within QC limits.

9. **Duplicates: Acceptable.**

Duplicate results were acceptable.

10. **Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

11. **Laboratory Contact: Not Required.**

No laboratory contact was required.

12. **Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Water
Units: mg/L (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-1** | | | | | |
| Laboratory ID: | 06-241-01 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.25 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ | 0.40 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *104* | *50-150* | | | | |
| **Client ID:** | **MW-2** | | | | | |
| Laboratory ID: | 06-241-02 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.24 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ | 0.38 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *97* | *50-150* | | | | |
| **Client ID:** | **MW-3** | | | | | |
| Laboratory ID: | 06-241-03 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.25 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ | 0.40 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *96* | *50-150* | | | | |
| **Client ID:** | **MW-4** | | | | | |
| Laboratory ID: | 06-241-04 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.25 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ | 0.40 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *104* | *50-150* | | | | |
| **Client ID:** | **P202** | | | | | |
| Laboratory ID: | 06-241-05 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.26 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil | **0.77** | 0.42 | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *98* | *50-150* | | | | |
| **Client ID:** | **P207** | | | | | |
| Laboratory ID: | 06-241-06 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.24 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ | 0.39 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *111* | *50-150* | | | | |
| **Client ID:** | **P208** | | | | | |
| Laboratory ID: | 06-241-07 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.26 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ | 0.41 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *118* | *50-150* | | | | |





MW 7-22-11

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**MEMORANDUM**

DATE: July 28, 2011

TO: Jake Moersen, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 30 soil and 8 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Analysis for Extended Diesel Range Total Petroleum Hydrocarbons (Ecology Method NWTPH-Dx) was performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 11060006 | 11060007 | 11060008 | 11060009 | 11060010 |
| 11060011 | 11060012 | 11060013 | 11060014 | 11060015 |
| 11060016 | 11060017 | 11060018 | 11060019 | 11060022 |
| 11060023 | 11060024 | 11060025 | 11060026 | 11060027 |
| 11060028 | 11060029 | 11060030 | 11060031 | 11060032 |
| 11060033 | 11060034 | 11060035 | 11060036 | 11060037 |
| GW $H_2O$ 11060045 | 11060046 | 11060052 - GW | 11060053 - GW | 11060054 |
| 11060055 - GW | 11060056 - GW | 11060058 - GW | | |

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected between June 26 and 28, 2011, extracted on July 5, 2011, and analyzed on July 6, 2011, therefore meeting QC criteria of less than 7 days between collection and extraction for unpreserved water samples, less than 14 days between collection and extraction for soil samples, and less than 40 days between extraction and analysis.

2. **Initial Calibration: Acceptable.**

Calculations were verified as correct. All relative percent differences (RPDs) were less than or

equal to the laboratory control limits.

**3. Continuing Calibration: Acceptable.**

Calculations were verified as correct. All percent differences (%Ds) were ≤ the laboratory control limits of 15%.

**4. Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**5. Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel- and lube oil-range TPHs were not detected in any blank.

**6. System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria except when diluted out due to high analyte concentrations in the sample.

**7. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**8. Blank Spike: Acceptable.**

Blank spike results were within QC limits.

**9. Duplicates: Acceptable.**

Duplicate results were acceptable.

**10. Quantitation and Quantitation Limits: Satisfactory.**

Sample concentrations were correctly calculated. The positive diesel range organics result in sample 11060053 was qualified as an estimated quantity with a high bias (JH) due to the presence of gasoline-range organics in the sample.

**11. Laboratory Contact: Not Required.**

No laboratory contact was required.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the

analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060006** | | | | | |
| Laboratory ID: | 07-002-01 | | | | | |
| Diesel Range Organics | ~~ND~~ | 30 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~ND~~ MW | 61 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *114* | *50-150* | | | | |
| **Client ID:** | **11060007** | | | | | |
| Laboratory ID: | 07-002-02 | | | | | |
| Diesel Range Organics | ~~ND~~ | 35 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~ND~~ MW | 70 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *111* | *50-150* | | | | |
| **Client ID:** | **11060008** | | | | | |
| Laboratory ID: | 07-002-03 | | | | | |
| Diesel Range Organics | ~~ND~~ | 40 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~ND~~ MW | 79 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *107* | *50-150* | | | | |
| **Client ID:** | **11060009** | | | | | |
| Laboratory ID: | 07-002-04 | | | | | |
| Diesel Range Organics | ~~ND~~ MW | 33 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil | **100** | 66 MW | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *122* | *50-150* | | | | |
| **Client ID:** | **11060010** | | | | | |
| Laboratory ID: | 07-002-05 | | | | | |
| Diesel Range Organics | ~~ND~~ | 37 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~ND~~ MW | 73 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *102* | *50-150* | | | | |
| **Client ID:** | **11060011** | | | | | |
| Laboratory ID: | 07-002-06 | | | | | |
| Diesel Range Organics | ~~ND~~ | 37 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~ND~~ MW | 75 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *109* | *50-150* | | | | |





MW 7-3(-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060012** | | | | | |
| Laboratory ID: | 07-002-07 | | | | | |
| Diesel Range Organics | **1200** | 160 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil | **3200** | 320 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *100* | *50-150* | | | | |
| **Client ID:** | **11060013** | | | | | |
| Laboratory ID: | 07-002-08 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 30 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 60 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *105* | *50-150* | | | | |
| **Client ID:** | **11060014** | | | | | |
| Laboratory ID: | 07-002-09 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 33 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 66 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *108* | *50-150* | | | | |
| **Client ID:** | **11060015** | | | | | |
| Laboratory ID: | 07-002-10 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 37 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 74 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *112* | *50-150* | | | | |
| **Client ID:** | **11060016** | | | | | |
| Laboratory ID: | 07-002-11 | | | | | |
| Diesel Range Organics | **34** | 31 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 62 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *115* | *50-150* | | | | |
| **Client ID:** | **11060017** | | | | | |
| Laboratory ID: | 07-002-12 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 41 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 81 U | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *100* | *50-150* | | | | |





JMW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060018** | | | | | |
| Laboratory ID: | 07-002-13 | | | | | |
| Diesel Range Organics | ND | 32 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ND | 64 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *97* | *50-150* | | | | |
| **Client ID:** | **11060019** | | | | | |
| Laboratory ID: | 07-002-14 | | | | | |
| Diesel Range Organics | ND | 36 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ND | 71 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *105* | *50-150* | | | | |
| **Client ID:** | **11060022** | | | | | |
| Laboratory ID: | 07-002-15 | | | | | |
| Diesel Range Organics | ND | 33 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil Range Organics | ND | 65 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *127* | *50-150* | | | | |
| **Client ID:** | **11060023** | | | | | |
| Laboratory ID: | 07-002-16 | | | | | |
| Diesel Range Organics | ND | 31 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | ND | 61 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *110* | *50-150* | | | | |
| **Client ID:** | **11060026** | | | | | |
| Laboratory ID: | 07-002-19 | | | | | |
| Diesel Range Organics | ND | 31 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil Range Organics | ND | 62 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *105* | *50-150* | | | | |
| **Client ID:** | **11060028** | | | | | |
| Laboratory ID: | 07-002-21 | | | | | |
| Diesel Range Organics | ND | 33 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil Range Organics | ND | 66 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *111* | *50-150* | | | | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060029** | | | | | |
| Laboratory ID: | 07-002-22 | | | | | |
| Diesel Range Organics | **86** | 33 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| Lube Oil | **180** | 66 | NWTPH-Dx | 7-8-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *118* | *50-150* | | | | |
| **Client ID:** | **11060030** | | | | | |
| Laboratory ID: | 07-002-23 | | | | | |
| Diesel Range Organics | **74** | 36 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil | **180** | 71 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *98* | *50-150* | | | | |
| **Client ID:** | **11060031** | | | | | |
| Laboratory ID: | 07-002-24 | | | | | |
| Diesel Range Organics | **ND** | 37 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | **ND** | 74 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *108* | *50-150* | | | | |
| **Client ID:** | **11060032** | | | | | |
| Laboratory ID: | 07-002-25 | | | | | |
| Diesel Range Organics | **310** | 38 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil | **640** | 76 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *105* | *50-150* | | | | |
| **Client ID:** | **11060033** | | | | | |
| Laboratory ID: | 07-002-26 | | | | | |
| Diesel Range Organics | **240** | 37 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil | **460** | 75 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *108* | *50-150* | | | | |
| **Client ID:** | **11060034** | | | | | |
| Laboratory ID: | 07-002-27 | | | | | |
| Diesel Range Organics | **ND** | 39 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | **ND** | 78 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *105* | *50-150* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060035** | | | | | |
| Laboratory ID: | 07-002-28 | | | | | |
| Diesel Range Organics | **370** | 37 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil | **710** | 74 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *104* | *50-150* | | | | |
| **Client ID:** | **11060036** | | | | | |
| Laboratory ID: | 07-002-29 | | | | | |
| Diesel Range Organics | **590** | 37 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil | **1100** | 74 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *106* | *50-150* | | | | |
| **Client ID:** | **11060037** | | | | | |
| Laboratory ID: | 07-002-30 | | | | | |
| Diesel Range Organics | **ND** | 35 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | **ND** MW | 70 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *113* | *50-150* | | | | |
| **Client ID:** | **11060038** | | | | | |
| Laboratory ID: | 07-002-31 | | | | | |
| Diesel Range Organics | **ND** | 35 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | **ND** MW | 70 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *106* | *50-150* | | | | |
| **Client ID:** | **11060039** | | | | | |
| Laboratory ID: | 07-002-32 | | | | | |
| Diesel Range Organics | **ND** | 39 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | **ND** MW | 78 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *108* | *50-150* | | | | |
| **Client ID:** | **11060040** | | | | | |
| Laboratory ID: | 07-002-33 | | | | | |
| Diesel Range Organics | **ND** | 34 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | **ND** MW | 68 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *109* | *50-150* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060041** | | | | | |
| Laboratory ID: | 07-002-34 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 35 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 70 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *116* | *50-150* | | | | |
| **Client ID:** | **11060042** | | | | | |
| Laboratory ID: | 07-002-35 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 35 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 70 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *109* | *50-150* | | | | |
| **Client ID:** | **11060043** | | | | | |
| Laboratory ID: | 07-002-36 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 37 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 73 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *103* | *50-150* | | | | |
| **Client ID:** | **11060044** | | | | | |
| Laboratory ID: | 07-002-37 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 40 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 79 U | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *100* | *50-150* | | | | |
| **Client ID:** | **11060047** | | | | | |
| Laboratory ID: | 07-002-40 | | | | | |
| Diesel Range Organics | **9600** | 190 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil Range Organics | ~~**ND**~~ | 1800 U | NWTPH-Dx | 7-8-11 | 7-11-11 | ~~U1~~ |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *142* | *50-150* | | | | |
| **Client ID:** | **11060048** | | | | | |
| Laboratory ID: | 07-002-41 | | | | | |
| Diesel Range Organics | **1300** | 35 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| Lube Oil | **3200** | 71 | NWTPH-Dx | 7-8-11 | 7-10-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *116* | *50-150* | | | | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Soil
Units: mg/Kg (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060049** | | | | | |
| Laboratory ID: | 07-002-42 | | | | | |
| Diesel Range Organics | **5800** | 200 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil | **12000** | 390 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *119* | *50-150* | | | | |
| **Client ID:** | **11060050** | | | | | |
| Laboratory ID: | 07-002-43 | | | | | |
| Diesel Range Organics | **ND** | 39 U | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil Range Organics | **ND** MW | 78 U | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *95* | *50-150* | | | | |
| **Client ID:** | **11060051** | | | | | |
| Laboratory ID: | 07-002-44 | | | | | |
| Diesel Range Organics | **ND** | 40 U | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil Range Organics | **ND** MW | 80 U | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *85* | *50-150* | | | | |
| **Client ID:** | **11060057** | | | | | |
| Laboratory ID: | 07-002-50 | | | | | |
| Diesel Range Organics | **120** | 29 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| Lube Oil | **160** | 59 | NWTPH-Dx | 7-8-11 | 7-11-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *111* | *50-150* | | | | |





MW 7-3-11

Date of Report: August 1, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Water
Units: mg/L (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060045** | | | | | |
| Laboratory ID: | 07-002-38 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 0.24 U | NWTPH-Dx | 7-5-11 | 7-7-11 | |
| Lube Oil Range Organics | ~~**ND**~~ MU | 0.38 U | NWTPH-Dx | 7-5-11 | 7-7-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *107* | *50-150* | | | | |
| **Client ID:** | **11060046** | | | | | |
| Laboratory ID: | 07-002-39 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 0.25 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~**ND**~~ MU | 0.40 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *140* | *50-150* | | | | |
| **Client ID:** | **11060052** | | | | | |
| Laboratory ID: | 07-002-45 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 0.24 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~**ND**~~ MU | 0.39 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *123* | *50-150* | | | | |
| **Client ID:** | **11060053** | | | | | |
| Laboratory ID: | 07-002-46 | | | | | |
| Diesel Range Organics | **0.45** JH | 0.26 | NWTPH-Dx | 7-5-11 | 7-6-11 | ~~MT~~ MU |
| Lube Oil Range Organics | ~~**ND**~~ MU | 0.41 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *133* | *50-150* | | | | |
| **Client ID:** | **11060054** | | | | | |
| Laboratory ID: | 07-002-47 | | | | | |
| Diesel Range Organics | ~~**ND**~~ | 0.24 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~**ND**~~ MU | 0.38 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *130* | *50-150* | | | | |
| **Client ID:** | **11060055** | | | | | |
| Laboratory ID: | 07-002-48 | | | | | |
| Diesel Range Organics | **2000** | 64 | NWTPH-Dx | 7-5-11 | 7-7-11 | |
| Lube Oil | **3600** | 100 | NWTPH-Dx | 7-5-11 | 7-7-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | --- | *50-150* | | | | ~~S~~ MU |





 MU 7-31-11

Date of Report: August 1, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**NWTPH-Dx**
**(with acid/silica gel clean-up)**

Matrix: Water
Units: mg/L (ppm)

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060056** | | | | | |
| Laboratory ID: | 07-002-49 | | | | | |
| Diesel Range Organics | ~~ND~~ | 0.24 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ MW | 0.39 U | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *128* | *50-150* | | | | |
| **Client ID:** | **11060058** | | | | | |
| Laboratory ID: | 07-002-51 | | | | | |
| Diesel Range Organics | **2.4** | 0.26 | NWTPH-Dx | 7-5-11 | 7-6-11 | |
| Lube Oil Range Organics | ~~ND~~ MW | 0.54 U | NWTPH-Dx | 7-5-11 | 7-6-11 | ~~U1~~ MW |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *o-Terphenyl* | *129* | *50-150* | | | | |

MW 7/3/11

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# MEMORANDUM

DATE: July 22, 2011

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 7 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Methods 8270 and 8270-SIM) was performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | | | |
|---|---|---|---|---|---|---|
| MW-1 | MW-2 | MW-3 | MW-4 | P202 | P207 | P208 |

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected between June 26 and 28, 2011, were extracted on June 30, 2011, and were analyzed on July 1, 2011, therefore meeting holding time criteria of less than 7 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Acceptable.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except hexachlorocyclopentadiene and 2,4-dinitrophenol; no action was taken based on these outliers as they were not detected in any sample.

**4. Continuing Calibration: Acceptable.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except hexachlorocyclopentadiene, 2,4-dinitrophenol, and 4,6-dinitro-2-methylphenol; no action was taken based on these outliers as they were not detected in any sample.

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/MS Duplicate (MSD)/Blank Spike (BS)/BS Duplicate (BSD) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Blank spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-1** | | | | | |
| Laboratory ID: | 06-241-01 | | | | | |
| n-Nitrosodimethylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyridine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Aniline | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzyl alcohol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachloroethane | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Nitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Isophorone | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Naphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Chloroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 1-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Hexachlorocyclopentadiene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dimethylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 3-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |

MW





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-1** | | | | | |
| Laboratory ID: | 06-241-01 | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Nitrophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dibenzofuran | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Diethylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluorene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pentachlorophenol | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenanthrene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Anthracene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Carbazole | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluoranthene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzidine | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyrene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Butylbenzylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| bis(2-Ethylhexyl)phthalate | 350 350 | 10 | EPA 8270 | 6-30-11 | 7-2-11 | |
| Di-n-octylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *31* | *18 - 86* |
| *Phenol-d6* | *22* | *10 - 88* |
| *Nitrobenzene-d5* | *46* | *37 - 112* |
| *2-Fluorobiphenyl* | *66* | *42 - 108* |
| *2,4,6-Tribromophenol* | *65* | *39 - 118* |
| *Terphenyl-d14* | *73* | *49 - 122* |



MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-2** | | | | | |
| Laboratory ID: | 06-241-02 | | | | | |
| n-Nitrosodimethylamine | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyridine | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Aniline | ND | 4.8 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzyl alcohol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachloroethane | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Nitrobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Isophorone | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Naphthalene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Chloroaniline | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 1-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Hexachlorocyclopentadiene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dimethylphthalate | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 3-Nitroaniline | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |

MW



MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-2** | | | | | |
| Laboratory ID: | 06-241-02 | | | | | |
| 2,4-Dinitrophenol | ND | 4.8 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Nitrophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dibenzofuran | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Diethylphthalate | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluorene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pentachlorophenol | ND | 4.8 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenanthrene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Anthracene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Carbazole | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluoranthene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzidine | ND | 4.8 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyrene | ND | 0.096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Butylbenzylphthalate | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[a]anthracene | **0.018** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Chrysene | **0.017** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| bis(2-Ethylhexyl)phthalate | **10** | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.96 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[b]fluoranthene | **0.016** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo(j,k)fluoranthene | **0.016** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[a]pyrene | **0.017** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Indeno[1,2,3-cd]pyrene | **0.016** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Dibenz[a,h]anthracene | **0.017** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[g,h,i]perylene | **0.015** | 0.0096 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *29* | *18 - 86* |
| *Phenol-d6* | *21* | *10 - 88* |
| *Nitrobenzene-d5* | *44* | *37 - 112* |
| *2-Fluorobiphenyl* | *59* | *42 - 108* |
| *2,4,6-Tribromophenol* | *67* | *39 - 118* |
| *Terphenyl-d14* | *77* | *49 - 122* |





7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-3** | | | | | |
| Laboratory ID: | 06-241-03 | | | | | |
| n-Nitrosodimethylamine | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyridine | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Aniline | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzyl alcohol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachloroethane | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Nitrobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Isophorone | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Naphthalene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Chloroaniline | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 1-Methylnaphthalene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Hexachlorocyclopentadiene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dimethylphthalate | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 3-Nitroaniline | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |

MW





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-3** | | | | | |
| Laboratory ID: | 06-241-03 | | | | | |
| 2,4-Dinitrophenol | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Nitrophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dibenzofuran | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Diethylphthalate | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluorene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pentachlorophenol | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenanthrene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Anthracene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Carbazole | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluoranthene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzidine | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyrene | ND | 0.098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Butylbenzylphthalate | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[a]anthracene | 0.010 | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Chrysene | ~~ND~~ | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| bis(2-Ethylhexyl)phthalate | 5.3 | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-octylphthalate | ND | 0.98 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[b]fluoranthene | ND | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[a]pyrene | ND | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Dibenz[a,h]anthracene | ND | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[g,h,i]perylene | ND | 0.0098 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *33* | *18 - 86* | | | | |
| *Phenol-d6* | *24* | *10 - 88* | | | | |
| *Nitrobenzene-d5* | *49* | *37 - 112* | | | | |
| *2-Fluorobiphenyl* | *65* | *42 - 108* | | | | |
| *2,4,6-Tribromophenol* | *67* | *39 - 118* | | | | |
| *Terphenyl-d14* | *79* | *49 - 122* | | | | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-4** | | | | | |
| Laboratory ID: | 06-241-04 | | | | | |
| n-Nitrosodimethylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyridine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Aniline | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzyl alcohol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachloroethane | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Nitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Isophorone | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Naphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Chloroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 1-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Hexachlorocyclopentadiene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dimethylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 3-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |

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MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **MW-4** | | | | | |
| Laboratory ID: | 06-241-04 | | | | | |
| 2,4-Dinitrophenol | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Nitrophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dibenzofuran | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Diethylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluorene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pentachlorophenol | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenanthrene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Anthracene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Carbazole | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluoranthene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzidine | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyrene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Butylbenzylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| bis(2-Ethylhexyl)phthalate | 7.8 | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-octylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *35* | *18 - 86* | | | | |
| *Phenol-d6* | *27* | *10 - 88* | | | | |
| *Nitrobenzene-d5* | *50* | *37 - 112* | | | | |
| *2-Fluorobiphenyl* | *68* | *42 - 108* | | | | |
| *2,4,6-Tribromophenol* | *72* | *39 - 118* | | | | |
| *Terphenyl-d14* | *81* | *49 - 122* | | | | |





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **P202** | | | | | |
| Laboratory ID: | 06-241-05 | | | | | |
| n-Nitrosodimethylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyridine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Aniline | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzyl alcohol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachloroethane | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Nitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Isophorone | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Naphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Chloroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 1-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Hexachlorocyclopentadiene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dimethylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 3-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |

MW





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **P202** | | | | | |
| Laboratory ID: | 06-241-05 | | | | | |
| 2,4-Dinitrophenol | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Nitrophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dibenzofuran | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Diethylphthalate | 1.0 | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluorene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pentachlorophenol | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenanthrene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Anthracene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Carbazole | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluoranthene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzidine | ND | 5.1 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyrene | ND | 0.10 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Butylbenzylphthalate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[a]anthracene | **0.014** | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Chrysene | **0.010** | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| bis(2-Ethylhexyl)phthalate | **240** | 10 | EPA 8270 | 6-30-11 | 7-2-11 | |
| Di-n-octylphthalate | ~~ND~~ | 1.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[b]fluoranthene | **0.010** | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *23* | *18 - 86* |
| *Phenol-d6* | *21* | *10 - 88* |
| *Nitrobenzene-d5* | *40* | *37 - 112* |
| *2-Fluorobiphenyl* | *66* | *42 - 108* |
| *2,4,6-Tribromophenol* | *64* | *39 - 118* |
| *Terphenyl-d14* | *68* | *49 - 122* |





7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **P207** | | | | | |
| Laboratory ID: | 06-241-06 | | | | | |
| n-Nitrosodimethylamine | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyridine | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Aniline | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzyl alcohol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachloroethane | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Nitrobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Isophorone | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Naphthalene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Chloroaniline | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 1-Methylnaphthalene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Hexachlorocyclopentadiene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dimethylphthalate | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 3-Nitroaniline | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |

MW





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **P207** | | | | | |
| Laboratory ID: | 06-241-06 | | | | | |
| 2,4-Dinitrophenol | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Nitrophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dibenzofuran | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Diethylphthalate | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluorene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pentachlorophenol | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenanthrene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Anthracene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Carbazole | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluoranthene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzidine | ND | 4.9 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyrene | ND | 0.097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Butylbenzylphthalate | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[a]anthracene | **0.011** | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Chrysene | ~~ND~~ | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| bis(2-Ethylhexyl)phthalate | **1.5** | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-octylphthalate | ND | 0.97 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[b]fluoranthene | ND | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[a]pyrene | ND | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Dibenz[a,h]anthracene | ND | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[g,h,i]perylene | ND | 0.0097 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *35* | *18 - 86* | | | | |
| *Phenol-d6* | *24* | *10 - 88* | | | | |
| *Nitrobenzene-d5* | *46* | *37 - 112* | | | | |
| *2-Fluorobiphenyl* | *64* | *42 - 108* | | | | |
| *2,4,6-Tribromophenol* | *67* | *39 - 118* | | | | |
| *Terphenyl-d14* | *75* | *49 - 122* | | | | |





7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **P208** | | | | | |
| Laboratory ID: | 06-241-07 | | | | | |
| n-Nitrosodimethylamine | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyridine | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Aniline | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzyl alcohol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachloroethane | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Nitrobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Isophorone | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Naphthalene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Chloroaniline | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 1-Methylnaphthalene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Hexachlorocyclopentadiene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dimethylphthalate | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 3-Nitroaniline | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |

MW





MW 7-22-11

Date of Report: July 13, 2011
Samples Submitted: June 29, 2011
Laboratory Reference: 1106-241
Project: Site#: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **P208** | | | | | |
| Laboratory ID: | 06-241-07 | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Acenaphthene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4-Nitrophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Dibenzofuran | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Diethylphthalate | **2.2** | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluorene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pentachlorophenol | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Phenanthrene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Anthracene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Carbazole | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Fluoranthene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzidine | ND | 5.0 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Pyrene | ND | 0.099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Butylbenzylphthalate | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[a]anthracene | **0.012** | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Chrysene | **0.022** | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Di-n-octylphthalate | ND | 0.99 | EPA 8270 | 6-30-11 | 7-1-11 | |
| Benzo[b]fluoranthene | **0.024** | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo(j,k)fluoranthene | **0.019** | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[a]pyrene | **0.018** | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Indeno[1,2,3-cd]pyrene | **0.019** | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Dibenz[a,h]anthracene | ND | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |
| Benzo[g,h,i]perylene | **0.022** | 0.0099 | EPA 8270/SIM | 6-30-11 | 7-1-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *24* | *18 - 86* |
| *Phenol-d6* | *19* | *10 - 88* |
| *Nitrobenzene-d5* | *39* | *37 - 112* |
| *2-Fluorobiphenyl* | *57* | *42 - 108* |
| *2,4,6-Tribromophenol* | *54* | *39 - 118* |
| *Terphenyl-d14* | *61* | *49 - 122* |





7-22-11

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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: July 28, 2011

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Phase 2 Source Removal Assessment Site, Walla Walla, Washington**

REF: TDD: 11-06-0008 PAN: 002233.0700.01SF

The data quality assurance review of 30 soil and 8 water samples collected from the Stubblefield Salvage Phase 2 Source Removal Assessment site located in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Methods 8270 and 8270-SIM) was performed by OnSite Environmental, Inc., Redmond, Washington. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered:

| | | | | |
|---|---|---|---|---|
| 11060006 | 11060007 | 11060008 | 11060009 | 11060010 |
| 11060011 | 11060012 | 11060013 | 11060014 | 11060015 |
| 11060016 | 11060017 | 11060018 | 11060019 | 11060022 |
| 11060023 | 11060024 | 11060025 | 11060026 | 11060027 |
| 11060028 | 11060029 | 11060030 | 11060031 | 11060032 |
| 11060033 | 11060034 | 11060035 | 11060036 | 11060037 |
| 11060045 | 11060046 | 11060052 | 11060053 | 11060054 |
| 11060055 | 11060056 | 11060058 | | |

**Data Qualifications:**

**1. Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected between June 26 and 28, 2011, were extracted on June 30, 2011, and were analyzed on July 1, 2011, therefore meeting holding time criteria of less than 7 days between collection and extraction and less than 40 days between extraction and analysis.

**2. Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

**3. Initial Calibration: Acceptable.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except 2,4-dinitrophenol and pentachlorophenol; no action was taken based on these outliers as they were not detected in any sample.

**4. Continuing Calibration: Satisfactory.**

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except hexachlorocyclopentadiene, 2,4-dinitrophenol, pentachlorophenol, 3,3'-dichlorobenzidine, and 4,6-dinitro-2-methylphenol in various continuing calibrations with low responses; associated positive results and sample quantitation limits were qualified as estimated quantities with a low bias (JL or UJL).

**5. Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

No more than one SMC outlier occurred per sample per fraction and all recoveries were greater than 10%, therefore no actions were required based on SMC outliers.

**7. Matrix Spike (MS)/MS Duplicate (MSD)/Blank Spike (BS)/BS Duplicate (BSD) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Acceptable.**

Blank spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

**9. Internal Standards: Acceptable.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation

Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

H - The associated estimated sample result has a likely high bias.

K - The associated estimated sample result has a likely unknown bias.

L - The associated estimated sample result has a likely low bias.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

Q - The associated estimated sample result is greater than the method detection limit/instrument detection limit and less than the practical quantitation limit/method reporting limit.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060006** | | | | | |
| Laboratory ID: | 07-002-01 | | | | | |
| n-Nitrosodimethylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |

MW





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060006** | | | | | |
| Laboratory ID: | 07-002-01 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 UJL | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND MW | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | **0.054** | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.040 U | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND MW | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *53* | *30 - 97* | | | | |
| *Phenol-d6* | *59* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *55* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *69* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *73* | *41 - 110* | | | | |
| *Terphenyl-d14* | *86* | *53 - 107* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060007** | | | | | |
| Laboratory ID: | 07-002-02 | | | | | |
| n-Nitrosodimethylamine | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.46 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.46 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060007** | | | | | |
| Laboratory ID: | 07-002-02 | | | | | |
| 2,4-Dinitrophenol | ND | 0.23 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.23 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.23 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.46 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.46 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.46 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.46 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.046 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND | 0.0093 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *70* | *30 - 97* | | | | |
| *Phenol-d6* | *75* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *67* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *75* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *84* | *41 - 110* | | | | |
| *Terphenyl-d14* | *88* | *53 - 107* | | | | |





Mw 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
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Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060008** | | | | | |
| Laboratory ID: | 07-002-03 | | | | | |
| n-Nitrosodimethylamine | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.53 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.53 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060008** | | | | | |
| Laboratory ID: | 07-002-03 | | | | | |
| 2,4-Dinitrophenol | ND | 0.26 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.26 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.26 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.53 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.53 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.53 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.53 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.053 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *49* | *30 - 97* |
| *Phenol-d6* | *56* | *40 - 104* |
| *Nitrobenzene-d5* | *49* | *35 - 102* |
| *2-Fluorobiphenyl* | *58* | *44 - 97* |
| *2,4,6-Tribromophenol* | *73* | *41 - 110* |
| *Terphenyl-d14* | *79* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060009** | | | | | |
| Laboratory ID: | 07-002-04 | | | | | |
| n-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | **0.029** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | **0.053** | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1-Methylnaphthalene | **0.025** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |

MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060009** | | | | | |
| Laboratory ID: | 07-002-04 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | **0.013** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | **0.021** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ~~ND~~ | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | **0.021** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | **0.013** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | **0.014** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | **0.010** | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND | 0.0089 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *51* | *30 - 97* |
| *Phenol-d6* | *58* | *40 - 104* |
| *Nitrobenzene-d5* | *52* | *35 - 102* |
| *2-Fluorobiphenyl* | *60* | *44 - 97* |
| *2,4,6-Tribromophenol* | *63* | *41 - 110* |
| *Terphenyl-d14* | *65* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060010** | | | | | |
| Laboratory ID: | 07-002-05 | | | | | |
| n-Nitrosodimethylamine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060010** | | | | | |
| Laboratory ID: | 07-002-05 | | | | | |
| 2,4-Dinitrophenol | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND MW | 0.0097 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *55* | *30 - 97* | | | | |
| *Phenol-d6* | *65* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *61* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *72* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *73* | *41 - 110* | | | | |
| *Terphenyl-d14* | *88* | *53 - 107* | | | | |

UJL





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060011** | | | | | |
| Laboratory ID: | 07-002-06 | | | | | |
| n-Nitrosodimethylamine | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.50 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.50 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |

MW





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060011** | | | | | |
| Laboratory ID: | 07-002-06 | | | | | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.50 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.50 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.50 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.50 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.050 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND MW | 0.010 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *55* | *30 - 97* |
| *Phenol-d6* | *62* | *40 - 104* |
| *Nitrobenzene-d5* | *58* | *35 - 102* |
| *2-Fluorobiphenyl* | *69* | *44 - 97* |
| *2,4,6-Tribromophenol* | *79* | *41 - 110* |
| *Terphenyl-d14* | *85* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060012** | | | | | |
| Laboratory ID: | 07-002-07 | | | | | |
| n-Nitrosodimethylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | **0.018** | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ~~ND~~ | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060012** | | | | | |
| Laboratory ID: | 07-002-07 | | | | | |
| 2,4-Dinitrophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | **0.074** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Anthracene | **0.023** | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | **0.13** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzidine | ~~ND~~ | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | **0.13** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Butylbenzylphthalate | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | **0.064** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Chrysene | **0.070** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Ethylhexyl)phthalate | **0.10** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | **0.094** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo(j,k)fluoranthene | **0.11** | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | **0.073** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Indeno[1,2,3-cd]pyrene | **0.068** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | **0.033** | 0.0084 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | **0.075** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *66* | *30 - 97* |
| *Phenol-d6* | *78* | *40 - 104* |
| *Nitrobenzene-d5* | *71* | *35 - 102* |
| *2-Fluorobiphenyl* | *84* | *44 - 97* |
| *2,4,6-Tribromophenol* | *152* | *41 - 110* |
| *Terphenyl-d14* | *98* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060013** | | | | | |
| Laboratory ID: | 07-002-08 | | | | | |
| n-Nitrosodimethylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |

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MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060013** | | | | | |
| Laboratory ID: | 07-002-08 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | **0.0095** | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ~~ND~~ | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | **0.012** | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.40 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | **0.0092** | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ~~ND~~ | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | **0.010** | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | **0.011** | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ~~ND~~ | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | **0.015** | 0.0080 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *40* | *30 - 97* |
| *Phenol-d6* | *51* | *40 - 104* |
| *Nitrobenzene-d5* | *45* | *35 - 102* |
| *2-Fluorobiphenyl* | *80* | *44 - 97* |
| *2,4,6-Tribromophenol* | *115* | *41 - 110* |
| *Terphenyl-d14* | *87* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060014** | | | | | |
| Laboratory ID: | 07-002-09 | | | | | |
| n-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |

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MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060014** | | | | | |
| Laboratory ID: | 07-002-09 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | **0.048** | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND | 0.0088 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *61* | *30 - 97* |
| *Phenol-d6* | *67* | *40 - 104* |
| *Nitrobenzene-d5* | *61* | *35 - 102* |
| *2-Fluorobiphenyl* | *67* | *44 - 97* |
| *2,4,6-Tribromophenol* | *84* | *41 - 110* |
| *Terphenyl-d14* | *78* | *53 - 107* |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060015** | | | | | |
| Laboratory ID: | 07-002-10 | | | | | |
| n-Nitrosodimethylamine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |

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MW731-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060015** | | | | | |
| Laboratory ID: | 07-002-10 | | | | | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.25 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.49 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.049 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND MW | 0.0099 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *59* | *30 - 97* | | | | |
| *Phenol-d6* | *62* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *56* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *74* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *80* | *41 - 110* | | | | |
| *Terphenyl-d14* | *87* | *53 - 107* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060016** | | | | | |
| Laboratory ID: | 07-002-11 | | | | | |
| n-Nitrosodimethylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060016** | | | | | |
| Laboratory ID: | 07-002-11 | | | | | |
| 2,4-Dinitrophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND MW | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | **0.0089** | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *47* | *30 - 97* |
| *Phenol-d6* | *64* | *40 - 104* |
| *Nitrobenzene-d5* | *53* | *35 - 102* |
| *2-Fluorobiphenyl* | *82* | *44 - 97* |
| *2,4,6-Tribromophenol* | *110* | *41 - 110* |
| *Terphenyl-d14* | *98* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060017** | | | | | |
| Laboratory ID: | 07-002-12 | | | | | |
| n-Nitrosodimethylamine | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.54 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.54 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |

MW





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060017** | | | | | |
| Laboratory ID: | 07-002-12 | | | | | |
| 2,4-Dinitrophenol | ND | 0.27 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.27 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.27 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.27 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.54 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.54 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.54 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.54 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.054 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | ND | 0.011 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *49* | *30 - 97* |
| *Phenol-d6* | *54* | *40 - 104* |
| *Nitrobenzene-d5* | *50* | *35 - 102* |
| *2-Fluorobiphenyl* | *72* | *44 - 97* |
| *2,4,6-Tribromophenol* | *80* | *41 - 110* |
| *Terphenyl-d14* | *65* | *53 - 107* |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060018** | | | | | |
| Laboratory ID: | 07-002-13 | | | | | |
| n-Nitrosodimethylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 1-Methylnaphthalene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Hexachlorocyclopentadiene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060018** | | | | | |
| Laboratory ID: | 07-002-13 | | | | | |
| 2,4-Dinitrophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Anthracene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Carbazole | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | **0.016** | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzidine | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | **0.022** | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Butylbenzylphthalate | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.42 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | **0.013** | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Chrysene | **0.016** | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | **0.021** | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | **0.020** | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[a]pyrene | **0.027** | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | **0.043** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | ND | 0.0085 | EPA 8270/SIM | 7-6-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | **0.050** | 0.042 | EPA 8270 | 7-6-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *53* | *30 - 97* | | | | |
| *Phenol-d6* | *59* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *52* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *73* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *105* | *41 - 110* | | | | |
| *Terphenyl-d14* | *63* | *53 - 107* | | | | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060019** | | | | | |
| Laboratory ID: | 07-002-14 | | | | | |
| n-Nitrosodimethylamine | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.48 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.48 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Chloroaniline | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 1-Methylnaphthalene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Hexachlorocyclopentadiene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 3-Nitroaniline | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |

MW





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060019** | | | | | |
| Laboratory ID: | 07-002-14 | | | | | |
| 2,4-Dinitrophenol | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Nitrophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.24 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Anthracene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Carbazole | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND MW | 0.48 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | **0.0097** | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Benzidine | ~~ND~~ MW | 0.48 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | **0.012** | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Butylbenzylphthalate | ND | 0.48 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.48 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Chrysene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.048 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Benzo(j,k)fluoranthene | ND MW | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Benzo[a]pyrene | **0.0098** | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Dibenz[a,h]anthracene | ND | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Benzo[g,h,i]perylene | ND MW | 0.0095 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *39* | *30 - 97* |
| *Phenol-d6* | *45* | *40 - 104* |
| *Nitrobenzene-d5* | *38* | *35 - 102* |
| *2-Fluorobiphenyl* | *57* | *44 - 97* |
| *2,4,6-Tribromophenol* | *97* | *41 - 110* |
| *Terphenyl-d14* | *58* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060022** | | | | | |
| Laboratory ID: | 07-002-15 | | | | | |
| n-Nitrosodimethylamine | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.43 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.43 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | **0.0093** | 0.0087 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Chloroaniline | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 1-Methylnaphthalene | ND | 0.0087 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Hexachlorocyclopentadiene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | **0.048** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |



MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060022** | | | | | |
| Laboratory ID: | 07-002-15 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0087 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Nitrophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | **0.012** | 0.0087 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | **0.26** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Anthracene | **0.098** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Carbazole | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.43 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | **0.84** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzidine | ND | 0.43 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | **0.77** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Butylbenzylphthalate | ND | 0.43 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.43 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | **0.47** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Chrysene | **0.47** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | **0.17** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo(j,k)fluoranthene | **0.57** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]pyrene | **0.50** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Indeno[1,2,3-cd]pyrene | **0.32** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | **0.071** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | **0.34** | 0.043 | EPA 8270 | 7-6-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *50* | *30 - 97* | | | | |
| *Phenol-d6* | *60* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *51* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *76* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *90* | *41 - 110* | | | | |
| *Terphenyl-d14* | *78* | *53 - 107* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060023** | | | | | |
| Laboratory ID: | 07-002-16 | | | | | |
| n-Nitrosodimethylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyridine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Aniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzyl alcohol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachloroethane | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Nitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Isophorone | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Naphthalene | ND | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Chloroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Methylnaphthalene | ND | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 1-Methylnaphthalene | ND | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Hexachlorocyclopentadiene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dimethylphthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthylene | 0.017 | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 3-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060023** | | | | | |
| Laboratory ID: | 07-002-16 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Acenaphthene | ND | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Nitrophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenzofuran | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Diethylphthalate | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluorene | ND | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Phenanthrene | **0.068** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Anthracene | **0.028** | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Carbazole | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Fluoranthene | **0.38** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzidine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Pyrene | **0.37** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Butylbenzylphthalate | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]anthracene | **0.22** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Chrysene | **0.20** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[b]fluoranthene | **0.25** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo(j,k)fluoranthene | **0.098** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Benzo[a]pyrene | **0.25** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Indeno[1,2,3-cd]pyrene | **0.16** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | **0.037** | 0.0082 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Benzo[g,h,i]perylene | **0.18** | 0.041 | EPA 8270 | 7-6-11 | 7-8-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *48* | *30 - 97* | | | | |
| *Phenol-d6* | *53* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *49* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *74* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *94* | *41 - 110* | | | | |
| *Terphenyl-d14* | *78* | *53 - 107* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060024** | | | | | |
| Laboratory ID: | 07-002-17 | | | | | |
| n-Nitrosodimethylamine | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyridine | ND | 0.39 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Aniline | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Isophorone | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.39 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Naphthalene | **0.041** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylnaphthalene | **0.0094** | 0.0078 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 1-Methylnaphthalene | ND | 0.0078 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Hexachlorocyclopentadiene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthylene | **0.23** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
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| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060024** | | | | | |
| Laboratory ID: | 07-002-17 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.19 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthene | **0.026** | 0.0078 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Nitrophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dibenzofuran | **0.050** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.19 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluorene | **0.26** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.19 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.19 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenanthrene | **5.0** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| Anthracene | **1.8** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Carbazole | **0.10** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-butylphthalate | ~~ND~~ | 0.39 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluoranthene | **12** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| Benzidine | ~~ND~~ | 0.39 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyrene | **8.8** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| Butylbenzylphthalate | ND | 0.39 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.39 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]anthracene | **5.3** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| Chrysene | **4.7** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| bis(2-Ethylhexyl)phthalate | **0.047** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[b]fluoranthene | **5.3** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| Benzo(j,k)fluoranthene | **1.4** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]pyrene | **5.4** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| Indeno[1,2,3-cd]pyrene | **2.9** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| Dibenz[a,h]anthracene | **0.53** | 0.039 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | **3.4** | 0.39 | EPA 8270 | 7-6-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *51* | *30 - 97* | | | | |
| *Phenol-d6* | *64* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *56* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *83* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *101* | *41 - 110* | | | | |
| *Terphenyl-d14* | *88* | *53 - 107* | | | | |





MW7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060025** | | | | | |
| Laboratory ID: | 07-002-18 | | | | | |
| n-Nitrosodimethylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyridine | ND | 0.42 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Aniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Isophorone | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.42 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Naphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Chloroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 1-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Hexachlorocyclopentadiene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthylene | 0.015 | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 3-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |





JAN 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060025** | | | | | |
| Laboratory ID: | 07-002-18 | | | | | |
| 2,4-Dinitrophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Nitrophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluorene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenanthrene | **0.025** | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Anthracene | **0.011** | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Carbazole | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.42 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluoranthene | **0.16** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzidine | ~~ND~~ | 0.42 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyrene | **0.17** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.42 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.42 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]anthracene | **0.12** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Chrysene | **0.12** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[b]fluoranthene | **0.14** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | **0.064** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]pyrene | **0.14** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | **0.085** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | **0.024** | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Benzo[g,h,i]perylene | **0.077** | 0.042 | EPA 8270 | 7-6-11 | 7-9-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *53* | *30 - 97* | | | | |
| *Phenol-d6* | *58* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *50* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *74* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *95* | *41 - 110* | | | | |
| *Terphenyl-d14* | *77* | *53 - 107* | | | | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060026** | | | | | |
| Laboratory ID: | 07-002-19 | | | | | |
| n-Nitrosodimethylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyridine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Aniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Isophorone | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.41 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Naphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Chloroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 1-Methylnaphthalene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Hexachlorocyclopentadiene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthylene | **0.029** | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 3-Nitroaniline | ~~ND~~ | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060026** | | | | | |
| Laboratory ID: | 07-002-19 | | | | | |
| 2,4-Dinitrophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Nitrophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluorene | ND | 0.0083 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.21 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenanthrene | **0.13** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Anthracene | **0.078** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Carbazole | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.41 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluoranthene | **0.53** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzidine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyrene | **0.51** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.41 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.41 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]anthracene | **0.28** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Chrysene | **0.27** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[b]fluoranthene | **0.29** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | **0.13** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]pyrene | **0.29** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | **0.18** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | **0.042** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | **0.18** | 0.041 | EPA 8270 | 7-6-11 | 7-9-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *56* | *30 - 97* | | | | |
| *Phenol-d6* | *62* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *54* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *77* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *101* | *41 - 110* | | | | |
| *Terphenyl-d14* | *83* | *53 - 107* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060027** | | | | | |
| Laboratory ID: | 07-002-20 | | | | | |
| n-Nitrosodimethylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyridine | ND | 0.40 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Aniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Isophorone | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.40 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Naphthalene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Chloroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 1-Methylnaphthalene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Hexachlorocyclopentadiene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthylene | 0.017 | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 3-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060027** | | | | | |
| Laboratory ID: | 07-002-20 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4-Nitrophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.20 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluorene | ND | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Phenanthrene | **0.059** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Anthracene | **0.029** | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Carbazole | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.40 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Fluoranthene | **0.30** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzidine | ~~ND~~ | 0.40 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Pyrene | **0.27** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.40 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.40 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]anthracene | **0.17** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Chrysene | **0.17** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | **0.28** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[b]fluoranthene | **0.19** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | **0.072** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Benzo[a]pyrene | **0.18** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | **0.11** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | **0.027** | 0.0081 | EPA 8270/SIM | 7-6-11 | 7-7-11 | |
| Benzo[g,h,i]perylene | **0.11** | 0.040 | EPA 8270 | 7-6-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *58* | *30 - 97* |
| *Phenol-d6* | *65* | *40 - 104* |
| *Nitrobenzene-d5* | *57* | *35 - 102* |
| *2-Fluorobiphenyl* | *81* | *44 - 97* |
| *2,4,6-Tribromophenol* | *98* | *41 - 110* |
| *Terphenyl-d14* | *75* | *53 - 107* |





MW 7/31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060028** | | | | | |
| Laboratory ID: | 07-002-21 | | | | | |
| n-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 1-Methylnaphthalene | ND | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | **0.013** | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |





JMW 7/31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060028** | | | | | |
| Laboratory ID: | 07-002-21 | | | | | |
| 2,4-Dinitrophenol | ND | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | **0.046** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Anthracene | **0.015** | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Carbazole | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | **0.18** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | **0.17** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | **0.11** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Chrysene | **0.11** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | **0.14** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | **0.048** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | **0.12** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | **0.077** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | **0.021** | 0.0088 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | **0.077** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *52* | *30 - 97* | | | | |
| *Phenol-d6* | *57* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *49* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *74* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *92* | *41 - 110* | | | | |
| *Terphenyl-d14* | *70* | *53 - 107* | | | | |





AMW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060029** | | | | | |
| Laboratory ID: | 07-002-22 | | | | | |
| n-Nitrosodimethylamine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0087 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Chloroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | **0.012** | 0.0087 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 1-Methylnaphthalene | **0.012** | 0.0087 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0087 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060029** | | | | | |
| Laboratory ID: | 07-002-22 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | **0.023** | 0.0087 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Nitrophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | **0.025** | 0.0087 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.22 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | **0.30** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Anthracene | **0.098** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | **0.77** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzidine | ~~ND~~ | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | **0.75** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.44 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | **0.32** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Chrysene | **0.31** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | **0.28** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | **0.098** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | **0.21** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | **0.13** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | **0.041** | 0.0087 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | **0.13** | 0.044 | EPA 8270 | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *31* | *30 - 97* |
| *Phenol-d6* | *35* | *40 - 104* |
| *Nitrobenzene-d5* | *35* | *35 - 102* |
| *2-Fluorobiphenyl* | *47* | *44 - 97* |
| *2,4,6-Tribromophenol* | *68* | *41 - 110* |
| *Terphenyl-d14* | *73* | *53 - 107* |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060030** | | | | | |
| Laboratory ID: | 07-002-23 | | | | | |
| n-Nitrosodimethylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Chloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 1-Methylnaphthalene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | **0.013** | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060030** | | | | | |
| Laboratory ID: | 07-002-23 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.24 U | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ~~ND~~ | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Nitrophenol | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ~~ND~~ | 0.24 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ~~ND~~ | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4,6-Dinitro-2-methylphenol | ~~ND~~ | 0.24 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ~~ND~~ | 0.24 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | **0.054** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Anthracene | **0.022** | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Carbazole | ~~ND~~ | 0.047 U | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ~~ND~~ | 0.47 U | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | **0.19** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzidine | ~~ND~~ | 0.47 U | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | **0.19** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ~~ND~~ | 0.47 U | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ~~ND~~ | 0.047 U | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | **0.16** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Chrysene | **0.16** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | **0.28** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.047 U | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | **0.18** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | **0.060** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | **0.15** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | **0.072** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | **0.026** | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | **0.077** | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *75* | *30 - 97* |
| *Phenol-d6* | *71* | *40 - 104* |
| *Nitrobenzene-d5* | *64* | *35 - 102* |
| *2-Fluorobiphenyl* | *76* | *44 - 97* |
| *2,4,6-Tribromophenol* | *82* | *41 - 110* |
| *Terphenyl-d14* | *56* | *53 - 107* |

7/31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060031** | | | | | |
| Laboratory ID: | 07-002-24 | | | | | |
| n-Nitrosodimethylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Chloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 1-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |

MM 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060031** | | | | | |
| Laboratory ID: | 07-002-24 | | | | | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.25 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Carbazole | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzidine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Butylbenzylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.49 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Chrysene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[a]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *60* | *30 - 97* |
| *Phenol-d6* | *54* | *40 - 104* |
| *Nitrobenzene-d5* | *52* | *35 - 102* |
| *2-Fluorobiphenyl* | *58* | *44 - 97* |
| *2,4,6-Tribromophenol* | *59* | *41 - 110* |
| *Terphenyl-d14* | *64* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060032** | | | | | |
| Laboratory ID: | 07-002-25 | | | | | |
| n-Nitrosodimethylamine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.51 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.51 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Chloroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |

MW



MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060032** | | | | | |
| Laboratory ID: | 07-002-25 | | | | | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Nitrophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.25 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Carbazole | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.51 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzidine | ND | 0.51 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Butylbenzylphthalate | ND | 0.51 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.51 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| bis(2-Ethylhexyl)phthalate | 0.12 | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.051 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *68* | *30 - 97* |
| *Phenol-d6* | *62* | *40 - 104* |
| *Nitrobenzene-d5* | *62* | *35 - 102* |
| *2-Fluorobiphenyl* | *74* | *44 - 97* |
| *2,4,6-Tribromophenol* | *85* | *41 - 110* |
| *Terphenyl-d14* | *87* | *53 - 107* |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060033** | | | | | |
| Laboratory ID: | 07-002-26 | | | | | |
| n-Nitrosodimethylamine | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.50 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.50 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Chloroaniline | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |

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MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060033** | | | | | |
| Laboratory ID: | 07-002-26 | | | | | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Nitrophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Carbazole | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.50 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzidine | ND | 0.50 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Butylbenzylphthalate | ND | 0.50 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.50 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| bis(2-Ethylhexyl)phthalate | **0.10** | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.050 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *56* | *30 - 97* |
| *Phenol-d6* | *62* | *40 - 104* |
| *Nitrobenzene-d5* | *65* | *35 - 102* |
| *2-Fluorobiphenyl* | *72* | *44 - 97* |
| *2,4,6-Tribromophenol* | *57* | *41 - 110* |
| *Terphenyl-d14* | *80* | *53 - 107* |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060034** | | | | | |
| Laboratory ID: | 07-002-27 | | | | | |
| n-Nitrosodimethylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Chloroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 3-Nitroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |

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MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060034** | | | | | |
| Laboratory ID: | 07-002-27 | | | | | |
| 2,4-Dinitrophenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4-Nitrophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.26 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.26 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Carbazole | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzidine | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Butylbenzylphthalate | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.52 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-8-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *54* | *30 - 97* |
| *Phenol-d6* | *64* | *40 - 104* |
| *Nitrobenzene-d5* | *62* | *35 - 102* |
| *2-Fluorobiphenyl* | *63* | *44 - 97* |
| *2,4,6-Tribromophenol* | *63* | *41 - 110* |
| *Terphenyl-d14* | *69* | *53 - 107* |





7/20-7/31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060035** | | | | | |
| Laboratory ID: | 07-002-28 | | | | | |
| n-Nitrosodimethylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |

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MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060035** | | | | | |
| Laboratory ID: | 07-002-28 | | | | | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | **0.058** | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *41* | *30 - 97* |
| *Phenol-d6* | *49* | *40 - 104* |
| *Nitrobenzene-d5* | *46* | *35 - 102* |
| *2-Fluorobiphenyl* | *54* | *44 - 97* |
| *2,4,6-Tribromophenol* | *55* | *41 - 110* |
| *Terphenyl-d14* | *55* | *53 - 107* |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060036** | | | | | |
| Laboratory ID: | 07-002-29 | | | | | |
| n-Nitrosodimethylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060036** | | | | | |
| Laboratory ID: | 07-002-29 | | | | | |
| 2,4-Dinitrophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | **0.018** | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | **0.013** | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | **0.13** | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.0099 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *42* | *30 - 97* |
| *Phenol-d6* | *56* | *40 - 104* |
| *Nitrobenzene-d5* | *53* | *35 - 102* |
| *2-Fluorobiphenyl* | *69* | *44 - 97* |
| *2,4,6-Tribromophenol* | *78* | *41 - 110* |
| *Terphenyl-d14* | *66* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060037** | | | | | |
| Laboratory ID: | 07-002-30 | | | | | |
| n-Nitrosodimethylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |

MW





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060037** | | | | | |
| Laboratory ID: | 07-002-30 | | | | | |
| 2,4-Dinitrophenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *69* | *30 - 97* |
| *Phenol-d6* | *57* | *40 - 104* |
| *Nitrobenzene-d5* | *54* | *35 - 102* |
| *2-Fluorobiphenyl* | *56* | *44 - 97* |
| *2,4,6-Tribromophenol* | *54* | *41 - 110* |
| *Terphenyl-d14* | *56* | *53 - 107* |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060038** | | | | | |
| Laboratory ID: | 07-002-31 | | | | | |
| n-Nitrosodimethylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060038** | | | | | |
| Laboratory ID: | 07-002-31 | | | | | |
| 2,4-Dinitrophenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.23 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.47 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND MW | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *71* | *30 - 97* |
| *Phenol-d6* | *57* | *40 - 104* |
| *Nitrobenzene-d5* | *52* | *35 - 102* |
| *2-Fluorobiphenyl* | *55* | *44 - 97* |
| *2,4,6-Tribromophenol* | *45* | *41 - 110* |
| *Terphenyl-d14* | *64* | *53 - 107* |

MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060039** | | | | | |
| Laboratory ID: | 07-002-32 | | | | | |
| n-Nitrosodimethylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060039** | | | | | |
| Laboratory ID: | 07-002-32 | | | | | |
| 2,4-Dinitrophenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.26 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.52 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *46* | *30 - 97* |
| *Phenol-d6* | *52* | *40 - 104* |
| *Nitrobenzene-d5* | *49* | *35 - 102* |
| *2-Fluorobiphenyl* | *54* | *44 - 97* |
| *2,4,6-Tribromophenol* | *40* | *41 - 110* |
| *Terphenyl-d14* | *65* | *53 - 107* |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060040** | | | | | |
| Laboratory ID: | 07-002-33 | | | | | |
| n-Nitrosodimethylamine | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.45 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.45 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |

mw





mw 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060040** | | | | | |
| Laboratory ID: | 07-002-33 | | | | | |
| 2,4-Dinitrophenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.45 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.45 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.45 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.45 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.045 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.0091 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *51* | *30 - 97* |
| *Phenol-d6* | *57* | *40 - 104* |
| *Nitrobenzene-d5* | *53* | *35 - 102* |
| *2-Fluorobiphenyl* | *61* | *44 - 97* |
| *2,4,6-Tribromophenol* | *45* | *41 - 110* |
| *Terphenyl-d14* | *71* | *53 - 107* |





7mw 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060041** | | | | | |
| Laboratory ID: | 07-002-34 | | | | | |
| n-Nitrosodimethylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyridine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Aniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzyl alcohol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachloroethane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Nitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Isophorone | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dimethylphenol | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Naphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobutadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chloro-3-methylphenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,6-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3-Dichloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4,5-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Chloronaphthalene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,4-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dimethylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,3-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,6-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthylene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060041** | | | | | |
| Laboratory ID: | 07-002-34 | | | | | |
| 2,4-Dinitrophenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Acenaphthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,4-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Dibenzofuran | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Diethylphthalate | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluorene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-9-11 | |
| n-Nitrosodiphenylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 1,2-Diphenylhydrazine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 4-Bromophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Hexachlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pentachlorophenol | ND | 0.23 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Phenanthrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-butylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Fluoranthene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Pyrene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-9-11 | |
| bis-2-Ethylhexyladipate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.47 | JL EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[a]anthracene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.0093 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Di-n-octylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-9-11 | |
| Benzo[b]fluoranthene | ND | 0.0093 | JL EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0093 | JL EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0093 | JL EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0093 | JL EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0093 | JL EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.0093 | JL EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *46* | *30 - 97* |
| *Phenol-d6* | *51* | *40 - 104* |
| *Nitrobenzene-d5* | *51* | *35 - 102* |
| *2-Fluorobiphenyl* | *62* | *44 - 97* |
| *2,4,6-Tribromophenol* | *46* | *41 - 110* |
| *Terphenyl-d14* | *61* | *53 - 107* |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060042** | | | | | |
| Laboratory ID: | 07-002-35 | | | | | |
| n-Nitrosodimethylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyridine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Aniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzyl alcohol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachloroethane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Nitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Isophorone | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dimethylphenol | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Naphthalene | ND | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobutadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chloro-3-methylphenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylnaphthalene | **0.034** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | **0.11** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,6-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3-Dichloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,5-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chloronaphthalene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dimethylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,6-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthylene | **0.015** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060042** | | | | | |
| Laboratory ID: | 07-002-35 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.23 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthene | **0.031** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dibenzofuran | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Diethylphthalate | ND | 0.23 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Nitroaniline | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluorene | **0.056** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.23 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitrosodiphenylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Diphenylhydrazine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Bromophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pentachlorophenol | ~~ND~~ | 0.23 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenanthrene | **0.16** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | **0.011** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-butylphthalate | ~~ND~~ | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluoranthene | **0.018** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ~~ND~~ | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyrene | **0.035** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis-2-Ethylhexyladipate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[a]anthracene | **0.013** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | **0.035** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[b]fluoranthene | **0.014** | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ~~ND~~ | 0.0094 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *51* | *30 - 97* |
| *Phenol-d6* | *70* | *40 - 104* |
| *Nitrobenzene-d5* | *47* | *35 - 102* |
| *2-Fluorobiphenyl* | *65* | *44 - 97* |
| *2,4,6-Tribromophenol* | *75* | *41 - 110* |
| *Terphenyl-d14* | *82* | *53 - 107* |





JW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060043** | | | | | |
| Laboratory ID: | 07-002-36 | | | | | |
| n-Nitrosodimethylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyridine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Aniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzyl alcohol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachloroethane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Nitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Isophorone | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dimethylphenol | ND | 0.49 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Naphthalene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobutadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chloro-3-methylphenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylnaphthalene | ND ML | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | **0.013** | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,6-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3-Dichloroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,5-Trichlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chloronaphthalene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dimethylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,6-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dinitrobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthylene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND MW | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060043** | | | | | |
| Laboratory ID: | 07-002-36 | | | | | |
| 2,4-Dinitrophenol | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dinitrotoluene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dibenzofuran | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Diethylphthalate | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Nitroaniline | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluorene | **0.016** | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitrosodiphenylamine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Diphenylhydrazine | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Bromophenyl-phenylether | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobenzene | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pentachlorophenol | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenanthrene | **0.027** | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-butylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluoranthene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyrene | **0.014** | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.49 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis-2-Ethylhexyladipate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.49 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[a]anthracene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | **0.0098** | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-octylphthalate | ND | 0.049 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[b]fluoranthene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.0098 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *61* | *30 - 97* |
| *Phenol-d6* | *76* | *40 - 104* |
| *Nitrobenzene-d5* | *60* | *35 - 102* |
| *2-Fluorobiphenyl* | *68* | *44 - 97* |
| *2,4,6-Tribromophenol* | *68* | *41 - 110* |
| *Terphenyl-d14* | *73* | *53 - 107* |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060044** | | | | | |
| Laboratory ID: | 07-002-37 | | | | | |
| n-Nitrosodimethylamine | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Pyridine | ND | 0.53 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Phenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Aniline | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis(2-Chloroethyl)ether | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Chlorophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,3-Dichlorobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,4-Dichlorobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Benzyl alcohol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2-Dichlorobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Hexachloroethane | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Nitrobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Isophorone | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Nitrophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4-Dimethylphenol | ND | 0.53 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4-Dichlorophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Naphthalene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Hexachlorobutadiene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Chloro-3-methylphenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4,6-Trichlorophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,3-Dichloroaniline | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4,5-Trichlorophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Chloronaphthalene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Nitroaniline | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,4-Dinitrobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Dimethylphthalate | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,3-Dinitrobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,6-Dinitrotoluene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2-Dinitrobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Acenaphthylene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |





JMW 7-3-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060044** | | | | | |
| Laboratory ID: | 07-002-37 | | | | | |
| 2,4-Dinitrophenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Acenaphthene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4-Dinitrotoluene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Dibenzofuran | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Diethylphthalate | ND | 0.26 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Nitroaniline | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Fluorene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-12-11 | |
| n-Nitrosodiphenylamine | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2-Diphenylhydrazine | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Bromophenyl-phenylether | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Hexachlorobenzene | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Pentachlorophenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Phenanthrene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Di-n-butylphthalate | ND | 0.53 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.53 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Pyrene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.53 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis-2-Ethylhexyladipate | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.53 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Benzo[a]anthracene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Di-n-octylphthalate | ND | 0.053 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Benzo[b]fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.011 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *58* | *30 - 97* |
| *Phenol-d6* | *70* | *40 - 104* |
| *Nitrobenzene-d5* | *57* | *35 - 102* |
| *2-Fluorobiphenyl* | *69* | *44 - 97* |
| *2,4,6-Tribromophenol* | *84* | *41 - 110* |
| *Terphenyl-d14* | *70* | *53 - 107* |





MW731-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060047** | | | | | |
| Laboratory ID: | 07-002-40 | | | | | |
| n-Nitrosodimethylamine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Pyridine | ND | 0.51 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Phenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Aniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis(2-Chloroethyl)ether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Chlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,3-Dichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,4-Dichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Benzyl alcohol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2-Dichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Hexachloroethane | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Nitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Isophorone | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Nitrophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4-Dimethylphenol | ND | 0.51 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4-Dichlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Naphthalene | **0.19** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Hexachlorobutadiene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Chloro-3-methylphenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Methylnaphthalene | **1.9** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1-Methylnaphthalene | **3.0** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Hexachlorocyclopentadiene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4,6-Trichlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,3-Dichloroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4,5-Trichlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Chloronaphthalene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2-Nitroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,4-Dinitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Dimethylphthalate | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,3-Dinitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,6-Dinitrotoluene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2-Dinitrobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Acenaphthylene | **0.13** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |





gm 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060047** | | | | | |
| Laboratory ID: | 07-002-40 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.25 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Acenaphthene | **0.40** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,4-Dinitrotoluene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Dibenzofuran | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Diethylphthalate | ND | 0.25 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Nitroaniline | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Fluorene | **0.58** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-12-11 | |
| n-Nitrosodiphenylamine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 1,2-Diphenylhydrazine | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 4-Bromophenyl-phenylether | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Hexachlorobenzene | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Pentachlorophenol | ND | 0.25 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Phenanthrene | **1.3** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Anthracene | **0.42** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Carbazole | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Di-n-butylphthalate | ND | 0.51 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Fluoranthene | **0.068** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ~~ND~~ | 0.51 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Pyrene | **0.22** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Butylbenzylphthalate | ND | 0.51 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis-2-Ethylhexyladipate | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.51 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Benzo[a]anthracene | **0.046** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | **0.061** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Di-n-octylphthalate | ND | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Benzo[b]fluoranthene | **0.071** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |
| Benzo(j,k)fluoranthene | **0.040** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | **0.057** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | **0.029** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ~~ND~~ | 0.010 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | **0.051** | 0.051 | EPA 8270 | 7-7-11 | 7-12-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *54* | *30 - 97* |
| *Phenol-d6* | *69* | *40 - 104* |
| *Nitrobenzene-d5* | *71* | *35 - 102* |
| *2-Fluorobiphenyl* | *76* | *44 - 97* |
| *2,4,6-Tribromophenol* | *69* | *41 - 110* |
| *Terphenyl-d14* | *65* | *53 - 107* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060048** | | | | | |
| Laboratory ID: | 07-002-41 | | | | | |
| n-Nitrosodimethylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyridine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Aniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzyl alcohol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachloroethane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Nitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Isophorone | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dimethylphenol | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Naphthalene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobutadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chloro-3-methylphenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylnaphthalene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,6-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3-Dichloroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,5-Trichlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chloronaphthalene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dimethylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,6-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dinitrobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthylene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |



7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060048** | | | | | |
| Laboratory ID: | 07-002-41 | | | | | |
| 2,4-Dinitrophenol | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dinitrotoluene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dibenzofuran | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Diethylphthalate | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Nitroaniline | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluorene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitrosodiphenylamine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Diphenylhydrazine | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Bromophenyl-phenylether | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobenzene | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pentachlorophenol | ND | 0.24 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenanthrene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Anthracene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Carbazole | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-butylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluoranthene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzidine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyrene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis-2-Ethylhexyladipate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.47 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[a]anthracene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Chrysene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | **0.11** | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-octylphthalate | ND | 0.047 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[b]fluoranthene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.0095 | EPA 8270/SIM | 7-7-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *56* | *30 - 97* |
| *Phenol-d6* | *78* | *40 - 104* |
| *Nitrobenzene-d5* | *61* | *35 - 102* |
| *2-Fluorobiphenyl* | *76* | *44 - 97* |
| *2,4,6-Tribromophenol* | *107* | *41 - 110* |
| *Terphenyl-d14* | *73* | *53 - 107* |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060049** | | | | | |
| Laboratory ID: | 07-002-42 | | | | | |
| n-Nitrosodimethylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyridine | ND | 0.52 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Aniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethyl)ether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzyl alcohol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachloroethane | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Nitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Isophorone | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitrophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dimethylphenol | ND | 0.52 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| 4-Chloroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobutadiene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chloro-3-methylphenol | ND ML | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Methylnaphthalene | **0.035** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| 1-Methylnaphthalene | **0.13** | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorocyclopentadiene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,6-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3-Dichloroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4,5-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Chloronaphthalene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2-Nitroaniline | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,4-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dimethylphthalate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,3-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,6-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Dinitrobenzene | ND MW | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthylene | **0.025** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| 3-Nitroaniline | ND MW | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060049** | | | | | |
| Laboratory ID: | 07-002-42 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 0.26 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Acenaphthene | **0.029** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| 4-Nitrophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,4-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Dibenzofuran | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Diethylphthalate | ND | 0.26 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Nitroaniline | ~~ND~~ | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluorene | **0.092** | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 7-7-11 | 7-11-11 | |
| n-Nitrosodiphenylamine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 1,2-Diphenylhydrazine | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 4-Bromophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Hexachlorobenzene | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pentachlorophenol | ~~ND~~ | 0.26 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Phenanthrene | **0.19** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Anthracene | **0.040** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Carbazole | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-butylphthalate | ~~ND~~ | 0.52 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Fluoranthene | **0.035** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Benzidine | ~~ND~~ | 0.52 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Pyrene | **0.057** | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Butylbenzylphthalate | ND | 0.52 | EPA 8270 | 7-7-11 | 7-11-11 | |
| bis-2-Ethylhexyladipate | ND | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 0.52 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[a]anthracene | **0.025** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Chrysene | **0.048** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| bis(2-Ethylhexyl)phthalate | **0.53** | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.052 | EPA 8270 | 7-7-11 | 7-11-11 | |
| Benzo[b]fluoranthene | **0.015** | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| Benzo[g,h,i]perylene | ~~ND~~ | 0.010 | EPA 8270/SIM | 7-7-11 | 7-12-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *24* | *30 - 97* | | | | |
| *Phenol-d6* | *46* | *40 - 104* | | | | |
| *Nitrobenzene-d5* | *47* | *35 - 102* | | | | |
| *2-Fluorobiphenyl* | *90* | *44 - 97* | | | | |
| *2,4,6-Tribromophenol* | *99* | *41 - 110* | | | | |
| *Terphenyl-d14* | *69* | *53 - 107* | | | | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060050** | | | | | |
| Laboratory ID: | 07-002-43 | | | | | |
| n-Nitrosodimethylamine | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Pyridine | ND | 0.52 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Phenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Aniline | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| bis(2-Chloroethyl)ether | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2-Chlorophenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,3-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,4-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Benzyl alcohol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,2-Dichlorobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Hexachloroethane | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Nitrobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Isophorone | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2-Nitrophenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,4-Dimethylphenol | ND | 0.52 | EPA 8270 | 7-8-11 | 7-11-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,4-Dichlorophenol | **0.10** | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Naphthalene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Hexachlorobutadiene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 4-Chloro-3-methylphenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,4,6-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,3-Dichloroaniline | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,4,5-Trichlorophenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2-Chloronaphthalene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2-Nitroaniline | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,4-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Dimethylphthalate | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,3-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,6-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,2-Dinitrobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Acenaphthylene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060050** | | | | | |
| Laboratory ID: | 07-002-43 | | | | | |
| 2,4-Dinitrophenol | ND | 0.26 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Acenaphthene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,4-Dinitrotoluene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Dibenzofuran | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Diethylphthalate | ND | 0.26 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 4-Nitroaniline | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Fluorene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.26 | EPA 8270 | 7-8-11 | 7-11-11 | |
| n-Nitrosodiphenylamine | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 1,2-Diphenylhydrazine | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 4-Bromophenyl-phenylether | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Hexachlorobenzene | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Pentachlorophenol | ND | 0.26 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Phenanthrene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Anthracene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Carbazole | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Di-n-butylphthalate | ND | 0.52 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzidine | ND | 0.52 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Pyrene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.52 | EPA 8270 | 7-8-11 | 7-11-11 | |
| bis-2-Ethylhexyladipate | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.52 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Benzo[a]anthracene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Chrysene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Di-n-octylphthalate | ND | 0.052 | EPA 8270 | 7-8-11 | 7-11-11 | |
| Benzo[b]fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *37* | *30 - 97* |
| *Phenol-d6* | *47* | *40 - 104* |
| *Nitrobenzene-d5* | *36* | *35 - 102* |
| *2-Fluorobiphenyl* | *57* | *44 - 97* |
| *2,4,6-Tribromophenol* | *81* | *41 - 110* |
| *Terphenyl-d14* | *69* | *53 - 107* |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060051** | | | | | |
| Laboratory ID: | 07-002-44 | | | | | |
| n-Nitrosodimethylamine | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Pyridine | ND | 0.54 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Phenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Aniline | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis(2-Chloroethyl)ether | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Chlorophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,3-Dichlorobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,4-Dichlorobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzyl alcohol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2-Dichlorobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Hexachloroethane | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Nitrobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Isophorone | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Nitrophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4-Dimethylphenol | ND | 0.54 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4-Dichlorophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Naphthalene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 4-Chloroaniline | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Hexachlorobutadiene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Chloro-3-methylphenol | **0.089** | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 1-Methylnaphthalene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Hexachlorocyclopentadiene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4,6-Trichlorophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,3-Dichloroaniline | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4,5-Trichlorophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Chloronaphthalene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Nitroaniline | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,4-Dinitrobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Dimethylphthalate | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,3-Dinitrobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,6-Dinitrotoluene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2-Dinitrobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Acenaphthylene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 3-Nitroaniline | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060051** | | | | | |
| Laboratory ID: | 07-002-44 | | | | | |
| 2,4-Dinitrophenol | ND | 0.27 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Acenaphthene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 4-Nitrophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4-Dinitrotoluene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Dibenzofuran | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Diethylphthalate | ND | 0.27 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Nitroaniline | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Fluorene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.27 | EPA 8270 | 7-8-11 | 7-12-11 | |
| n-Nitrosodiphenylamine | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2-Diphenylhydrazine | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Bromophenyl-phenylether | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Hexachlorobenzene | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Pentachlorophenol | ND | 0.27 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Phenanthrene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Anthracene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Carbazole | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Di-n-butylphthalate | ND | 0.54 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzidine | ND | 0.54 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Pyrene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Butylbenzylphthalate | ND | 0.54 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis-2-Ethylhexyladipate | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.54 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzo[a]anthracene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Chrysene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Di-n-octylphthalate | ND | 0.054 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzo[b]fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzo(j,k)fluoranthene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzo[a]pyrene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Dibenz[a,h]anthracene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |
| Benzo[g,h,i]perylene | ND | 0.011 | EPA 8270/SIM | 7-8-11 | 7-9-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *43* | *30 - 97* |
| *Phenol-d6* | *54* | *40 - 104* |
| *Nitrobenzene-d5* | *41* | *35 - 102* |
| *2-Fluorobiphenyl* | *57* | *44 - 97* |
| *2,4,6-Tribromophenol* | *73* | *41 - 110* |
| *Terphenyl-d14* | *79* | *53 - 107* |





JMW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Soil
Units: mg/Kg

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060057** | | | | | |
| Laboratory ID: | 07-002-50 | | | | | |
| n-Nitrosodimethylamine | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Pyridine | ND | 0.39 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Phenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Aniline | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis(2-Chloroethyl)ether | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Chlorophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,3-Dichlorobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,4-Dichlorobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzyl alcohol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2-Dichlorobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Hexachloroethane | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Nitrobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Isophorone | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Nitrophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4-Dimethylphenol | ND | 0.39 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4-Dichlorophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Naphthalene | ND | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| 4-Chloroaniline | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Hexachlorobutadiene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Chloro-3-methylphenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Methylnaphthalene | ND | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| 1-Methylnaphthalene | ND | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| Hexachlorocyclopentadiene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4,6-Trichlorophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,3-Dichloroaniline | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4,5-Trichlorophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Chloronaphthalene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2-Nitroaniline | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,4-Dinitrobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Dimethylphthalate | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,3-Dinitrobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,6-Dinitrotoluene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2-Dinitrobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Acenaphthylene | ND | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| 3-Nitroaniline | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |

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MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060057** | | | | | |
| Laboratory ID: | 07-002-50 | | | | | |
| 2,4-Dinitrophenol | ND | 0.20 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Acenaphthene | ND | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| 4-Nitrophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,4-Dinitrotoluene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Dibenzofuran | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Diethylphthalate | ND | 0.20 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Nitroaniline | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Fluorene | ND | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 0.20 | EPA 8270 | 7-8-11 | 7-12-11 | |
| n-Nitrosodiphenylamine | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 1,2-Diphenylhydrazine | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 4-Bromophenyl-phenylether | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Hexachlorobenzene | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Pentachlorophenol | ND | 0.20 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Phenanthrene | 0.011 | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| Anthracene | ND | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| Carbazole | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Di-n-butylphthalate | ND | 0.39 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Fluoranthene | 0.060 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzidine | ~~ND~~ | 0.39 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Pyrene | 0.056 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Butylbenzylphthalate | ND | 0.39 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis-2-Ethylhexyladipate | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.39 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzo[a]anthracene | 0.040 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Chrysene | 0.041 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Di-n-octylphthalate | ND | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzo[b]fluoranthene | 0.072 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Benzo(j,k)fluoranthene | 0.042 | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| Benzo[a]pyrene | 0.045 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Indeno[1,2,3-cd]pyrene | 0.040 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |
| Dibenz[a,h]anthracene | 0.0092 | 0.0078 | EPA 8270/SIM | 7-8-11 | 7-11-11 | |
| Benzo[g,h,i]perylene | 0.051 | 0.039 | EPA 8270 | 7-8-11 | 7-12-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *44* | *30 - 97* |
| *Phenol-d6* | *60* | *40 - 104* |
| *Nitrobenzene-d5* | *53* | *35 - 102* |
| *2-Fluorobiphenyl* | *79* | *44 - 97* |
| *2,4,6-Tribromophenol* | *90* | *41 - 110* |
| *Terphenyl-d14* | *86* | *53 - 107* |





MN 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060045** | | | | | |
| Laboratory ID: | 07-002-38 | | | | | |
| n-Nitrosodimethylamine | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Pyridine | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Phenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Aniline | ND | 4.8 | EPA 8270 | 7-1-11 | 7-1-11 | |
| bis(2-Chloroethyl)ether | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2-Chlorophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,3-Dichlorobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,4-Dichlorobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Benzyl alcohol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,2-Dichlorobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Hexachloroethane | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Nitrobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Isophorone | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2-Nitrophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,4-Dimethylphenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,4-Dichlorophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Naphthalene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Chloroaniline | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Hexachlorobutadiene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 4-Chloro-3-methylphenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2-Methylnaphthalene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 1-Methylnaphthalene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Hexachlorocyclopentadiene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,4,6-Trichlorophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,3-Dichloroaniline | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,4,5-Trichlorophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2-Chloronaphthalene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2-Nitroaniline | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,4-Dinitrobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Dimethylphthalate | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,3-Dinitrobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,6-Dinitrotoluene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,2-Dinitrobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Acenaphthylene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 3-Nitroaniline | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060045** | | | | | |
| Laboratory ID: | 07-002-38 | | | | | |
| 2,4-Dinitrophenol | ND | 4.8 | JL EPA 8270 | 7-1-11 | 7-1-11 | |
| Acenaphthene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Nitrophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,4-Dinitrotoluene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Dibenzofuran | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Diethylphthalate | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 4-Nitroaniline | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Fluorene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 | JL EPA 8270 | 7-1-11 | 7-1-11 | |
| n-Nitrosodiphenylamine | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 1,2-Diphenylhydrazine | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 4-Bromophenyl-phenylether | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Hexachlorobenzene | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Pentachlorophenol | ND | 4.8 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Phenanthrene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Anthracene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Carbazole | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Di-n-butylphthalate | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Fluoranthene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzidine | ND | 4.8 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Pyrene | ND | 0.095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Butylbenzylphthalate | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| bis-2-Ethylhexyladipate | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Benzo[a]anthracene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Chrysene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Di-n-octylphthalate | ND | 0.95 | EPA 8270 | 7-1-11 | 7-1-11 | |
| Benzo[b]fluoranthene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[a]pyrene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Dibenz[a,h]anthracene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[g,h,i]perylene | ND | 0.0095 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *29* | *18 - 86* |
| *Phenol-d6* | *21* | *10 - 88* |
| *Nitrobenzene-d5* | *41* | *37 - 112* |
| *2-Fluorobiphenyl* | *53* | *42 - 108* |
| *2,4,6-Tribromophenol* | *52* | *39 - 118* |
| *Terphenyl-d14* | *63* | *49 - 122* |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060046** | | | | | |
| Laboratory ID: | 07-002-39 | | | | | |
| n-Nitrosodimethylamine | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyridine | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Aniline | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethyl)ether | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chlorophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dichlorobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dichlorobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzyl alcohol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dichlorobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachloroethane | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Nitrobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Isophorone | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitrophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dimethylphenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dichlorophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Naphthalene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Chloroaniline | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobutadiene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chloro-3-methylphenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylnaphthalene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 1-Methylnaphthalene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Hexachlorocyclopentadiene | ND | 0.97 | JL EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,6-Trichlorophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3-Dichloroaniline | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,5-Trichlorophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chloronaphthalene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitroaniline | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dinitrobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dimethylphthalate | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dinitrobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,6-Dinitrotoluene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dinitrobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthylene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 3-Nitroaniline | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060046** | | | | | |
| Laboratory ID: | 07-002-39 | | | | | |
| 2,4-Dinitrophenol | ND | 4.8 JL | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Nitrophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dinitrotoluene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dibenzofuran | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Diethylphthalate | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Nitroaniline | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluorene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 JL | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitrosodiphenylamine | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Diphenylhydrazine | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Bromophenyl-phenylether | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobenzene | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pentachlorophenol | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenanthrene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Anthracene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Carbazole | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-butylphthalate | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluoranthene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzidine | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyrene | ND | 0.097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Butylbenzylphthalate | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis-2-Ethylhexyladipate | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[a]anthracene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Chrysene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-octylphthalate | ND | 0.97 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[b]fluoranthene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[a]pyrene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Dibenz[a,h]anthracene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[g,h,i]perylene | ND | 0.0097 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *33* | *18 - 86* | | | | |
| *Phenol-d6* | *26* | *10 - 88* | | | | |
| *Nitrobenzene-d5* | *55* | *37 - 112* | | | | |
| *2-Fluorobiphenyl* | *57* | *42 - 108* | | | | |
| *2,4,6-Tribromophenol* | *63* | *39 - 118* | | | | |
| *Terphenyl-d14* | *69* | *49 - 122* | | | | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060052** | | | | | |
| Laboratory ID: | 07-002-45 | | | | | |
| n-Nitrosodimethylamine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyridine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Aniline | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethyl)ether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzyl alcohol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachloroethane | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Nitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Isophorone | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitrophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dimethylphenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dichlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Naphthalene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Chloroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobutadiene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chloro-3-methylphenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 1-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Hexachlorocyclopentadiene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,6-Trichlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3-Dichloroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,5-Trichlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chloronaphthalene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dinitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dimethylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dinitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,6-Dinitrotoluene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dinitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthylene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 3-Nitroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |

MW





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060052** | | | | | |
| Laboratory ID: | 07-002-45 | | | | | |
| 2,4-Dinitrophenol | ND | 4.8 U | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Nitrophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dinitrotoluene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dibenzofuran | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Diethylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Nitroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluorene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitrosodiphenylamine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Diphenylhydrazine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Bromophenyl-phenylether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pentachlorophenol | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenanthrene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Anthracene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Carbazole | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-butylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluoranthene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzidine | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyrene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Butylbenzylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis-2-Ethylhexyladipate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[a]anthracene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Chrysene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| bis(2-Ethylhexyl)phthalate | 770 770 | 19 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Di-n-octylphthalate | ND | 0.96 U | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[b]fluoranthene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[a]pyrene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Dibenz[a,h]anthracene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[g,h,i]perylene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | *21* | *18 - 86* | | | | |
| *Phenol-d6* | *20* | *10 - 88* | | | | |
| *Nitrobenzene-d5* | *49* | *37 - 112* | | | | |
| *2-Fluorobiphenyl* | *60* | *42 - 108* | | | | |
| *2,4,6-Tribromophenol* | *60* | *39 - 118* | | | | |
| *Terphenyl-d14* | *68* | *49 - 122* | | | | |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060053** | | | | | |
| Laboratory ID: | 07-002-46 | | | | | |
| n-Nitrosodimethylamine | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Pyridine | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Phenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Aniline | ND | 120 | EPA 8270 | 7-1-11 | 7-3-11 | |
| bis(2-Chloroethyl)ether | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2-Chlorophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,3-Dichlorobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,4-Dichlorobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Benzyl alcohol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,2-Dichlorobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2-Methylphenol (o-Cresol) | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| bis(2-Chloroisopropyl)ether | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| n-Nitroso-di-n-propylamine | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Hexachloroethane | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Nitrobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Isophorone | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2-Nitrophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,4-Dimethylphenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| bis(2-Chloroethoxy)methane | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,4-Dichlorophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,2,4-Trichlorobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Naphthalene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Chloroaniline | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Hexachlorobutadiene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 4-Chloro-3-methylphenol | 120 | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2-Methylnaphthalene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 1-Methylnaphthalene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Hexachlorocyclopentadiene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,4,6-Trichlorophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,3-Dichloroaniline | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,4,5-Trichlorophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2-Chloronaphthalene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2-Nitroaniline | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,4-Dinitrobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Dimethylphthalate | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,3-Dinitrobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,6-Dinitrotoluene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,2-Dinitrobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Acenaphthylene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 3-Nitroaniline | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060053** | | | | | |
| Laboratory ID: | 07-002-46 | | | | | |
| 2,4-Dinitrophenol | ND | 120 U | EPA 8270 | 7-1-11 | 7-3-11 | |
| Acenaphthene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Nitrophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,4-Dinitrotoluene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Dibenzofuran | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Diethylphthalate | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 4-Chlorophenyl-phenylether | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 4-Nitroaniline | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Fluorene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 120 | EPA 8270 | 7-1-11 | 7-3-11 | |
| n-Nitrosodiphenylamine | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 1,2-Diphenylhydrazine | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 4-Bromophenyl-phenylether | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Hexachlorobenzene | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Pentachlorophenol | ND | 120 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Phenanthrene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Anthracene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Carbazole | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Di-n-butylphthalate | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Fluoranthene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzidine | ND | 120 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Pyrene | ND | 2.4 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Butylbenzylphthalate | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| bis-2-Ethylhexyladipate | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| 3,3'-Dichlorobenzidine | ND | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Benzo[a]anthracene | ND | 0.24 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Chrysene | ND | 0.24 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| bis(2-Ethylhexyl)phthalate | **51** | 24 | EPA 8270 | 7-1-11 | 7-3-11 | |
| Di-n-octylphthalate | ~~ND~~ | 24 U | EPA 8270 | 7-1-11 | 7-3-11 | |
| Benzo[b]fluoranthene | **0.27** | 0.24 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo(j,k)fluoranthene | ~~ND~~ | 0.24 U | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[a]pyrene | **0.32** | 0.24 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Indeno[1,2,3-cd]pyrene | **0.27** | 0.24 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Dibenz[a,h]anthracene | ~~ND~~ | 0.24 U | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[g,h,i]perylene | **0.31** | 0.24 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *51* | *18 - 86* |
| *Phenol-d6* | *44* | *10 - 88* |
| *Nitrobenzene-d5* | *82* | *37 - 112* |
| *2-Fluorobiphenyl* | *84* | *42 - 108* |
| *2,4,6-Tribromophenol* | *95* | *39 - 118* |
| *Terphenyl-d14* | *100* | *49 - 122* |





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Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060054** | | | | | |
| Laboratory ID: | 07-002-47 | | | | | |
| n-Nitrosodimethylamine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyridine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Aniline | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethyl)ether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzyl alcohol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachloroethane | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Nitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Isophorone | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitrophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dimethylphenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dichlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Naphthalene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Chloroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobutadiene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chloro-3-methylphenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 1-Methylnaphthalene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Hexachlorocyclopentadiene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,6-Trichlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3-Dichloroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,5-Trichlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chloronaphthalene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dinitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dimethylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dinitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,6-Dinitrotoluene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dinitrobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthylene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 3-Nitroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |

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Mw 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060054** | | | | | |
| Laboratory ID: | 07-002-47 | | | | | |
| 2,4-Dinitrophenol | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Nitrophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dinitrotoluene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dibenzofuran | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Diethylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chlorophenyl-phenylether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Nitroaniline | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluorene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitrosodiphenylamine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Diphenylhydrazine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Bromophenyl-phenylether | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobenzene | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pentachlorophenol | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenanthrene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Anthracene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Carbazole | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-butylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluoranthene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzidine | ND | 4.8 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyrene | ND | 0.096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Butylbenzylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis-2-Ethylhexyladipate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 3,3'-Dichlorobenzidine | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[a]anthracene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Chrysene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| bis(2-Ethylhexyl)phthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-octylphthalate | ND | 0.96 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[b]fluoranthene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo(j,k)fluoranthene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[a]pyrene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Dibenz[a,h]anthracene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[g,h,i]perylene | ND | 0.0096 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *25* | *18 - 86* |
| *Phenol-d6* | *11* | *10 - 88* |
| *Nitrobenzene-d5* | *53* | *37 - 112* |
| *2-Fluorobiphenyl* | *56* | *42 - 108* |
| *2,4,6-Tribromophenol* | *47* | *39 - 118* |
| *Terphenyl-d14* | *73* | *49 - 122* |





MN 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060055** | | | | | |
| Laboratory ID: | 07-002-48 | | | | | |
| n-Nitrosodimethylamine | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Pyridine | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Phenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Aniline | ND | 1000 | EPA 8270 | 7-1-11 | 7-8-11 | |
| bis(2-Chloroethyl)ether | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2-Chlorophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,3-Dichlorobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,4-Dichlorobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Benzyl alcohol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,2-Dichlorobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2-Methylphenol (o-Cresol) | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| bis(2-Chloroisopropyl)ether | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| n-Nitroso-di-n-propylamine | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Hexachloroethane | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Nitrobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Isophorone | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2-Nitrophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,4-Dimethylphenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| bis(2-Chloroethoxy)methane | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,4-Dichlorophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,2,4-Trichlorobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Naphthalene | **30** | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| 4-Chloroaniline | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Hexachlorobutadiene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 4-Chloro-3-methylphenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2-Methylnaphthalene | **210** | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1-Methylnaphthalene | **270** | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Hexachlorocyclopentadiene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,4,6-Trichlorophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,3-Dichloroaniline | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,4,5-Trichlorophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2-Chloronaphthalene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2-Nitroaniline | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,4-Dinitrobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Dimethylphthalate | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,3-Dinitrobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,6-Dinitrotoluene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,2-Dinitrobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Acenaphthylene | ND | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| 3-Nitroaniline | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |





7/31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060055** | | | | | |
| Laboratory ID: | 07-002-48 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 1000 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Acenaphthene | **31** | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| 4-Nitrophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,4-Dinitrotoluene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Dibenzofuran | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Diethylphthalate | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 4-Chlorophenyl-phenylether | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 4-Nitroaniline | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Fluorene | ND | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 1000 | EPA 8270 | 7-1-11 | 7-8-11 | |
| n-Nitrosodiphenylamine | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 1,2-Diphenylhydrazine | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 4-Bromophenyl-phenylether | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Hexachlorobenzene | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Pentachlorophenol | ND | 1000 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Phenanthrene | **40** | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Anthracene | **54** | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Carbazole | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Di-n-butylphthalate | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Fluoranthene | ND | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Benzidine | ND | 1000 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Pyrene | ND | 21 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Butylbenzylphthalate | **600** | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| bis-2-Ethylhexyladipate | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| 3,3'-Dichlorobenzidine | ND | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Benzo[a]anthracene | ND | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Chrysene | ND | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| bis(2-Ethylhexyl)phthalate | **80000** | 4200 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Di-n-octylphthalate | ~~ND~~ | 210 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Benzo[b]fluoranthene | **9.6** | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Benzo(j,k)fluoranthene | **26** | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Benzo[a]pyrene | **14** | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Indeno[1,2,3-cd]pyrene | **4.1** | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Dibenz[a,h]anthracene | ~~ND~~ | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| Benzo[g,h,i]perylene | **17** | 2.1 | EPA 8270/SIM | 7-1-11 | 7-6-11 | |
| *Surrogate:* | *Percent Recovery* | *Control Limits* | | | | |
| *2-Fluorophenol* | .-- | *18 - 86* | | | | S |
| *Phenol-d6* | .-- | *10 - 88* | | | | S |
| *Nitrobenzene-d5* | .-- | *37 - 112* | | | | S |
| *2-Fluorobiphenyl* | .-- | *42 - 108* | | | | S |
| *2,4,6-Tribromophenol* | .-- | *39 - 118* | | | | S |
| *Terphenyl-d14* | .-- | *49 - 122* | | | | S |

MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060056** | | | | | |
| Laboratory ID: | 07-002-49 | | | | | |
| n-Nitrosodimethylamine | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyridine | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Aniline | ND | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethyl)ether | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chlorophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dichlorobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dichlorobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzyl alcohol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dichlorobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylphenol (o-Cresol) | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroisopropyl)ether | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitroso-di-n-propylamine | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachloroethane | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Nitrobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Isophorone | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitrophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dimethylphenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethoxy)methane | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dichlorophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Naphthalene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Chloroaniline | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobutadiene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chloro-3-methylphenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 1-Methylnaphthalene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Hexachlorocyclopentadiene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,6-Trichlorophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3-Dichloroaniline | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,5-Trichlorophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chloronaphthalene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitroaniline | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dinitrobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dimethylphthalate | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dinitrobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,6-Dinitrotoluene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dinitrobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthylene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 3-Nitroaniline | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |





MW 7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060056** | | | | | |
| Laboratory ID: | 07-002-49 | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Nitrophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dinitrotoluene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dibenzofuran | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,5,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,4,6-Tetrachlorophenol | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Diethylphthalate | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chlorophenyl-phenylether | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Nitroaniline | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluorene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4,6-Dinitro-2-methylphenol | ND | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitrosodiphenylamine | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Diphenylhydrazine | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Bromophenyl-phenylether | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobenzene | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pentachlorophenol | ND | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenanthrene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Anthracene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Carbazole | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-butylphthalate | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluoranthene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzidine | ND | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyrene | ND | 0.10 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Butylbenzylphthalate | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis-2-Ethylhexyladipate | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 3,3'-Dichlorobenzidine | ND | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[a]anthracene | **0.015** | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Chrysene | **0.013** | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| bis(2-Ethylhexyl)phthalate | **24** | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-octylphthalate | ~~ND~~ | 1.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[b]fluoranthene | **0.011** | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo(j,k)fluoranthene | ~~ND~~ | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[a]pyrene | **0.012** | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Indeno[1,2,3-cd]pyrene | ND | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Dibenz[a,h]anthracene | ND | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[g,h,i]perylene | ND | 0.010 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *32* | *18 - 86* |
| *Phenol-d6* | *28* | *10 - 88* |
| *Nitrobenzene-d5* | *53* | *37 - 112* |
| *2-Fluorobiphenyl* | *60* | *42 - 108* |
| *2,4,6-Tribromophenol* | *70* | *39 - 118* |
| *Terphenyl-d14* | *70* | *49 - 122* |

7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 1 of 2

Matrix: Water
Units: ug/L

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060058** | | | | | |
| Laboratory ID: | 07-002-51 | | | | | |
| n-Nitrosodimethylamine | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyridine | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Aniline | ND | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethyl)ether | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chlorophenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dichlorobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dichlorobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzyl alcohol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dichlorobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylphenol (o-Cresol) | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroisopropyl)ether | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| (3+4)-Methylphenol (m,p-Cresol) | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitroso-di-n-propylamine | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachloroethane | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Nitrobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Isophorone | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitrophenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dimethylphenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis(2-Chloroethoxy)methane | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dichlorophenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2,4-Trichlorobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Naphthalene | **0.52** | 0.099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Chloroaniline | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobutadiene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chloro-3-methylphenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Methylnaphthalene | **8.1** | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1-Methylnaphthalene | **21** | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorocyclopentadiene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,6-Trichlorophenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3-Dichloroaniline | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4,5-Trichlorophenol | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Chloronaphthalene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2-Nitroaniline | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,4-Dinitrobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dimethylphthalate | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,3-Dinitrobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,6-Dinitrotoluene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Dinitrobenzene | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthylene | **0.29** | 0.099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 3-Nitroaniline | ND | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |





7-31-11

Date of Report: July 20, 2011
Samples Submitted: July 1, 2011
Laboratory Reference: 1107-002
Project: 10HD

**SEMIVOLATILES by EPA 8270D/SIM**
page 2 of 2

| Analyte | Result | PQL | Method | Date Prepared | Date Analyzed | Flags |
|---|---|---|---|---|---|---|
| **Client ID:** | **11060058** | | | | | |
| Laboratory ID: | 07-002-51 | | | | | |
| 2,4-Dinitrophenol | ~~ND~~ | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Acenaphthene | **2.0** | 0.099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| 4-Nitrophenol | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,4-Dinitrotoluene | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Dibenzofuran | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,5,6-Tetrachlorophenol | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 2,3,4,6-Tetrachlorophenol | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Diethylphthalate | **28** | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Chlorophenyl-phenylether | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Nitroaniline | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluorene | **3.0** | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4,6-Dinitro-2-methylphenol | ~~ND~~ | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| n-Nitrosodiphenylamine | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 1,2-Diphenylhydrazine | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 4-Bromophenyl-phenylether | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Hexachlorobenzene | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pentachlorophenol | ~~ND~~ | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Phenanthrene | **3.4** | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Anthracene | **0.33** | 0.099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Carbazole | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Di-n-butylphthalate | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Fluoranthene | ~~ND~~ | 0.099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzidine | ~~ND~~ | 5.0 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Pyrene | **0.18** | 0.099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Butylbenzylphthalate | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| bis-2-Ethylhexyladipate | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| 3,3'-Dichlorobenzidine | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[a]anthracene | ~~ND~~ | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Chrysene | **0.044** | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| bis(2-Ethylhexyl)phthalate | **200** | 9.9 | EPA 8270 | 7-1-11 | 7-8-11 | |
| Di-n-octylphthalate | ~~ND~~ | 0.99 | EPA 8270 | 7-1-11 | 7-2-11 | |
| Benzo[b]fluoranthene | ~~ND~~ | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo(j,k)fluoranthene | ~~ND~~ | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[a]pyrene | ~~ND~~ | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Indeno[1,2,3-cd]pyrene | ~~ND~~ | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Dibenz[a,h]anthracene | ~~ND~~ | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |
| Benzo[g,h,i]perylene | ~~ND~~ | 0.0099 | EPA 8270/SIM | 7-1-11 | 7-2-11 | |

| *Surrogate:* | *Percent Recovery* | *Control Limits* |
|---|---|---|
| *2-Fluorophenol* | *37* | *18 - 86* |
| *Phenol-d6* | *32* | *10 - 88* |
| *Nitrobenzene-d5* | *56* | *37 - 112* |
| *2-Fluorobiphenyl* | *63* | *42 - 108* |
| *2,4,6-Tribromophenol* | *77* | *39 - 118* |
| *Terphenyl-d14* | *69* | *49 - 122* |





7-31-11

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# J April 2012 Data Memoranda

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Tel: (206) 624-9537, Fax: (206) 621-9832

**MEMORANDUM**

DATE: May 16, 2012

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Inorganic Data Quality Assurance Review, Stubblefield Salvage Drum Removal Site, Walla Walla, Washington**

REF: TDD: 11-11-0003 PAN: 002233.0727.01RA

The data quality assurance review of three soil samples collected from the Stubblefield Salvage Drum Removal site in Walla Walla, Washington, has been completed. RCRA metals plus copper, nickel, and zinc analyses (EPA Methods 6010C and 7471B) were performed by GEL, Inc., Charleston, South Carolina. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered: 12040001 12040001D 12040002

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected on April 12, 2012, and were analyzed by April 18, 2012, therefore meeting QC criteria of less than 6 months between collection, extraction, and analysis (28 days for mercury).

2. **Initial and Continuing Calibration: Acceptable.**

A minimum of one calibration standard and a blank were analyzed at the beginning of the ICP analysis sequence and after every 10 samples. No results were greater than 110% of the highest calibration standard. All ICP recoveries were within the QC limits of 90% to 110%. All AA recoveries were within QC limits of 80% to 120%.

3. **Blanks: Acceptable.**

A preparation blank was analyzed for each 20 samples or per matrix per concentration level. Blanks were analyzed after each Initial or Continuing Calibration Verification. There were no detections in any applicable blanks.

4. **ICP Interference Check Sample: Satisfactory.**

An Interference Check Sample (ICS) was analyzed at the beginning and end of each sequence or at least twice every 8 hours, whichever was more frequent. All ICS (solution AB) results were within QC

limits of 80% - 120% recovery except copper (high recovery). Positive sample results associated with the high recovery outliers were qualified as estimated quantities with an unknown bias (JK).

**5. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**6. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. ICP Serial Dilution: Satisfactory.**

A serial dilution analysis was performed per matrix per concentration or per sample delivery group, whichever was more frequent. All serial dilution results were within QC limits except nickel. Associated sample results were qualified as estimated quantities with an unknown bias (JK or UJK).

**8. Matrix Spike Analysis: Acceptable.**

A matrix spike analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. Applicable spike and spike duplicate recoveries were within the QC limits.

**9. Duplicate Analysis: Satisfactory.**

Laboratory duplicate and spike duplicate analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All duplicate results were within QC limits except copper, zinc, and mercury. Associated sample results were qualified as estimated quantities with an unknown bias (JK or UJK).

**10. Laboratory Control Sample Analysis: Acceptable.**

A Laboratory Control Sample (LCS) was analyzed per SDG per matrix. All LCS results were within the established control limits.

**11. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical methods, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

<u>Data Qualifiers and Definitions</u>

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.

JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.

JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.

JQ – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

**SDG No:** 302687 **METHOD TYPE:** SW846

**SAMPLE ID:** 302687001 **CLIENT ID:** 12040001

**CONTRACT:** ECOL01401

**MATRIX:** Soil **DATE RECEIVED** 14-APR-12 **LEVEL:** Low **%SOLIDS:** 75

| CAS No | Analyte | Result | Units | C | Qual | M* | MDL | DF | Inst ID | Analytical Run |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 173 | ug/Kg | | JK | AV | 5.27 | 1 | HG3 | 042312S1-3 |
| 7440-38-2 | Arsenic | 2250 | ug/kg | | B | P | 569 | 1 | OPTIMA | 041812-1 |
| 7440-39-3 | Barium | 332000 | ug/kg | | | P | 114 | 1 | OPTIMA | 041812-1 |
| 7440-43-9 | Cadmium | 4850 | ug/kg | | | P | 114 | 1 | OPTIMA | 041812-1 |
| 7440-47-3 | Chromium | 18800 | ug/kg | | | P | 171 | 1 | OPTIMA | 041812-1 |
| 7440-50-8 | Copper | 488000 | ug/kg | | JK | P | 1710 | 5 | OPTIMA | 041912-2 |
| 7439-92-1 | Lead | 251000 | ug/kg | | | P | 375 | 1 | OPTIMA | 041812-1 |
| 7440-02-0 | Nickel | 33900 | ug/kg | | JK B | P | 171 | 1 | OPTIMA | 041812-1 |
| 7782-49-2 | Selenium | 3220 | ug/kg | | B | P | 569 | 1 | OPTIMA | 041812-1 |
| 7440-22-4 | Silver | 572 | ug/kg | | | P | 114 | 1 | OPTIMA | 041812-1 |
| 7440-66-6 | Zinc | 2840000 | ug/kg | | JK | P | 2270 | 5 | OPTIMA | 041912-2 |

***Analytical Methods:**

| | |
|---|---|
| P | SW846 6010B |
| MS | SW846 6020 |
| AV | SW846 7470A/7471A |
| AF | EPA 1631E |

5/6/12

# METALS
## -1-
## INORGANICS ANALYSIS DATA PACKAGE

**SDG No:** 302687 **METHOD TYPE:** SW846

**SAMPLE ID:** 302687002 **CLIENT ID:** 12040001D

**CONTRACT:** ECOL01401

**MATRIX:** Soil **DATE RECEIVED** 14-APR-12 **LEVEL:** Low **%SOLIDS:** 75

| CAS No | Analyte | Result | Units | C | Qual | M* | MDL | DF | Inst ID | Analytical Run |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 321 | ug/Kg | JK | | AV | 5.03 | 1 | HG3 | 042312S1-3 |
| 7440-38-2 | Arsenic | 1640 | ug/kg | | | P | 601 | 1 | OPTIMA | 041812-1 |
| 7440-39-3 | Barium | 312000 | ug/kg | | | P | 120 | 1 | OPTIMA | 041812-1 |
| 7440-43-9 | Cadmium | 4740 | ug/kg | | | P | 120 | 1 | OPTIMA | 041812-1 |
| 7440-47-3 | Chromium | 27200 | ug/kg | | | P | 180 | 1 | OPTIMA | 041812-1 |
| 7440-50-8 | Copper | 269000 | ug/kg | JK | | P | 1800 | 5 | OPTIMA | 041912-2 |
| 7439-92-1 | Lead | 221000 | ug/kg | | | P | 397 | 1 | OPTIMA | 041812-1 |
| 7440-02-0 | Nickel | 27300 | ug/kg | JK | | P | 180 | 1 | OPTIMA | 041812-1 |
| 7782-49-2 | Selenium | 4180 | ug/kg | | | P | 601 | 1 | OPTIMA | 041812-1 |
| 7440-22-4 | Silver | 141 | ug/kg | | | P | 120 | 1 | OPTIMA | 041812-1 |
| 7440-66-6 | Zinc | 1210000 | ug/kg | JK | | P | 481 | 1 | OPTIMA | 041812-1 |

***Analytical Methods:**

| | |
|---|---|
| P | SW846 6010B |
| MS | SW846 6020 |
| AV | SW846 7470A/7471A |
| AF | EPA 1631E |



MW 5/6/12

# METALS
## -1-
## INORGANICS ANALYSIS DATA PACKAGE

**SDG No:** 302687 **METHOD TYPE:** SW846

**SAMPLE ID:** 302687003 **CLIENT ID:** 12040002

**CONTRACT:** ECOL01401

**MATRIX:** Soil **DATE RECEIVED** 14-APR-12 **LEVEL:** Low **%SOLIDS:** 79

| CAS No | Analyte | Result | Units | C | Qual | M* | MDL | DF | Inst ID | Analytical Run |
|---|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | Mercury | 244 | ug/Kg | | JK* | AV | 4.91 | 1 | HG3 | 042312S1-3 |
| 7440-38-2 | Arsenic | 822 | ug/kg | | B | P | 617 | 1 | OPTIMA | 041812-1 |
| 7440-39-3 | Barium | 164000 | ug/kg | | | P | 123 | 1 | OPTIMA | 041812-1 |
| 7440-43-9 | Cadmium | 2900 | ug/kg | | | P | 123 | 1 | OPTIMA | 041812-1 |
| 7440-47-3 | Chromium | 11600 | ug/kg | | | P | 185 | 1 | OPTIMA | 041812-1 |
| 7440-50-8 | Copper | 126000 | ug/kg | | JK | P | 1850 | 5 | OPTIMA | 041912-2 |
| 7439-92-1 | Lead | 142000 | ug/kg | | | P | 408 | 1 | OPTIMA | 041812-1 |
| 7440-02-0 | Nickel | 12500 | ug/kg | | JK | P | 185 | 1 | OPTIMA | 041812-1 |
| 7782-49-2 | Selenium | 2940 | ug/kg | | B | P | 617 | 1 | OPTIMA | 041812-1 |
| 7440-22-4 | Silver | 352 | ug/kg | | B | P | 123 | 1 | OPTIMA | 041812-1 |
| 7440-66-6 | Zinc | 551000 | ug/kg | | JK* | P | 494 | 1 | OPTIMA | 041812-1 |

***Analytical Methods:**

| | |
|---|---|
| P | SW846 6010B |
| MS | SW846 6020 |
| AV | SW846 7470A/7471A |
| AF | EPA 1631E |

5/8/12

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# MEMORANDUM

DATE: May 16, 2012

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Drum Removal Site, Walla Walla, Washington**

REF: TDD: 11-11-0003 PAN: 002233.0727.01RA

The data quality assurance review of three soil samples collected from the Stubblefield Salvage Drum Removal site in Walla Walla, Washington, has been completed. Analysis for Polychlorinated Biphenyls (PCBs - EPA Method 8082A) was performed by GEL, Inc., Charleston, South Carolina. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered: 12040001 12040001D 12040002

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained at < 6°C. The samples were collected on April 12, 2012, extracted on April 18, 2012, and were analyzed by April 18, 2012, therefore meeting QC criteria of less than 14 days between collection and soil sample extraction and less than 40 days between extraction and analysis.

2. **Instrument Performance: Acceptable.**

The surrogate retention time percent difference between the initial calibration standards and the remaining standards and samples was ≤ 0.3% for capillary column analyses.

3. **Initial and Continuing Calibration: Acceptable.**

All initial calibration relative standard deviations (RSDs) were less than 15%. All continuing calibration % differences (% D) were less than 15% and were within QC limits.

4. **Error Determination: Not Provided.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

5. **Blanks: Acceptable.**

A method blank was prepared at the required frequency of every time samples were extracted for each matrix and for each concentration level, or every 20 samples, whichever is greater, and for each analytical system. No target analytes were detected in any blanks.

**6. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**7. System Monitoring Compounds (SMCs): Acceptable.**

All recoveries of the SMCs were within the established control limits.

**8. Blank and Matrix Spikes: Satisfactory.**

Recoveries of all spiked analytes were within the appropriate control limits except the aroclor 1016 high recovery in the matrix spike analysis of sample 12040002, the aroclor 1016 high recovery in the matrix spike duplicate analysis of sample 12040002, and the low aroclor 1260 recovery in the matrix spike duplicate analysis of sample 12040002. No action was taken based on these outliers as the aroclor peaks in the native sample interfered with the spike aroclor peaks.

**9. Duplicates: Acceptable.**

Applicable Relative Percent Differences (RPDs) of all spiked analytes were within the required control limits.

**10. Compound Identification: Satisfactory.**

All results were dual-column confirmed with differences between the columns less than 25% except Aroclor 1260 in sample 12040002. Positive sample results with percent differences between the columns greater than 25% were qualified as estimated quantities with an unknown bias (JK).

**11. Target Compound Quantitation and Quantitation Limits: Acceptable.**

Sample results and quantitation limits were correctly calculated.

**12. Laboratory Contact**

No laboratory contact was required.

**13. Overall Assessment**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

<u>Data Qualifiers and Definitions</u>

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.

JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.

JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.

JQ – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

# PCB
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | 302687 | **Date Collected:** | 04/12/2012 12:30 | **Matrix:** | SOIL |
| **Lab Sample ID:** | 302687001 | **Date Received:** | 04/14/2012 09:50 | **%Moisture:** | 25.5 |
| | | **Client:** | ECOL014 | **Project:** | ECOL01401 |
| **Client ID:** | 12040001 | **Method:** | SW846 3541/8082A | **SOP Ref:** | GL-OA-E-040 |
| **Batch ID:** | 1204704 | **Inst:** | ECD9A.I | **Dilution:** | 1 |
| **Run Date:** | 04/18/2012 15:56 | **Analyst:** | YS1 | **Inj. Vol:** | 1 uL |
| **Prep Date:** | 04/18/2012 08:25 | **Aliquot:** | 30.1 g | **Final Volume:** | 1 mL |
| **Data File:** | 041812PCB.S\E9d1836.D | **Column:** | 1 RTX-CLPEST 1 | | |
| | 041812PCB.S\E9d1836.D | | 2 RTX-CLPEST 2 | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ | Column |
|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | U | 4.46 | ug/kg | 1.48 | 4.46 | 1 |
| 11104-28-2 | Aroclor-1221 | U | 4.46 | ug/kg | 1.48 | 4.46 | 1 |
| 11141-16-5 | Aroclor-1232 | U | 4.46 | ug/kg | 1.48 | 4.46 | 1 |
| 53469-21-9 | Aroclor-1242 | U | 4.46 | ug/kg | 1.48 | 4.46 | 1 |
| 12672-29-6 | Aroclor-1248 | | 127 | ug/kg | 1.48 | 4.46 | 1 |
| 11097-69-1 | Aroclor-1254 | | 152 | ug/kg | 1.48 | 4.46 | 2 |
| 11096-82-5 | Aroclor-1260 | | 151 | ug/kg | 1.48 | 4.46 | 2 |



MW 5/6/12

# PCB
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | 302687 | **Date Collected:** | 04/12/2012 12:30 | **Matrix:** | SOIL |
| **Lab Sample ID:** | 302687002 | **Date Received:** | 04/14/2012 09:50 | **%Moisture:** | 25.4 |
| | | **Client:** | ECOL014 | **Project:** | ECOL01401 |
| **Client ID:** | 12040001D | **Method:** | SW846 3541/8082A | **SOP Ref:** | GL-OA-E-040 |
| **Batch ID:** | 1204704 | **Inst:** | ECD9A.I | **Dilution:** | 1 |
| **Run Date:** | 04/18/2012 16:09 | **Analyst:** | YS1 | **Inj. Vol:** | 1 uL |
| **Prep Date:** | 04/18/2012 08:25 | **Aliquot:** | 30.2 g | **Final Volume:** | 1 mL |
| **Data File:** | 041812PCB.S\E9d1837.D | **Column:** | 1 RTX-CLPEST 1 | | |
| | 041812PCB.S\E9d1837.D | | 2 RTX-CLPEST 2 | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ | Column |
|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | U | 4.44 | ug/kg | 1.48 | 4.44 | 1 |
| 11104-28-2 | Aroclor-1221 | U | 4.44 | ug/kg | 1.48 | 4.44 | 1 |
| 11141-16-5 | Aroclor-1232 | U | 4.44 | ug/kg | 1.48 | 4.44 | 1 |
| 53469-21-9 | Aroclor-1242 | U | 4.44 | ug/kg | 1.48 | 4.44 | 1 |
| 12672-29-6 | Aroclor-1248 | | 79.2 | ug/kg | 1.48 | 4.44 | 1 |
| 11097-69-1 | Aroclor-1254 | | 94.1 | ug/kg | 1.48 | 4.44 | 2 |
| 11096-82-5 | Aroclor-1260 | | 75.5 | ug/kg | 1.48 | 4.44 | 2 |

MW 5/6/12

# PCB
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | 302687 | **Date Collected:** | 04/12/2012 12:40 | **Matrix:** | SOIL |
| **Lab Sample ID:** | 302687003 | **Date Received:** | 04/14/2012 09:50 | **%Moisture:** | 21.4 |
| | | **Client:** | ECOL014 | **Project:** | ECOL01401 |
| **Client ID:** | 12040002 | **Method:** | SW846 3541/8082A | **SOP Ref:** | GL-OA-E-040 |
| **Batch ID:** | 1204704 | **Inst:** | ECD9A.I | **Dilution:** | 1 |
| **Run Date:** | 04/18/2012 16:21 | **Analyst:** | YS1 | **Inj. Vol:** | 1 uL |
| **Prep Date:** | 04/18/2012 08:25 | **Aliquot:** | 30.21 g | **Final Volume:** | 1 mL |
| **Data File:** | 041812PCB.S\E9d1838.D | **Column:** | 1 RTX-CLPEST 1 | | |
| | 041812PCB.S\E9d1838.D | | 2 RTX-CLPEST 2 | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ | Column |
|---|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | U | 4.21 | ug/kg | 1.40 | 4.21 | 1 |
| 11104-28-2 | Aroclor-1221 | U | 4.21 | ug/kg | 1.40 | 4.21 | 1 |
| 11141-16-5 | Aroclor-1232 | U | 4.21 | ug/kg | 1.40 | 4.21 | 1 |
| 53469-21-9 | Aroclor-1242 | U | 4.21 | ug/kg | 1.40 | 4.21 | 1 |
| 12672-29-6 | Aroclor-1248 | | 70.2 | ug/kg | 1.40 | 4.21 | 1 |
| 11097-69-1 | Aroclor-1254 | | 112 | ug/kg | 1.40 | 4.21 | 2 |
| 11096-82-5 | Aroclor-1260 | JK | 121 | ug/kg | 1.40 | 4.21 | 2 |

MW 5-16-12

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# MEMORANDUM

DATE: May 16, 2012

TO: Jake Moersen, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Stubblefield Salvage Drum Removal Site, Walla Walla, Washington**

REF: TDD: 11-11-0003 PAN: 002233.0727.01RA

The data quality assurance review of three soil samples collected from the Stubblefield Salvage Drum Removal site in Walla Walla, Washington, has been completed. Semivolatile Organic Compound (SVOC) analysis (EPA Method 8270) was performed by GEL, Inc., Charleston, South Carolina. All sample analyses were evaluated following EPA's Stage 2 and 4 Data Validation Electronic/Manual Process (S4VEM).

The samples were numbered: 12040001 12040001D 12040002

**Data Qualifications:**

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected on April 12, 2012, were extracted on April 18, 2012, and were analyzed on April 19, 2012, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Acceptable.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were within the QC limits.

4. **Continuing Calibration: Acceptable.**

All RRFs were greater than the QC limit of 0.050. All % differences were within the QC limits.

5. **Blanks: Acceptable.**

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

**6. System Monitoring Compounds (SMCs): Acceptable.**

All SMC recoveries were within QC limits.

**7. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Analysis: Acceptable.**

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits.

**8. Duplicate Analysis: Satisfactory.**

Spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits except pyrene. The pyrene result in sample 12040002 was qualified as an estimated quantity with an unknown bias (JK).

**9. Internal Standards: Satisfactory.**

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts except perylene-d12 with low area counts in the matrix spike and matrix spike duplicate (no action was taken for the spike samples), and in samples 12040001D and 12040002. Positive sample results associated with high area count outliers were qualified as estimated quantities with a low bias (JL).

**10. Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

**11. Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**12. Overall Assessment of Data for Use**

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

<u>Data Qualifiers and Definitions</u>

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.

JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.

JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.

JQ – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

# Semi-Volatile
# Certificate of Analysis
# Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | **302687** | **Date Collected:** | **04/12/2012 12:30** | **Matrix:** | **SOIL** |
| **Lab Sample ID:** | **302687001** | **Date Received:** | **04/14/2012 09:50** | **%Moisture:** | **25.5** |
| | | **Client:** | **ECOL014** | **Project:** | **ECOL01401** |
| **Client ID:** | **12040001** | **Method:** | **SW846 3550C/8270D** | **SOP Ref:** | **GL-OA-E-009** |
| **Batch ID:** | **1204700** | **Inst:** | **MSD3.I** | **Dilution:** | **1** |
| **Run Date:** | **04/19/2012 17:03** | **Analyst:** | **JMB3** | **Inj. Vol:** | **1 uL** |
| **Prep Date:** | **04/18/2012 08:10** | **Aliquot:** | **30.22 g** | **Final Volume:** | **1 mL** |
| **Data File:** | **S041912.B\s3d1913.D** | **Column:** | **DB-5ms** | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ |
|---|---|---|---|---|---|---|
| 108-95-2 | Phenol | U | 444 | ug/kg | 133 | 444 |
| 111-44-4 | bis(2-Chloroethyl) ether | U | 444 | ug/kg | 133 | 444 |
| 95-57-8 | 2-Chlorophenol | U | 444 | ug/kg | 133 | 444 |
| 39638-32-9 | bis(2-Chloroisopropyl)ether | U | 444 | ug/kg | 133 | 444 |
| 95-48-7 | o-Cresol | U | 444 | ug/kg | 133 | 444 |
| 65794-96-9 | m,p-Cresols | U | 444 | ug/kg | 133 | 444 |
| 621-64-7 | N-Nitrosodipropylamine | U | 444 | ug/kg | 133 | 444 |
| 67-72-1 | Hexachloroethane | U | 444 | ug/kg | 133 | 444 |
| 98-95-3 | Nitrobenzene | U | 444 | ug/kg | 133 | 444 |
| 78-59-1 | Isophorone | U | 444 | ug/kg | 133 | 444 |
| 88-75-5 | 2-Nitrophenol | U | 444 | ug/kg | 133 | 444 |
| 105-67-9 | 2,4-Dimethylphenol | U | 444 | ug/kg | 133 | 444 |
| 111-91-1 | bis(2-Chloroethoxy)methane | U | 444 | ug/kg | 133 | 444 |
| 120-83-2 | 2,4-Dichlorophenol | U | 444 | ug/kg | 133 | 444 |
| 106-47-8 | 4-Chloroaniline | U | 444 | ug/kg | 133 | 444 |
| 87-68-3 | Hexachlorobutadiene | U | 444 | ug/kg | 133 | 444 |
| 59-50-7 | 4-Chloro-3-methylphenol | U | 444 | ug/kg | 133 | 444 |
| 91-57-6 | 2-Methylnaphthalene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 91-20-3 | Naphthalene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 77-47-4 | Hexachlorocyclopentadiene | U | 444 | ug/kg | 133 | 444 |
| 88-06-2 | 2,4,6-Trichlorophenol | U | 444 | ug/kg | 133 | 444 |
| 95-95-4 | 2,4,5-Trichlorophenol | U | 444 | ug/kg | 133 | 444 |
| 91-58-7 | 2-Chloronaphthalene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 88-74-4 | o-Nitroaniline | U | 444 | ug/kg | 133 | 444 |
| 99-09-2 | m-Nitroaniline | U | 444 | ug/kg | 133 | 444 |
| 131-11-3 | Dimethylphthalate | U | 444 | ug/kg | 133 | 444 |
| 606-20-2 | 2,6-Dinitrotoluene | U | 444 | ug/kg | 133 | 444 |
| 121-14-2 | 2,4-Dinitrotoluene | U | 444 | ug/kg | 133 | 444 |
| 208-96-8 | Acenaphthylene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 83-32-9 | Acenaphthene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 51-28-5 | 2,4-Dinitrophenol | U | 888 | ug/kg | 133 | 888 |
| 132-64-9 | Dibenzofuran | U | 444 | ug/kg | 133 | 444 |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | U | 444 | ug/kg | 133 | 444 |
| 84-66-2 | Diethylphthalate | U | 444 | ug/kg | 133 | 444 |
| 100-02-7 | 4-Nitrophenol | U | 444 | ug/kg | 133 | 444 |
| 86-73-7 | Fluorene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 7005-72-3 | 4-Chlorophenylphenylether | U | 444 | ug/kg | 133 | 444 |
| 100-01-6 | p-Nitroaniline | U | 444 | ug/kg | 133 | 444 |

MW 5/6/12

# Semi-Volatile
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | **302687** | **Date Collected:** | **04/12/2012 12:30** | **Matrix:** | **SOIL** |
| **Lab Sample ID:** | **302687001** | **Date Received:** | **04/14/2012 09:50** | **%Moisture:** | **25.5** |
| | | **Client:** | **ECOL014** | **Project:** | **ECOL01401** |
| **Client ID:** | **12040001** | **Method:** | **SW846 3550C/8270D** | **SOP Ref:** | **GL-OA-E-009** |
| **Batch ID:** | **1204700** | **Inst:** | **MSD3.I** | **Dilution:** | **1** |
| **Run Date:** | **04/19/2012 17:03** | **Analyst:** | **JMB3** | **Inj. Vol:** | **1 uL** |
| **Prep Date:** | **04/18/2012 08:10** | **Aliquot:** | **30.22 g** | **Final Volume:** | **1 mL** |
| **Data File:** | **S041912.B\s3d1913.D** | **Column:** | **DB-5ms** | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ |
|---|---|---|---|---|---|---|
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | U | 444 | ug/kg | 133 | 444 |
| 122-39-4 | Diphenylamine | U | 444 | ug/kg | 133 | 444 |
| 101-55-3 | 4-Bromophenylphenylether | U | 444 | ug/kg | 133 | 444 |
| 118-74-1 | Hexachlorobenzene | U | 444 | ug/kg | 133 | 444 |
| 87-86-5 | Pentachlorophenol | U | 444 | ug/kg | 133 | 444 |
| 85-01-8 | Phenanthrene | J Q | 20.9 | ug/kg | 13.3 | 44.4 |
| 120-12-7 | Anthracene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 86-74-8 | Carbazole | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 84-74-2 | Di-n-butylphthalate | U | 444 | ug/kg | 133 | 444 |
| 206-44-0 | Fluoranthene | | 71.9 | ug/kg | 13.3 | 44.4 |
| 129-00-0 | Pyrene | | 86.1 | ug/kg | 13.3 | 44.4 |
| 85-68-7 | Butylbenzylphthalate | J Q | 156 | ug/kg | 133 | 444 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | U | 444 | ug/kg | 133 | 444 |
| 56-55-3 | Benzo(a)anthracene | | 51.1 | ug/kg | 13.3 | 44.4 |
| 218-01-9 | Chrysene | | 53.3 | ug/kg | 13.3 | 44.4 |
| 117-84-0 | Di-n-octylphthalate | U | 444 | ug/kg | 133 | 444 |
| 205-99-2 | Benzo(b)fluoranthene | | 131 | ug/kg | 13.3 | 44.4 |
| 207-08-9 | Benzo(k)fluoranthene | J Q | 33.3 | ug/kg | 13.3 | 44.4 |
| 50-32-8 | Benzo(a)pyrene | | 68.4 | ug/kg | 13.3 | 44.4 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | J Q | 35.1 | ug/kg | 13.3 | 44.4 |
| 53-70-3 | Dibenzo(a,h)anthracene | U | 44.4 | ug/kg | 13.3 | 44.4 |
| 191-24-2 | Benzo(ghi)perylene | | 48.0 | ug/kg | 13.3 | 44.4 |
| 100-52-7 | Benzaldehyde | U | 444 | ug/kg | 133 | 444 |
| 98-86-2 | Acetophenone | U | 444 | ug/kg | 133 | 444 |
| 105-60-2 | Caprolactam | U | 444 | ug/kg | 133 | 444 |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | U | 444 | ug/kg | 133 | 444 |
| 92-52-4 | 1,1'-Biphenyl | U | 444 | ug/kg | 133 | 444 |
| 1912-24-9 | Atrazine | U | 444 | ug/kg | 133 | 444 |
| 91-94-1 | 3,3'-Dichlorobenzidine | U | 444 | ug/kg | 133 | 444 |



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# Semi-Volatile
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | **302687** | **Date Collected:** | **04/12/2012 12:30** | **Matrix:** | **SOIL** |
| **Lab Sample ID:** | **302687002** | **Date Received:** | **04/14/2012 09:50** | **%Moisture:** | **25.4** |
| | | **Client:** | **ECOL014** | **Project:** | **ECOL01401** |
| **Client ID:** | **12040001D** | **Method:** | **SW846 3550C/8270D** | **SOP Ref:** | **GL-OA-E-009** |
| **Batch ID:** | **1204700** | **Inst:** | **MSD3.I** | **Dilution:** | **1** |
| **Run Date:** | **04/19/2012 17:28** | **Analyst:** | **JMB3** | **Inj. Vol:** | **1 uL** |
| **Prep Date:** | **04/18/2012 08:10** | **Aliquot:** | **30.34 g** | **Final Volume:** | **1 mL** |
| **Data File:** | **S041912.B\s3d1914.D** | **Column:** | **DB-5ms** | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ |
|---|---|---|---|---|---|---|
| 108-95-2 | Phenol | U | 442 | ug/kg | 133 | 442 |
| 111-44-4 | bis(2-Chloroethyl) ether | U | 442 | ug/kg | 133 | 442 |
| 95-57-8 | 2-Chlorophenol | U | 442 | ug/kg | 133 | 442 |
| 39638-32-9 | bis(2-Chloroisopropyl)ether | U | 442 | ug/kg | 133 | 442 |
| 95-48-7 | o-Cresol | U | 442 | ug/kg | 133 | 442 |
| 65794-96-9 | m,p-Cresols | U | 442 | ug/kg | 133 | 442 |
| 621-64-7 | N-Nitrosodipropylamine | U | 442 | ug/kg | 133 | 442 |
| 67-72-1 | Hexachloroethane | U | 442 | ug/kg | 133 | 442 |
| 98-95-3 | Nitrobenzene | U | 442 | ug/kg | 133 | 442 |
| 78-59-1 | Isophorone | U | 442 | ug/kg | 133 | 442 |
| 88-75-5 | 2-Nitrophenol | U | 442 | ug/kg | 133 | 442 |
| 105-67-9 | 2,4-Dimethylphenol | U | 442 | ug/kg | 133 | 442 |
| 111-91-1 | bis(2-Chloroethoxy)methane | U | 442 | ug/kg | 133 | 442 |
| 120-83-2 | 2,4-Dichlorophenol | U | 442 | ug/kg | 133 | 442 |
| 106-47-8 | 4-Chloroaniline | U | 442 | ug/kg | 133 | 442 |
| 87-68-3 | Hexachlorobutadiene | U | 442 | ug/kg | 133 | 442 |
| 59-50-7 | 4-Chloro-3-methylphenol | U | 442 | ug/kg | 133 | 442 |
| 91-57-6 | 2-Methylnaphthalene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 91-20-3 | Naphthalene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 77-47-4 | Hexachlorocyclopentadiene | U | 442 | ug/kg | 133 | 442 |
| 88-06-2 | 2,4,6-Trichlorophenol | U | 442 | ug/kg | 133 | 442 |
| 95-95-4 | 2,4,5-Trichlorophenol | U | 442 | ug/kg | 133 | 442 |
| 91-58-7 | 2-Chloronaphthalene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 88-74-4 | o-Nitroaniline | U | 442 | ug/kg | 133 | 442 |
| 99-09-2 | m-Nitroaniline | U | 442 | ug/kg | 133 | 442 |
| 131-11-3 | Dimethylphthalate | U | 442 | ug/kg | 133 | 442 |
| 606-20-2 | 2,6-Dinitrotoluene | U | 442 | ug/kg | 133 | 442 |
| 121-14-2 | 2,4-Dinitrotoluene | U | 442 | ug/kg | 133 | 442 |
| 208-96-8 | Acenaphthylene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 83-32-9 | Acenaphthene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 51-28-5 | 2,4-Dinitrophenol | U | 884 | ug/kg | 133 | 884 |
| 132-64-9 | Dibenzofuran | U | 442 | ug/kg | 133 | 442 |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | U | 442 | ug/kg | 133 | 442 |
| 84-66-2 | Diethylphthalate | U | 442 | ug/kg | 133 | 442 |
| 100-02-7 | 4-Nitrophenol | U | 442 | ug/kg | 133 | 442 |
| 86-73-7 | Fluorene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 7005-72-3 | 4-Chlorophenylphenylether | U | 442 | ug/kg | 133 | 442 |
| 100-01-6 | p-Nitroaniline | U | 442 | ug/kg | 133 | 442 |

MW 5-16-12

# Semi-Volatile
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | 302687 | **Date Collected:** | 04/12/2012 12:30 | **Matrix:** | SOIL |
| **Lab Sample ID:** | 302687002 | **Date Received:** | 04/14/2012 09:50 | **%Moisture:** | 25.4 |
| | | **Client:** | ECOL014 | **Project:** | ECOL01401 |
| **Client ID:** | 12040001D | **Method:** | SW846 3550C/8270D | **SOP Ref:** | GL-OA-E-009 |
| **Batch ID:** | 1204700 | **Inst:** | MSD3.I | **Dilution:** | 1 |
| **Run Date:** | 04/19/2012 17:28 | **Analyst:** | JMB3 | **Inj. Vol:** | 1 uL |
| **Prep Date:** | 04/18/2012 08:10 | **Aliquot:** | 30.34 g | **Final Volume:** | 1 mL |
| **Data File:** | S041912.B\s3d1914.D | **Column:** | DB-5ms | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ |
|---|---|---|---|---|---|---|
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | U | 442 | ug/kg | 133 | 442 |
| 122-39-4 | Diphenylamine | U | 442 | ug/kg | 133 | 442 |
| 101-55-3 | 4-Bromophenylphenylether | U | 442 | ug/kg | 133 | 442 |
| 118-74-1 | Hexachlorobenzene | U | 442 | ug/kg | 133 | 442 |
| 87-86-5 | Pentachlorophenol | U | 442 | ug/kg | 133 | 442 |
| 85-01-8 | Phenanthrene | | 53.9 | ug/kg | 13.3 | 44.2 |
| 120-12-7 | Anthracene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 86-74-8 | Carbazole | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 84-74-2 | Di-n-butylphthalate | U | 442 | ug/kg | 133 | 442 |
| 206-44-0 | Fluoranthene | | 130 | ug/kg | 13.3 | 44.2 |
| 129-00-0 | Pyrene | | 168 | ug/kg | 13.3 | 44.2 |
| 85-68-7 | Butylbenzylphthalate | U | 442 | ug/kg | 133 | 442 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | U | 442 | ug/kg | 133 | 442 |
| 56-55-3 | Benzo(a)anthracene | | 84.4 | ug/kg | 13.3 | 44.2 |
| 218-01-9 | Chrysene | | 105 | ug/kg | 13.3 | 44.2 |
| 117-84-0 | Di-n-octylphthalate | U | 442 | ug/kg | 133 | 442 |
| 205-99-2 | Benzo(b)fluoranthene | J | 190 | ug/kg | 13.3 | 44.2 |
| 207-08-9 | Benzo(k)fluoranthene | J | 61.9 | ug/kg | 13.3 | 44.2 |
| 50-32-8 | Benzo(a)pyrene | JL | 112 | ug/kg | 13.3 | 44.2 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | JL | 59.7 | ug/kg | 13.3 | 44.2 |
| 53-70-3 | Dibenzo(a,h)anthracene | U | 44.2 | ug/kg | 13.3 | 44.2 |
| 191-24-2 | Benzo(ghi)perylene | JL | 80.0 | ug/kg | 13.3 | 44.2 |
| 100-52-7 | Benzaldehyde | U | 442 | ug/kg | 133 | 442 |
| 98-86-2 | Acetophenone | U | 442 | ug/kg | 133 | 442 |
| 105-60-2 | Caprolactam | U | 442 | ug/kg | 133 | 442 |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | U | 442 | ug/kg | 133 | 442 |
| 92-52-4 | 1,1'-Biphenyl | U | 442 | ug/kg | 133 | 442 |
| 1912-24-9 | Atrazine | U | 442 | ug/kg | 133 | 442 |
| 91-94-1 | 3,3'-Dichlorobenzidine | U | 442 | ug/kg | 133 | 442 |

MW 5-16-12

# Semi-Volatile
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | 302687 | **Date Collected:** | 04/12/2012 12:40 | **Matrix:** | SOIL |
| **Lab Sample ID:** | 302687003 | **Date Received:** | 04/14/2012 09:50 | **%Moisture:** | 21.4 |
| | | **Client:** | ECOL014 | **Project:** | ECOL01401 |
| **Client ID:** | 12040002 | **Method:** | SW846 3550C/8270D | **SOP Ref:** | GL-OA-E-009 |
| **Batch ID:** | 1204700 | **Inst:** | MSD3.I | **Dilution:** | 1 |
| **Run Date:** | 04/19/2012 17:53 | **Analyst:** | JMB3 | **Inj. Vol:** | 1 uL |
| **Prep Date:** | 04/18/2012 08:10 | **Aliquot:** | 30.39 g | **Final Volume:** | 1 mL |
| **Data File:** | S041912.B\s3d1915.D | **Column:** | DB-5ms | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ |
|---|---|---|---|---|---|---|
| 108-95-2 | Phenol | U | 419 | ug/kg | 126 | 419 |
| 111-44-4 | bis(2-Chloroethyl) ether | U | 419 | ug/kg | 126 | 419 |
| 95-57-8 | 2-Chlorophenol | U | 419 | ug/kg | 126 | 419 |
| 39638-32-9 | bis(2-Chloroisopropyl)ether | U | 419 | ug/kg | 126 | 419 |
| 95-48-7 | o-Cresol | U | 419 | ug/kg | 126 | 419 |
| 65794-96-9 | m,p-Cresols | U | 419 | ug/kg | 126 | 419 |
| 621-64-7 | N-Nitrosodipropylamine | U | 419 | ug/kg | 126 | 419 |
| 67-72-1 | Hexachloroethane | U | 419 | ug/kg | 126 | 419 |
| 98-95-3 | Nitrobenzene | U | 419 | ug/kg | 126 | 419 |
| 78-59-1 | Isophorone | U | 419 | ug/kg | 126 | 419 |
| 88-75-5 | 2-Nitrophenol | U | 419 | ug/kg | 126 | 419 |
| 105-67-9 | 2,4-Dimethylphenol | U | 419 | ug/kg | 126 | 419 |
| 111-91-1 | bis(2-Chloroethoxy)methane | U | 419 | ug/kg | 126 | 419 |
| 120-83-2 | 2,4-Dichlorophenol | U | 419 | ug/kg | 126 | 419 |
| 106-47-8 | 4-Chloroaniline | U | 419 | ug/kg | 126 | 419 |
| 87-68-3 | Hexachlorobutadiene | U | 419 | ug/kg | 126 | 419 |
| 59-50-7 | 4-Chloro-3-methylphenol | U | 419 | ug/kg | 126 | 419 |
| 91-57-6 | 2-Methylnaphthalene | U | 41.9 | ug/kg | 12.6 | 41.9 |
| 91-20-3 | Naphthalene | U | 41.9 | ug/kg | 12.6 | 41.9 |
| 77-47-4 | Hexachlorocyclopentadiene | U | 419 | ug/kg | 126 | 419 |
| 88-06-2 | 2,4,6-Trichlorophenol | U | 419 | ug/kg | 126 | 419 |
| 95-95-4 | 2,4,5-Trichlorophenol | U | 419 | ug/kg | 126 | 419 |
| 91-58-7 | 2-Chloronaphthalene | U | 41.9 | ug/kg | 12.6 | 41.9 |
| 88-74-4 | o-Nitroaniline | U | 419 | ug/kg | 126 | 419 |
| 99-09-2 | m-Nitroaniline | U | 419 | ug/kg | 126 | 419 |
| 131-11-3 | Dimethylphthalate | U | 419 | ug/kg | 126 | 419 |
| 606-20-2 | 2,6-Dinitrotoluene | U | 419 | ug/kg | 126 | 419 |
| 121-14-2 | 2,4-Dinitrotoluene | U | 419 | ug/kg | 126 | 419 |
| 208-96-8 | Acenaphthylene | J Q | 17.6 | ug/kg | 12.6 | 41.9 |
| 83-32-9 | Acenaphthene | U | 41.9 | ug/kg | 12.6 | 41.9 |
| 51-28-5 | 2,4-Dinitrophenol | U | 837 | ug/kg | 126 | 837 |
| 132-64-9 | Dibenzofuran | U | 419 | ug/kg | 126 | 419 |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol | U | 419 | ug/kg | 126 | 419 |
| 84-66-2 | Diethylphthalate | U | 419 | ug/kg | 126 | 419 |
| 100-02-7 | 4-Nitrophenol | U | 419 | ug/kg | 126 | 419 |
| 86-73-7 | Fluorene | U | 41.9 | ug/kg | 12.6 | 41.9 |
| 7005-72-3 | 4-Chlorophenylphenylether | U | 419 | ug/kg | 126 | 419 |
| 100-01-6 | p-Nitroaniline | U | 419 | ug/kg | 126 | 419 |



JMW 5/6/12

## Semi-Volatile
## Certificate of Analysis
## Sample Summary

| | | | | | |
|---|---|---|---|---|---|
| **SDG Number:** | **302687** | **Date Collected:** | **04/12/2012 12:40** | **Matrix:** | **SOIL** |
| **Lab Sample ID:** | **302687003** | **Date Received:** | **04/14/2012 09:50** | **%Moisture:** | **21.4** |
| | | **Client:** | **ECOL014** | **Project:** | **ECOL01401** |
| **Client ID:** | **12040002** | **Method:** | **SW846 3550C/8270D** | **SOP Ref:** | **GL-OA-E-009** |
| **Batch ID:** | **1204700** | **Inst:** | **MSD3.I** | **Dilution:** | **1** |
| **Run Date:** | **04/19/2012 17:53** | **Analyst:** | **JMB3** | **Inj. Vol:** | **1 uL** |
| **Prep Date:** | **04/18/2012 08:10** | **Aliquot:** | **30.39 g** | **Final Volume:** | **1 mL** |
| **Data File:** | **S041912.B\s3d1915.D** | **Column:** | **DB-5ms** | | |

| CAS No. | Parmname | Qualifier | Result | Units | MDL/LOD | PQL/LOQ |
|---|---|---|---|---|---|---|
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | U | 419 | ug/kg | 126 | 419 |
| 122-39-4 | Diphenylamine | U | 419 | ug/kg | 126 | 419 |
| 101-55-3 | 4-Bromophenylphenylether | U | 419 | ug/kg | 126 | 419 |
| 118-74-1 | Hexachlorobenzene | U | 419 | ug/kg | 126 | 419 |
| 87-86-5 | Pentachlorophenol | U | 419 | ug/kg | 126 | 419 |
| 85-01-8 | Phenanthrene | | 84.1 | ug/kg | 12.6 | 41.9 |
| 120-12-7 | Anthracene | J Q | 23.0 | ug/kg | 12.6 | 41.9 |
| 86-74-8 | Carbazole | U | 41.9 | ug/kg | 12.6 | 41.9 |
| 84-74-2 | Di-n-butylphthalate | U | 419 | ug/kg | 126 | 419 |
| 206-44-0 | Fluoranthene | | 268 | ug/kg | 12.6 | 41.9 |
| 129-00-0 | Pyrene | JK | 439 | ug/kg | 12.6 | 41.9 |
| 85-68-7 | Butylbenzylphthalate | U | 419 | ug/kg | 126 | 419 |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | U | 419 | ug/kg | 126 | 419 |
| 56-55-3 | Benzo(a)anthracene | | 205 | ug/kg | 12.6 | 41.9 |
| 218-01-9 | Chrysene | | 222 | ug/kg | 12.6 | 41.9 |
| 117-84-0 | Di-n-octylphthalate | U | 419 | ug/kg | 126 | 419 |
| 205-99-2 | Benzo(b)fluoranthene | JL | 349 | ug/kg | 12.6 | 41.9 |
| 207-08-9 | Benzo(k)fluoranthene | JL | 117 | ug/kg | 12.6 | 41.9 |
| 50-32-8 | Benzo(a)pyrene | JL | 228 | ug/kg | 12.6 | 41.9 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | JL | 108 | ug/kg | 12.6 | 41.9 |
| 53-70-3 | Dibenzo(a,h)anthracene | U | 41.9 | ug/kg | 12.6 | 41.9 |
| 191-24-2 | Benzo(ghi)perylene | JL | 118 | ug/kg | 12.6 | 41.9 |
| 100-52-7 | Benzaldehyde | U | 419 | ug/kg | 126 | 419 |
| 98-86-2 | Acetophenone | U | 419 | ug/kg | 126 | 419 |
| 105-60-2 | Caprolactam | U | 419 | ug/kg | 126 | 419 |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | U | 419 | ug/kg | 126 | 419 |
| 92-52-4 | 1,1'-Biphenyl | U | 419 | ug/kg | 126 | 419 |
| 1912-24-9 | Atrazine | U | 419 | ug/kg | 126 | 419 |
| 91-94-1 | 3,3'-Dichlorobenzidine | U | 419 | ug/kg | 126 | 419 |

MW 5-16-12

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