

**REMEDIAL INVESTIGATION, FOCUSED FEASIBILITY STUDY, AND  
CLEANUP ACTION PLAN**

**6050 EAST MARGINAL WAY SOUTH PROPERTY  
SEATTLE, WASHINGTON**

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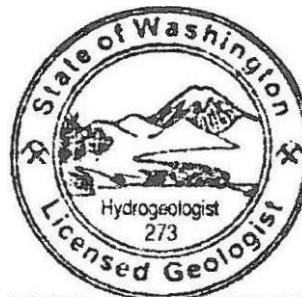
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## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1-1</b>
1.1	OBJECTIVES .....	1-2
1.2	ORGANIZATION .....	1-3
<b>2.0</b>	<b>PROPERTY BACKGROUND .....</b>	<b>2-1</b>
2.1	PROPERTY DESCRIPTION .....	2-1
2.2	GEOLOGY AND HYDROLOGY .....	2-1
2.2.1	Geology.....	2-1
2.2.2	Hydrology.....	2-2
<b>3.0</b>	<b>REMEDIAL INVESTIGATION.....</b>	<b>3-1</b>
3.1	INVESTIGATIONS .....	3-1
3.1.1	1988 Contamination Investigation—Blymyer Engineers, Inc.....	3-1
3.1.2	1988 – 1989 Groundwater Monitoring Results—Blymyer Engineers, Inc. ....	3-2
3.1.3	1997 Site Investigation-Shannon & Wilson, Inc. ....	3-2
3.1.4	1998 Site Investigation and Risk Assessment—Golder Associates Inc. ....	3-3
3.1.5	1998 Permanent UST Decommissioning and Closure—Fluor Daniel GTI .....	3-4
3.1.6	2000 Groundwater Investigation and Groundwater Monitoring Work Plan—Golder Associates Inc. ....	3-5
3.1.7	2001 Results from Additional Groundwater and Soil Investigations—Golder Associates Inc. ....	3-6
3.1.8	2004 Phase II Investigation—Golder Associates Inc. ....	3-8
3.1.9	2014 Phase II Subsurface Investigation—Farallon Consulting, L.L.C. ....	3-10
3.2	SOURCE AND EXTENT OF CONSTITUENTS OF CONCERN .....	3-15
<b>4.0</b>	<b>CONCEPTUAL SITE MODEL .....</b>	<b>4-1</b>
4.1	APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS.....	4-1
4.2	CONSTITUENTS OF CONCERN.....	4-2
4.3	MEDIA OF CONCERN .....	4-2
4.4	CLEANUP STANDARDS .....	4-3
4.4.1	Soil Cleanup Levels .....	4-3
4.4.2	Groundwater Cleanup Levels .....	4-3
4.4.3	Points of Compliance.....	4-4
4.5	TERRESTRIAL ECOLOGICAL EVALUATION .....	4-4
4.6	CONTAMINANT FATE AND TRANSPORT .....	4-4
<b>5.0</b>	<b>FOCUSED FEASIBILITY STUDY .....</b>	<b>5-1</b>



5.1	POTENTIAL CLEANUP ALTERNATIVES .....	5-2
5.2	RECOMMENDED CLEANUP ALTERNATIVE .....	5-3
<b>6.0</b>	<b>CLEANUP ACTION PLAN .....</b>	<b>6-1</b>
6.1	OBJECTIVE OF CLEANUP ACTION.....	6-1
6.2	ELEMENTS OF CLEANUP ACTION .....	6-1
6.3	PROPERTY PREPARATION.....	6-1
6.4	EXCAVATION .....	6-1
6.5	EXCAVATION DEWATERING.....	6-2
6.6	SOIL SEGREGATION AND STOCKPILING .....	6-2
6.6.1	Identification of Contaminated Soil.....	6-3
6.6.2	Performance and Confirmational Soil Sampling .....	6-3
6.6.3	Soil Sample Identification.....	6-4
6.6.4	Soil Sample Collection and Handling Procedures .....	6-4
6.6.5	Analytical Methods and Turnaround Times .....	6-5
6.6.6	Waste Soil Disposal .....	6-6
6.6.7	Wastewater Disposal.....	6-6
6.6.8	Backfill and Property Restoration.....	6-6
<b>7.0</b>	<b>DOCUMENTATION REQUIREMENTS.....</b>	<b>7-1</b>
7.1	FIELD DOCUMENTATION .....	7-1
7.2	HEALTH AND SAFETY .....	7-2
7.3	CLOSURE REPORT .....	7-2
<b>8.0</b>	<b>BIBLIOGRAPHY .....</b>	<b>8-1</b>
<b>9.0</b>	<b>LIMITATIONS .....</b>	<b>9-1</b>
9.1	GENERAL LIMITATIONS .....	9-1
9.2	LIMITATION ON RELIANCE BY THIRD PARTIES .....	9-1



## FIGURES

- Figure 1 *Property Vicinity Map*  
Figure 2 *Former Property Features*  
Figure 3 *Sample Location Map, Former Shop Building UST Area*  
Figure 4 *Soil Analytical Results for Petroleum Hydrocarbons, Former Shop Building UST Area*  
Figure 5 *Soil Analytical Results, Former Northwest UST Area*  
Figure 6 *Groundwater Analytical Results for August 17 and 18, 1999*  
Figure 7 *Groundwater Elevation Contour Map and Groundwater Analytical Results for January 17, 2001*  
Figure 8 *Groundwater Elevation Contour Map and Groundwater Analytical Results for December 2, 2003*  
Figure 9 *Groundwater Analytical Results for August 12 and September 23, 2014*

## TABLES

- Table 1 *Summary of Groundwater Elevation Data*  
Table 2 *Summary of Soil Analytical Results for TPH and BTEX*  
Table 3a *Summary of Soil Analytical Results for VOCs*  
Table 3b *Summary of Soil Analytical Results for Other VOCs*  
Table 4 *Summary of Soil Analytical Results for PCBs*  
Table 5 *Summary of Soil Analytical Results for PAHs*  
Table 6 *Summary of Soil Analytical Results for Metals*  
Table 7 *Summary of Soil Analytical Results for Volatile and Extractable Petroleum Hydrocarbons*  
Table 8 *Summary of Groundwater Analytical Results for TPH and BTEX*  
Table 9a *Summary of Groundwater Analytical Results for VOCs*  
Table 9b *Summary of Groundwater Analytical Results for Other VOCs*  
Table 10 *Summary of Groundwater Analytical Results for PAHs*  
Table 11 *Summary of Groundwater Analytical Results for Metals*

## APPENDICES

- Appendix A *Boring Logs*  
Appendix B *Laboratory Analytical Reports*  
Appendix C *Soil Disposal Documentation*



## ABBREVIATIONS AND ACRONYMS

ARARs	applicable or relevant and appropriate requirements
bgs	below ground surface
Blymyer	Blymyer Engineers, Inc.
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	cleanup action plan
COCs	constituents of concern
Consolidated Freightways	Consolidated Freightways Inc.
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
CSO	combined sewer outfall
DRO	total petroleum hydrocarbons as diesel-range organics
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EPH/VPH	extractible petroleum hydrocarbons/volatile petroleum hydrocarbons
Farallon	Farallon Consulting, L.L.C.
2015 Phase I ESA	<i>Environmental Due Diligence Report, 6050 East Marginal Way South, Seattle, Washington</i> dated May 29, 2015, prepared by Farallon Consulting, L.L.C.
FFS	Focused Feasibility Study
Golder	Golder Associates Inc.
GPR	ground-penetrating radar
GRO	total petroleum hydrocarbons as gasoline-range organics
GTI	Groundwater Technology, Inc.
HASP	Health and Safety Plan
LDW	Lower Duwamish Waterway
mg/kg	milligrams per kilogram
µg/l	micrograms per liter
MTCA	Washington State Model Toxics Control Act Cleanup Regulation
NFA	No Further Action
ORO	total petroleum hydrocarbons as oil-range organics
PAHs	polycyclic aromatic hydrocarbons



PCBs	polychlorinated biphenyls
2003 Phase I ESA	<i>Phase I Environmental Site Assessment for Consolidated Freightways, 6050 East Marginal Way South, Seattle, Washington 98108</i> dated January 20, 2003, prepared by Phase One Inc.
PID	photoionization detector
Property	the property at 6050 East Marginal Way South in Seattle, King County, Washington
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RI	Remedial Investigation
RI/FFS/CAP Report	<i>Draft Remedial Investigation, Focused Feasibility Study, and Cleanup Action Plan, 6050 East Marginal Way South Property, Seattle, Washington</i> dated December 16, 2015 prepared by Farallon Consulting, L.L.C. (this report)
TEE	Terrestrial Ecological Evaluation
TPH	total petroleum hydrocarbons
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code



## 1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this Remedial Investigation, Focused Feasibility Study, and Cleanup Action Plan (RI/FFS/CAP Report) on behalf of Prologis, Inc. for the property at 6050 East Marginal Way South in Seattle, Washington (herein referred to as the Property) (Figure 1). This RI/FFS/CAP Report was prepared in accordance with the Washington State Model Toxics Control Act Cleanup Regulation (MTCA), as set forth in Chapter 173-340 of the Washington Administrative Code (WAC 173-340). The “Site,” as defined under MTCA, is confined within the boundaries of the Property where petroleum hydrocarbons have come to be located at concentrations exceeding applicable regulatory cleanup levels. Concentrations of vinyl chloride in groundwater from an up-gradient source off the Property have migrated onto the Site.

This RI/FFS/CAP Report provides sufficient information to support implementation of a cleanup action at the Property that will be conducted in conjunction with Property redevelopment as a truck transport warehouse and logistics facility. The Remedial Investigation (RI) and Focused Feasibility Study (FFS) portions of this RI/FFS/CAP Report summarize the results from the remedial investigation conducted at the Property, and presents the conclusions from the focused feasibility study conducted to evaluate technically feasible cleanup alternatives for the affected media on the Property; the Cleanup Action Plan (CAP) portion of this RI/FFS/CAP Report presents the scope of work planned for implementing the selected cleanup approach described in the FFS portion.

In February 2000, the Property was enrolled in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) as Consolidated Freightways Seattle, and was assigned VCP Project No. NW0410. Enrollment in the VCP was terminated in May 2007. A request for re-enrollment in the VCP will be made with submittal of this RI/FFS/CAP Report to Ecology. Other Ecology identification numbers applicable to the Property include: Facility Site No. 54757868, Cleanup Site No. 6262, and Leaking Underground Storage Tank No. 1274.

Consolidated Freightways Inc. (Consolidated Freightways) was a former tenant that operated a truck transport and motor freight facility on the Property from approximately 1960 to 2003. Eleven known underground storage tanks (USTs) were used by Consolidated Freightways to store various petroleum products on the Property. Releases of petroleum hydrocarbons from several of the UST systems have been evaluated and confirmed by subsurface investigations conducted on the Property between 1988 and 2014.

The remedial investigation conducted by Farallon and others at the Property has delineated the nature and approximate extent of the contamination in soil and groundwater at the Property at concentrations exceeding MTCA Method A cleanup levels. Concentrations of total petroleum hydrocarbons (TPH) as diesel-range organics (DRO), as oil-range organics (ORO), and as gasoline-range organics (GRO); and benzene, toluene, ethylbenzene, and xylenes (BTEX) exceed MTCA cleanup levels in soil on the Property. Concentrations of DRO, ORO, GRO, benzene, naphthalenes, and vinyl chloride (collectively referred to herein as the constituents of concern



[COCs]) exceed MTCA cleanup levels in groundwater. The source of the petroleum hydrocarbons on the Property is historical trucking facility operations. Vinyl chloride in groundwater is from the regional vinyl chloride plume associated with historical releases from the Capital Industries facilities at 5801 Third Avenue South.

A cleanup action will be conducted during construction of two new two-story warehouse and office structures, with driveways, parking, and landscaping that will cover the entire Property. The new construction will require extensive reconfiguration of existing surface features at the Property. Therefore, the cleanup action to remove concentrations of petroleum hydrocarbons in soil exceeding MTCA cleanup levels and to eliminate the risk of vapor intrusion from COCs within the Property boundaries will be implemented concurrently with redevelopment activities.

The cleanup actions presented in the CAP portion of this RI/FFS/CAP Report will be performed in accordance with MTCA with the technical assistance of Ecology under the VCP. The cleanup actions will be substantially equivalent to remedial actions conducted or supervised by Ecology, consistent with WAC 173-340-545(2). The cleanup actions will meet the threshold requirements of WAC 173-340-360, including protection of human health and the environment, compliance with cleanup standards, and compliance with applicable state and federal laws.

## 1.1 OBJECTIVES

The purpose of the RI/FFS/CAP Report is to: summarize the results from subsurface investigations conducted at the Property by Farallon and others; evaluate and select a cleanup action under WAC 173-340-350 through WAC 173-340-390; and identify the steps required to implement the cleanup action. The RI/FFS/CAP Report describes the selected cleanup action to clean up soil and groundwater at the Property with concentrations of COCs exceeding MTCA cleanup levels.

The objective of the cleanup action is to meet Ecology requirements for a written determination issued by Ecology stating that no further remedial action is necessary at the Property (i.e., a Property-specific No Further Action [NFA] determination).

The purpose of the remedial investigation was to collect and evaluate sufficient information to support the development and evaluation of technically feasible cleanup alternatives in accordance with WAC 173-340-360 through 173-340-390. The remedial investigation was based on subsurface investigations completed by Farallon and others that provided sufficient data for evaluation and selection of a technically feasible cleanup action.

The purpose of the focused feasibility study was to develop and evaluate cleanup action alternatives to facilitate selection of a final cleanup action at a Property in accordance with WAC 173-340-350(8). The focused feasibility study focused on a remediation technology appropriate and applicable for implementation during Property redevelopment in accordance with redevelopment plans and applicable MTCA regulations.





The purpose of the CAP portion of the RI/FFS/CAP Report was to present the scope of work for the selected cleanup action described in the RI/FFS portion to protect human health and the environment and to meet MTCA requirements for a Property-specific NFA determination for the Property. The CAP has been prepared in accordance with the requirements of WAC 173-340-380(1).

## 1.2 ORGANIZATION

This RI/FFS/CAP Report includes the following information:

- **Section 2—Property Background** provides a description of the Property location and local land use, a summary of historical Property uses, and a description of the local geology and hydrology at the Property.
- **Section 3—Remedial Investigation** presents a summary of the subsurface investigations and interim cleanup actions completed at the Property, and provides a summary of confirmed source areas and the extent of COCs at the Property.
- **Section 4—Conceptual Site Model** provides a summary of the conceptual site model derived from the results from the remedial investigation conducted at the Property, including identification of applicable or relevant and appropriate requirements (ARARs), COCs, and media of concern; selection of cleanup standards and points of compliance; a discussion concerning the Terrestrial Ecological Evaluation (TEE), and the fate and transport characteristics of the COCs.
- **Section 5—Focused Feasibility Study** provides a summary of the results from the focused feasibility study, and identifies the cleanup action approach recommended for implementation at the Property and the rationale for its selection.
- **Section 6—Cleanup Action Plan** presents the CAP for the selected cleanup action, and describes the activities and processes that will be implemented during the cleanup action.
- **Section 7—Documentation Requirements** describes the requirements for documentation of field activities and health and safety issues during the cleanup action, and discusses the Closure Report, which will be prepared to describe and summarize the cleanup action.
- **Section 8—Bibliography** provides a listing of the references and source materials used in preparing the RI/FFS/CAP Report.
- **Section 9—Limitations** provides Farallon’s standard limitations.

Information supporting this RI/FFS/CAP Report is provided in accompanying Figures 1 through 9, Tables 1 through 11, and Appendices A through C.



## **2.0 PROPERTY BACKGROUND**

This section provides a description of the Property location, land use, and zoning; a summary of historical uses of the Property; and a description of the local geology and hydrology.

### **2.1 PROPERTY DESCRIPTION**

The Property is located at 6050 East Marginal Way South in Seattle, King County, Washington, east of the intersection of East Marginal Way and State Route 509 (Figure 1). The Property consists of 13.58 acres of land at approximate Latitude North 47.547044 and Longitude West 122.33185 on King County Tax Parcel No. 536720-4646. The Property and surrounding vicinity are zoned Industrial General 2 Unlimited 85, which includes heavy and general manufacturing, and commercial, transportation, utility, salvage, and recycling services.

The Property was developed as part of a military barracks-type facility in 1943, which was no longer present by 1956 (Farallon 2015). Two structures referred to as the Transfer Dock Building and the Shop Building were present on the Property by 1958, and were used by Consolidated Freightways as a trucking terminal from at least 1960 until sometime prior to 2003. The buildings were demolished in 2005/2006. Locations of the former buildings and other features are depicted on Figure 2. The Property currently is covered entirely by asphaltic pavement and concrete surfaces. No aboveground structures are present.

### **2.2 GEOLOGY AND HYDROLOGY**

A summary of the geology and hydrology at the Property is provided below.

#### **2.2.1 Geology**

The Puget Sound region is underlain by Quaternary sediments deposited by and during a number of glacial advances and retreats that created the existing subsurface conditions. Regional sediments consist primarily of interlayered and/or sequential deposits of alluvial clays, silts, and sands that typically are situated over deposits of glacial till consisting of silty sand to sandy silt with gravel. Outwash sediments consisting of sands, silts, clays, and gravels were deposited by rivers, streams, and post-glacial lakes during the glacial retreats. With the exception of the most-recent recessional deposits, the outwash sediments have been over-consolidated by the overriding ice sheets (Galster and Laprade 1991).

The subsurface stratigraphy encountered in borings advanced on the Property consists generally of silty sand and gravel fill 2 to 3 feet thick overlying loose to compact sand to silty sand, including an intermittent/discontinuous clayey to sandy silt unit 1 to 6 feet thick, to depths of 24 feet below ground surface (bgs), the maximum depth explored. Boring logs are provided in Appendix A.



### **2.2.2 Hydrology**

The depth to groundwater as measured in groundwater monitoring wells on the Property varied between 6.25 and 9.44 feet bgs (Table 1). Daily groundwater level fluctuations up to 0.5 foot due to tidal cycle influences have been observed at the Property (Blymyer 1988b). Inferred groundwater flow direction in the unconfined aquifer is west to southwest based on groundwater monitoring conducted between 1988 and 2003.

The nearest surface water body is the Lower Duwamish Waterway (LDW). Slip 1 of the LDW is approximately 350 feet west of the Property, and the main channel of the LDW is approximately 1,000 feet to the west (Figure 1). Stormwater runoff collects in a network of catch basins and conveyance piping on the Property, and discharges to the combined sewer outfall (CSO) beneath South Michigan Street to the south, where stormwater from the Property combines with stormwater from other properties in the area (Farallon 2015). The CSO discharges to the City of Seattle wastewater treatment plant for treatment prior to discharge to Puget Sound.



## 3.0 REMEDIAL INVESTIGATION

This section summarizes the results from subsurface investigations and interim cleanup actions conducted between 1988 and 2014.

### 3.1 INVESTIGATIONS

Provided below is a summary of the analytical results for soil and groundwater samples collected during subsurface investigations, UST decommissioning activities, and remedial actions conducted at the Property by Farallon and others.

#### 3.1.1 1988 Contamination Investigation—Blymyer Engineers, Inc.

Five USTs were decommissioned by removal under the direction of Blymyer Engineers, Inc. (Blymyer) (1988b) during two phases of excavation conducted in April and June 1988. An 8,000- and a 10,000-gallon diesel fuel UST and a 5,000-gallon motor oil UST were decommissioned in April 1988; and two 3,000-gallon waste oil USTs were decommissioned in June 1988. All five USTs were removed from the same tank hold adjacent to the west side of the Shop Building (Figures 2 and 3). Approximately 185 cubic yards of contaminated soil was removed from the excavation for ex-situ treatment on the Property. DRO and ORO were detected at concentrations exceeding MTCA Method A cleanup levels in confirmational soil samples collected from the western and southern portions of the excavation (Figure 4; Table 2). This soil was left in-place, and the excavation was backfilled with clean imported soil.

Confirmational soil samples collected proximate to the waste oil USTs (located in the southern part of the UST hold) were analyzed additionally for purgeable halocarbons and Resource Conservation and Recovery Act (RCRA) metals (Tables 3b and 6). Halocarbons were not detected at concentrations exceeding laboratory detection limits. The metals either were not detected at concentrations exceeding the laboratory detection limits or were detected at concentrations less than MTCA Method A cleanup levels.

Monitoring wells MW-1 and MW-2A through MW-5 were installed around the tank excavation area in late June 1988 to collect groundwater samples for analysis for DRO and ORO (Figure 3). The inferred groundwater flow directions based on groundwater levels measured in July 1988 were west to southwest, with a distinct tidal influence. The results from groundwater sampling and analyses are discussed in Section 3.1.2, 1988 – 1989 Groundwater Monitoring Results. Well installation logs are provided in Appendix A.

Although not discussed in the Blymyer (1988b) report, Blymyer (1988a) communications with Ecology in April 1988 indicated that a 10,000-gallon gasoline UST northwest of the former Office Building on the Property was decommissioned by removal concurrently with removal of the diesel fuel and motor oil USTs. GRO was detected at a concentration exceeding the MTCA Method A cleanup level in one of the confirmational soil samples collected from the gasoline UST excavation (sample T-9, Figure 8; Table 2). BTEX compounds were not detected in the confirmational soil



samples at concentrations either exceeding the laboratory detection limits or exceeding the MTCA Method A cleanup level. Approximately 60 to 100 cubic yards of GRO-contaminated soil from the gasoline UST hold was combined with DRO- and ORO-contaminated soil removed from the diesel fuel/motor oil/waste oil UST excavation for treatment using aboveground enhanced biodegradation.

Groundwater Technology, Inc. (GTI) (1989a), under contract to Blymyer, constructed soil treatment piles in November 1988, with interior perforated piping and a vacuum blower to provide air flow. Nutrients were applied to the soil, and the soil piles were covered with plastic sheeting. The treatment piles were reconstructed in June 1989 to improve circulation. Periodic performance samples were collected through at least June 1989 (see “Soil Treatment Mound” sample results in Table 2). The final disposition and disposal of this soil is not known.

Laboratory reports for the soil and groundwater sample analyses discussed in this section are provided in Appendix B.

### **3.1.2 1988 – 1989 Groundwater Monitoring Results—Blymyer Engineers, Inc.**

Five groundwater sampling and monitoring events were conducted by GTI on behalf of Blymyer (1989a) from October 1988 to December 1989. The groundwater samples were analyzed for DRO only, with the exception of the groundwater samples collected on October 6, 1988, which were analyzed also for chromium and lead. DRO was not detected at concentrations exceeding the laboratory detection limits in any of the groundwater samples analyzed (Table 8), although the laboratory detection limits were greater than the MTCA Method A cleanup level for all analyses. Lead was detected at a concentration exceeding the MTCA Method A cleanup level in one groundwater sample collected from monitoring well MW-2A. Chromium or lead was not detected at a concentration exceeding laboratory detection limits in the other groundwater samples (Table 11), although the laboratory detection limits were greater than the MTCA Method A cleanup levels, as for the DRO results. The laboratory reports for the groundwater sample analyses are provided in Appendix B.

Ecology provided authorization to decommission the monitoring wells. Fluor Daniel GTI (1998) decommissioned the monitoring wells in-place in January 1990.

### **3.1.3 1997 Site Investigation-Shannon & Wilson, Inc.**

During UST product line integrity testing conducted in March 1997, a leak was detected in the pressurized product line that ran from the two 20,000-gallon diesel fuel USTs to the maintenance shop (Figure 3). The piping was exposed and partially replaced with new single-walled steel pipe. A second line test indicated another leak in the pressurized product line. After the second leak was repaired, the piping was re-tested and determined to be tight.

In August 1997, soil borings P-1 through P-10 were advanced using a direct-push rig under the oversight of Shannon & Wilson, Inc. (1997) (Figure 3). Two soil samples and one reconnaissance groundwater sample were collected from each boring for analysis for DRO. The soil and



groundwater analytical results are provided in Tables 2 and 8, respectively; soil analytical results are shown on Figure 4.

DRO was detected at concentrations exceeding MTCA Method A cleanup levels in soil and reconnaissance groundwater samples collected from boring P-2, located near the product line DRO release adjacent to the northern end of the Shop Building, and from boring P-4, located adjacent to the diesel fuel UST hold northwest of the Shop Building. During sample collection, hydrocarbon odors and sheen were observed in soil samples collected from borings P-2, P-4, P-5, and P-7. A slight sheen was observed on the groundwater sample collected from boring P-2.

During the investigation, groundwater was encountered at a depth of approximately 7.5 feet bgs. Four temporary piezometers were installed to evaluate the direction of groundwater flow, which was inferred to be west to northwest (Shannon & Wilson, Inc. 1997).

#### **3.1.4 1998 Site Investigation and Risk Assessment—Golder Associates Inc.**

Petroleum-impacted soil encountered in the area of the diesel product line release proximate to boring P-2 was excavated and stockpiled on the Property in March 1998 during installation of a new 20,000-gallon diesel fuel tank immediately north of the Shop Building (Figure 3). The impacted soil was removed from the Property in November 1998 for treatment by thermal desorption at the facilities of TPS Technologies Inc. in Tacoma, Washington. Soil disposal documentation is provided in Appendix C.

In April 1998, Golder Associates Inc. (Golder) (1998a) conducted a site investigation and risk assessment for the Property. The site investigation included soil sampling along the diesel product line trench, installation of groundwater monitoring wells MW-1 through MW-3 and product recovery wells RW-1 and RW-2 (Figure 3), and analysis of collected soil and groundwater samples for DRO, ORO, GRO, BTEX, and polycyclic aromatic hydrocarbons (PAHs). Selected soil samples were analyzed also for extractable petroleum hydrocarbons/ volatile petroleum hydrocarbons (EPH/VPH).

The highest concentrations of DRO, BTEX, PAHs, and EPH/VPH in soil were detected in the vicinity of wells RW-1 and RW-2 and in trench sample CF-T1 (Figures 3 and 4; Tables 2, 5, and 7). These areas were near the former UST hold northwest of the Shop Building and the diesel fuel release from the product line, respectively. PAH compounds were detected at concentrations less than MTCA cleanup levels in some soil samples collected from wells MW-2, RW-1, and RW-2 (Table 5); naphthalene was detected at concentrations exceeding the MTCA Method A cleanup level in soil samples collected from wells RW-1 and RW-2.

Petroleum hydrocarbons were not detected at concentrations exceeding MTCA Method A cleanup levels in soil samples collected at a depth less than approximately 2 feet bgs in the diesel fuel product line trench, with exception of sample CF-T1, collected in the area with visible petroleum staining and with an elevated EPH/VPH concentration (Table 7). No groundwater samples were collected in the product line trench area.



DRO and ORO were detected at concentrations exceeding MTCA Method A cleanup levels in groundwater samples collected from monitoring wells MW-2, MW-3, and well RW-2. DRO was detected at a concentration exceeding the MTCA Method A cleanup level in the groundwater sample collected from monitoring well RW-1. Benzene was detected at a concentration exceeding the MTCA Method A cleanup level in the groundwater sample collected from well RW-2. The only PAH detected at a concentration exceeding the MTCA Method A or B cleanup level was 2-methylnaphthalene, detected in the groundwater sample collected from well RW-2. Petroleum hydrocarbons were not detected at concentrations exceeding MTCA Method A cleanup levels in groundwater samples collected from up-gradient monitoring well MW-1. The petroleum hydrocarbon and PAH analytical results for groundwater are provided in Tables 8 and 10, respectively.

The well installation logs for monitoring wells MW-1 through MW-5 and wells RW-1 and RW-2 are provided in Appendix A. The laboratory reports for the groundwater sample analyses discussed above are provided in Appendix B.

A risk assessment was conducted by Golder (1998a) to determine whether petroleum hydrocarbons in soil and/or groundwater at the Property posed a risk to human health. The results from the risk assessment were used to develop Property-specific risk-based cleanup levels for petroleum hydrocarbons in soil.

Golder (1998a) concluded that petroleum hydrocarbons in soil at the Property did not exceed the risk-based screening levels calculated in accordance with the Ecology TPH Interim Policy. The highest concentrations of petroleum hydrocarbons in soil and groundwater were detected proximate to the two 20,000-gallon diesel fuel USTs and the diesel product line release discovered in 1997. Free product (liquid hydrocarbons) was not observed in soil or groundwater. Concentrations of DRO and ORO exceeded MTCA Method A cleanup levels in groundwater. Benzene was detected at a concentration exceeding the MTCA Method A cleanup level in the groundwater sample collected from well RW-2; toluene, ethylbenzene, and xylenes were detected at concentrations less than MTCA Method A cleanup levels.

### **3.1.5 1998 Permanent UST Decommissioning and Closure—Fluor Daniel GTI**

In July 1998, the two 20,000-gallon diesel fuel USTs northwest of the Shop Building were decommissioned by removal by Joe Hall Construction. Fluor Daniel GTI was contracted by Joe Hall Construction to provide environmental oversight and site assessment sampling during removal of the two USTs.

Fluor Daniel GTI (1998) observed pitting along the bottoms and western ends of the steel USTs. Concentrations of DRO were detected in soil and groundwater in the UST excavation, and contaminated soil subsequently was removed from the UST excavation. However, DRO was detected at concentrations exceeding the MTCA Method A cleanup level in the confirmational soil samples collected from the edges of the excavation along the northern and eastern sidewalls. Recovery well RW-1 was damaged and removed.



Contaminated soil excavated during removal of the USTs was stockpiled with contaminated soil excavated during preparations for the installation of the new 20,000-gallon diesel fuel UST north of the Shop Building. Approximately 800 tons of stockpiled soil was transported to TPS Technologies Inc. in Tacoma, Washington in November 1998 for thermal desorption (Golder 1998b). Disposal documentation is provided in Appendix C.

Following decommissioning of the two 20,000-gallon diesel fuel USTs, residual contaminated soil remained proximate to the former UST hold. The primary data gap was the down-gradient extent of the petroleum hydrocarbon plume in groundwater.

### **3.1.6 2000 Groundwater Investigation and Groundwater Monitoring Work Plan—Golder Associates Inc.**

On August 17 and 18, 1999, Golder (2000a) conducted a groundwater investigation at the Property that included collection of groundwater samples from the existing on-site monitoring wells and collection of reconnaissance groundwater samples from borings GP-1 through GP-13, located down-gradient of the TPH source areas, using direct-push sampling techniques (Figure 6). The objectives of the groundwater investigation were to:

- Define the approximate extent of the TPH plume identified during previous groundwater sampling events at the Property;
- Evaluate the TPH plume flow path to support installation of additional down-gradient monitoring wells; and
- Determine whether the TPH plume was migrating off the Property.

Groundwater samples collected from the four monitoring well locations were analyzed for DRO, ORO, and BTEX. Reconnaissance groundwater samples collected from the 13 direct-push locations were analyzed for DRO and ORO. The groundwater analytical results are presented in Table 8 and are shown on Figure 6. The laboratory reports for the groundwater sample analyses are provided in Appendix B. Figure 6 shows the estimated extent of the TPH groundwater plume where DRO and/or ORO concentrations exceeded MTCA Method A cleanup levels in August 1999.

The results of the groundwater investigation are summarized as follows:

- Leaking USTs and piping, considered the source of TPH, were removed, and contaminated soil was excavated and disposed of;
- Concentrations of TPH exceeding MTCA Method A cleanup levels remained in soil and groundwater within the Property boundaries;
- DRO was the primary TPH contaminant in groundwater;
- The highest concentration of DRO in groundwater was detected proximate to the former 20,000-gallon diesel fuel USTs;





- Benzene was detected at a concentration exceeding the MTCA Method A cleanup level in groundwater proximate to well RW-2;
- The TPH plume extended from the former UST and product line source areas toward the west and southwest; and
- Concentrations of DRO and ORO exceeding MTCA Method A cleanup levels in groundwater did not appear to extend beyond the western Property boundary.

### **3.1.7 2001 Results from Additional Groundwater and Soil Investigations—Golder Associates Inc.**

Golder (2000b) prepared a strategy to provide additional data requested by Ecology (2000) for consideration of a No Further Action determination for the Property. The strategy included installation of three additional groundwater monitoring wells, soil sampling in selected portions of the Property to further delineate areas of residual soil contamination, assessment of relevant exposure pathways associated with the residual soil contamination, and addition of analyses for volatile organic compounds (VOCs) for samples collected from the groundwater monitoring wells.

Monitoring wells MW-4, MW-5, and MW-6 were installed along the down-gradient Property boundary in January 2001 to assess the westward limit of the TPH plume on the Property (Figure 7). Logs for the monitoring wells are provided in Appendix A. On January 17, 2001, approximately 1 week following installation of the monitoring wells, groundwater samples were collected from monitoring wells MW-1 through MW-6 for analysis for DRO, ORO, VOCs, and PAHs.

The analytical results for the groundwater samples collected from the monitoring wells are summarized in Tables 8 through 10. The laboratory analytical reports are provided in Appendix B. The DRO and ORO analytical results for the groundwater samples are shown on Figure 7 and summarized below:

- DRO and ORO were detected at concentrations exceeding MTCA Method A cleanup levels in monitoring wells MW-2 and MW-3, which was consistent with analytical results from sampling events conducted in 1998 and 1999 (Table 8).
- Analytical results for groundwater samples collected from monitoring wells MW-4 through MW-6 confirmed that DRO and ORO were not migrating off the Property at concentrations exceeding MTCA Method A cleanup levels (Figure 7).
- Several PAH compounds were detected in the groundwater sample collected from monitoring well MW-2, but at concentrations less than MTCA Method A cleanup levels. Carcinogenic PAHs (cPAHs) were not detected at concentrations exceeding laboratory reporting limits in any of the groundwater samples. These results were consistent with those from the groundwater sampling event conducted in 1998 (Golder 1998a) (Table 10).
- Various VOCs were detected in groundwater samples at concentrations less than MTCA cleanup levels (Tables 9a and 9b). Vinyl chloride was detected at concentrations exceeding



the MTCA Method A cleanup level in groundwater samples collected from monitoring wells MW-4 and MW-6 (Table 9a).

Additional soil data were requested by Ecology (2000) to delineate the nature and extent of contamination in soil and to assess whether the contamination in soil posed a risk via relevant exposure pathways. The soil investigation focused on the three areas where releases occurred in the past and where contamination had been detected. These three investigation areas are shown on Figure 3 and include:

- The UST excavation area west of the Shop Building where five USTs were removed in 1988;
- The product line release area adjoining the northern end of the Shop Building; and
- The UST excavation area northwest of the shop building where two 20,000-gallon diesel fuel USTs were removed in 1998.

Soil samples were collected from borings SP-1 through SP-13 using a direct-push rig. At each boring location, soil samples were collected from depth intervals of 2 to 5, 5 to 8, and 8 to 11 feet bgs. Selected soil samples were analyzed for DRO and ORO, and six additional samples (at least one sample from each of the three investigation areas) were analyzed for BTEX, PAHs, and EPH/VPH to assess exposure pathways. The soil analytical results are presented in Tables 2, 5, and 7; laboratory analytical reports are provided in Appendix B.

Golder (2001) concluded that the nature and extent of TPH in soil on the Property were defined and bound on all sides. The distribution of TPH in soil is consistent with sources of releases at the two UST excavation areas and in the product line release area. DRO and ORO were the only constituents distributed widely in soil at the Property.

Benzene and xylenes were detected at concentrations exceeding MTCA Method A cleanup levels in soil samples collected from borings SP-8 and SP-9 within approximately 10 to 15 feet of the former product line release (Table 2; Figure 4). These results were consistent with those for aromatic hydrocarbons detected in soil and groundwater at nearby well RW-2 (Golder 1998a and 2000a).

PAHs and cPAHs were detected in soil samples at concentrations less than MTCA Method A cleanup levels, with the exception of naphthalene, which was detected at concentrations exceeding the MTCA Method A cleanup level in samples collected from borings SP-6 and SP-8 near the product line release area. These results were consistent with PAH and cPAH analytical data previously reported by Golder (1998a).

The laboratory reports for the groundwater and soil sample analyses discussed above are provided in Appendix B.



### **3.1.8 2004 Phase II Investigation—Golder Associates Inc.**

Golder (2004) conducted a Phase II Investigation to evaluate the environmental concerns presented in the *Phase I Environmental Site Assessment for Consolidated Freightways, 6050 East Marginal Way South, Seattle, Washington* dated January 20, 2003 prepared by Phase One Inc. (2003) (2003 Phase I ESA). The environmental concerns identified in the Phase I ESA are discussed in the following sections.

#### **3.1.8.1 Groundwater Monitoring**

The Phase I ESA identified groundwater contamination as an environmental issue and recommended further groundwater monitoring using the existing monitoring wells until Ecology issues an NFA determination.

Golder (2004) conducted groundwater monitoring and sampling at monitoring wells MW-1 through MW-6 and well RW-2. Groundwater samples were analyzed for DRO, ORO, GRO, and VOCs.

DRO and ORO were not detected at concentrations exceeding laboratory reporting limits in groundwater samples collected from any of the monitoring wells. GRO was detected at a concentration exceeding the laboratory detection limit in the groundwater sample collected from well RW-2, but at a concentration less than the MTCA Method A cleanup level. GRO was not detected at a concentration exceeding the laboratory reporting limit in groundwater samples collected from any of the other monitoring wells.

Benzene was detected at a concentration exceeding the MTCA Method A cleanup level in the groundwater sample collected from well RW-2. Several petroleum-related VOCs were detected at concentrations exceeding laboratory detection limits in the groundwater sample collected from well RW-2, but at concentrations less than MTCA cleanup levels. No other VOCs were detected at concentrations exceeding laboratory detection limits in the groundwater samples collected from any other monitoring wells on the Property.

Vinyl chloride was detected at concentrations exceeding the MTCA Method A cleanup level in groundwater samples collected from monitoring wells MW-4 and MW-6 during groundwater sampling events conducted in January and June 2001. However, the laboratory detection limits for vinyl chloride were elevated for groundwater samples collected during the December 2003 sampling event, and detections of vinyl chloride may have been masked.

Groundwater flow direction was toward the west-southwest during this groundwater monitoring event. The groundwater flow direction was consistent with that determined during prior groundwater monitoring events. Groundwater elevation data for this sampling period and sampling events in January and June 2001 are presented in Table 1. Groundwater analytical results are presented in Tables 8, 9a, and 9b. TPH results and



groundwater elevation contours are shown on Figure 7. Analytical reports are provided in Appendix B.

### 3.1.8.2 Investigation Results

An oil-water separator (known as the “grease trap”) located adjacent to the northern end of the Shop Building, and an oil-water separator (known as the “sand trap”) and drainage trench associated with the former wash rack that adjoined the eastern side of the Shop Building were identified as potential sources of releases. The 2003 Phase I ESA recommended investigating subsurface conditions at the oil-water separators and drainage trench.

Because previous subsurface investigations evaluated soil and groundwater conditions in the area surrounding the grease trap, Golder (2004) did not conduct additional investigation in that area. Borings GP-6 through GP-8 were advanced on the eastern side of the Shop Building at the sand trap and drainage trench area. Soil and reconnaissance groundwater samples were collected for analysis for DRO, ORO, GRO, and VOCs.

DRO, GRO, or BTEX were not detected at concentrations exceeding laboratory reporting limits in the soil samples collected from borings GP-6 through GP-8. ORO was detected at a concentration exceeding the MTCA Method A cleanup level in the soil sample collected from boring GP-6. ORO was not detected at concentrations exceeding the laboratory reporting limit in the soil samples collected from borings GP-7 or GP-8. One or more VOCs were detected at concentrations exceeding laboratory detection limits but not exceeding MTCA Method B cleanup levels in the soil samples collected from each boring.

DRO, ORO, GRO, and BTEX were not detected at concentrations exceeding the laboratory reporting limits in the reconnaissance groundwater samples collected from borings GP-6 through GP-8. One or more VOCs were detected at concentrations less than MTCA Method B cleanup levels in the reconnaissance groundwater samples collected from borings GP-7 and GP-8. No other VOCs were detected at concentrations exceeding laboratory detection limits.

Soil analytical results are presented in Tables 2, 3a, and 3b. TPH results are shown on Figure 4. Groundwater analytical results are presented in Tables 8, 9a, and 9b. Analytical reports are provided in Appendix B.

### 3.1.8.3 UST Location Assessment

Two USTs with capacities of 500 and 5,000 gallons identified in historical documents for the Property were not accounted for and were suspected of remaining in-place on the Property. The 2003 Phase I ESA recommended conducting a geophysical survey and/or subsurface investigation to evaluate the potential presence of the USTs.



Golder (2004) identified a 10,000-gallon gasoline and a 5,000-gallon lube oil UST in the area north of the office building from 1958 building plans (Figures 2 and 8). This area had not been previously investigated. Golder (2004) therefore conducted the following activities:

- Performed a geophysical survey over the former UST area using magnetometer and ground-penetrating radar (GPR) methods;
- Advanced borings GP-1 through GP-5 by direct-push methods at the former UST area; and
- Collected soil and reconnaissance groundwater samples from borings GP-1 through GP-5 for analyses for DRO, ORO, GRO, and VOCs.

The geophysical investigation conducted north of the office building did not identify evidence of the presence of USTs in this area.

Borings GP-1 through GP-5 were advanced at the suspected UST locations shown on the 1958 building plans. DRO, GRO, or BTEX were not detected at concentrations exceeding laboratory reporting limits in the soil samples collected from borings GP-1 through GP-5. ORO was detected at a concentration less than the MTCA Method A cleanup level in the soil sample collected from boring GP-4 at a depth of 2 to 4 feet bgs. VOCs were detected at concentrations less than MTCA Method B cleanup levels in one or more of the soil samples collected from each boring.

DRO, ORO, GRO, BTEX, or other VOCs were not detected at concentrations exceeding laboratory reporting limits in the reconnaissance groundwater samples collected from borings GP-1 through GP-5.

Soil analytical results are presented in Tables 2, 3a, and 3b. Groundwater analytical results are presented in Tables 8, 9a, and 9b. Groundwater analytical results for TPH are shown on Figure 8. Analytical reports are provided in Appendix B.

### **3.1.9 2014 Phase II Subsurface Investigation—Farallon Consulting, L.L.C.**

Farallon conducted a Phase II Subsurface Investigation to evaluate the recognized environmental conditions identified in the Phase I ESA report prepared for the Property by Farallon (2015) (2015 Phase I ESA). The results of the Phase II Subsurface Investigation were report in the 2015 Phase I ESA. The recognized environmental conditions identified were:

- The known release of hazardous substances on the Property from historical fuel and waste-oil USTs; and
- The potential migration of hazardous substances to the Property from current and historical operations on properties adjacent and proximate to the Property.



The purposes of the Phase II Subsurface Investigation conducted by Farallon were to assess:

- The status of several USTs identified in the 2015 Phase I ESA as a data gap (UST Survey); and
- The extent of known releases of hazardous substances beneath the Property, and to screen other portions of the Property for potential releases associated with historical on- or off-Property activities (Subsurface Soil and Groundwater Analysis).

The UST Survey and Subsurface Soil and Groundwater Analysis activities are discussed in the following sections.

#### 3.1.9.1 **Underground Storage Tank Survey**

The scope of work for the UST Survey consisted of using GPR proximate to the suspected UST locations. The UST Survey did not identify evidence of USTs present at the suspected location of the potential 500-gallon diesel fuel UST near the former wash rack on the eastern side of the former Shop Building, or at the suspected location of the former diesel fuel/heating oil UST southeast of the former office building (Figure 2).

The 20,000-gallon diesel fuel UST was identified north of the former Shop Building (Figure 2). Insufficient information was available to justify investigation of the potential in-place abandonment of a 10,000-gallon UST on the Property. No evidence of the 10,000-gallon UST was located during the GPR survey for other USTs or during the Subsurface Soil and Groundwater Analysis field work performed by Farallon.

UST information from historical research and the findings of the UST Survey at the Property is summarized below by area.

##### **USTs formerly west of the former Shop Building (Figure 2) included:**

- A 10,000-gallon diesel fuel UST installed in 1958 and removed in 1988;
- An 8,000-gallon fuel oil UST installed in 1958 and removed in 1988;
- A 5,000-gallon lube oil UST installed in 1958 and removed in 1988; and
- Two 3,000-gallon waste oil USTs installed in 1958 and removed in 1988.

##### **USTs formerly northwest of the former Shop Building (Figure 2) included:**

- Two 20,000-gallon diesel fuel USTs installed in 1981 and removed in 1998.

##### **USTs in the former northwest UST area (Figure 2) included:**

- A 10,000-gallon gasoline UST installed prior to 1958, removal date unknown, but assumed to be 1988 based on a Blymyer (1988a) memorandum; and



- A 5,000-gallon lube oil UST installed prior to 1958, removal date unknown, but assumed to have been concurrent with the removal of the 10,000-gallon gasoline UST.

**Other former USTs included:**

- A 1,000-gallon heating oil UST southeast of the former office building, installation and removal dates unknown; and
- A 500-gallon diesel fuel UST east of former Shop Building (beneath the former wash rack area), installation and removal date unknown.

**Current UST north of former Shop Building:**

- A 20,000-gallon diesel fuel UST installed in 1998, remains present on the Property.

**3.1.9.2 Subsurface Soil and Groundwater Analysis**

Sufficient information was collected to address the data gaps and investigate the areas of suspected contamination that had not been assessed in previous investigations. The analytical results for soil and groundwater samples were compared to MTCA Method A cleanup levels, or to MTCA Method B cleanup levels if there was no Method A cleanup level.

During previous subsurface investigations at the Property, DRO had been detected at concentrations exceeding the MTCA Method A cleanup level in soil and groundwater samples collected at the former UST areas and the former product line release area near the former Shop Building. Based on Farallon's review, additional assessment of soil proximate to the former UST areas was not deemed warranted because of the significant set of existing analytical data from prior assessments in these areas. Soil samples collected from this area were analyzed for polychlorinated biphenyl compounds (PCBs). The former product line release area was further assessed to the south. Contamination in soil or groundwater was not detected in the former northwest UST area (Figure 2) during previous investigations; therefore, further assessment was not warranted.

Farallon collected two soil samples and reconnaissance groundwater samples from borings F-1 through F-8, and groundwater samples from existing wells RW-2, MW-2, MW-3, and MW-4 for laboratory analysis. After review of the analytical results for the prior samples, soil and reconnaissance groundwater samples were collected from borings F-9 through F-18, and groundwater samples were collected from existing monitoring wells MW-5 and MW-6 for laboratory analysis to further characterize areas of known or potential releases.

Soil borings were advanced using a direct-push rig; soil, groundwater, and reconnaissance groundwater samples were collected using industry-standard methodologies. Soil and reconnaissance groundwater samples were selectively analyzed for DRO, GRO, ORO, VOCs, PCBs, and PAHs. Soil sample depths were selected based on field observations for



potential contamination. Groundwater was encountered during the investigation at depths of between approximately 7 and 10 feet bgs. Soil boring and monitoring well locations are shown on Figures 3, 4, 6, and 8.

Analytical results are summarized in Tables 2, 3a, 4, 8, 9, and 10, and below by area:

**Proximate to the Former Heating Oil UST:**

- GRO was detected at a concentration exceeding the MTCA Method A cleanup level in the soil sample collected from boring F-5 at a depth of 6.7 feet bgs (Figure 8; Table 2). GRO was not detected at a concentration exceeding the laboratory reporting limit in the reconnaissance groundwater sample collected from boring F-5 (Table 8).
- DRO was detected at a concentration exceeding the laboratory reporting limit but less than the MTCA Method A cleanup level in both the soil and reconnaissance groundwater samples collected from boring F-5.
- GRO or DRO were not detected in soil or reconnaissance groundwater samples collected from borings F-9 through F-12, which surround boring F-5, indicating that residual GRO impact in the former heating oil UST area is bounded on all sides, and therefore is very limited.

**Proximate to the Existing 20,000-Gallon Diesel Fuel UST:**

- GRO was detected at a concentration exceeding the MTCA Method A cleanup level in the soil sample collected from boring F-8 at a depth of 5 feet bgs (Figure 4; Table 2) proximate to the western end of the existing 20,000-gallon diesel fuel UST.
- DRO and ORO were detected in the reconnaissance groundwater sample collected from boring F-8 (Table 8) at concentrations exceeding the MTCA Method A cleanup level.
- GRO or ORO were not detected at concentrations exceeding laboratory detection limits in soil samples collected from soil borings F-15 through F-17, advanced proximate to the other three sides of the UST.
- DRO was detected at a concentration less than the MTCA Method A cleanup level in the soil sample collected from boring F-17.
- The cumulative analytical results suggest that petroleum impact in this area is related to the known release from the nearby product line, and not a release from the existing UST.

**Proximate to the Former Product Line Release Area:**

- DRO was detected at a concentration exceeding the MTCA Method A cleanup level in the soil sample collected from boring F-14 (Figure 4; Table 2), located proximate to the former product line release area.





- DRO was not detected at a concentration exceeding the MTCA Method A cleanup level in the soil sample collected from boring F-13, advanced west of boring F-14.

#### **Proximate to the Former Shop Building UST Areas:**

- PCBs were not detected at a concentration exceeding the laboratory reporting limit in the soil sample collected from boring F-18, located within the area of residual impact from the former UST hold that contained five USTs for storage of diesel fuel, motor oil, and waste oil.
- DRO was detected at a concentration exceeding the MTCA Method A cleanup level in the soil sample collected from boring F-18, which is consistent with historical data.
- DRO and ORO were detected at concentrations exceeding MTCA Method A cleanup levels in groundwater samples collected from wells MW-2, MW-3, and RW-2, proximate to the former Shop Building UST areas (Table 8).
- The PAH compound 2-methylnaphthalene was detected at a concentration exceeding the MTCA Method B cleanup level in the groundwater sample collected from well RW-2 (Table 10).
- The groundwater analytical results for wells MW-4 through MW-6 suggest that petroleum constituents at concentrations exceeding MTCA Method A or Method B cleanup levels are not migrating off the Property.

#### **Potential Migration of Chemicals from Off-Property Sources onto the Property:**

- Vinyl chloride was detected at concentrations of 0.23 and 0.3 micrograms per liter ( $\mu\text{g/l}$ ) in groundwater samples collected from monitoring wells MW-2 and MW-4 (Table 9a), respectively, which exceeded the MTCA Method A cleanup level and was less than the Ecology screening level of 0.35  $\mu\text{g/l}$  for vapor intrusion.

#### **Potential Presence of PCBs in Soil:**

- PCBs were not detected at concentrations exceeding laboratory reporting limits in soil samples screened for PCBs.

The laboratory reports for the soil and groundwater sample analyses discussed above are provided in Appendix B.

Petroleum hydrocarbons were detected at concentrations exceeding MTCA Method A and/or Method B cleanup levels in soil and groundwater proximate to one or more of the following: 1) the former heating oil UST; 2) the former Shop building UST areas; and 3) the former product line release area.

The petroleum hydrocarbons detected in soil west of the current 20,000-gallon diesel fuel UST appear to be related to the former product line release area. The petroleum hydrocarbons detected in soil and groundwater proximate to the former heating oil UST is



bound, and appear very limited in extent. Groundwater sample analytical data suggest that petroleum constituents at concentrations exceeding MTCA Method A and/or Method B cleanup levels are not migrating off the Property.

The regional VOC plume associated with releases at the Capital Industries, Inc. property at 5801 3<sup>rd</sup> Avenue South is present in the Property vicinity. The presence of vinyl chloride detected in groundwater samples collected from wells MW-4 and MW-6 on the Property is associated with the regional VOC plume.

No other compounds were detected at concentrations exceeding MTCA cleanup levels during the Subsurface Soil and Groundwater Analysis.

### 3.2 SOURCE AND EXTENT OF CONSTITUENTS OF CONCERN

Based on analytical results from the investigations conducted at the Property, the sources of COCs to soil and groundwater at the Property are releases from:

- USTs that were located in the UST excavation area west of the Shop Building and were removed in 1988;
- The product line in the area adjoining the northern end of the Shop Building; and
- Two 20,000-gallon diesel fuel USTs that were located in the UST excavation area northwest of the Shop Building and were removed in 1998.

The approximate extent of TPH concentrations in soil exceeding MTCA Method A cleanup levels from these sources is shown on Figure 4. The approximate extent of the groundwater plume with TPH concentrations exceeding MTCA Method A cleanup levels down-gradient of these sources is shown on Figure 6.

Other potential sources of COCs to soil include:

- The former gasoline and lube oil UST northwest of the former office building where residual GRO may be present in a very limited area of shallow soil (Figure 8);
- The former heating oil UST southeast of the former office building where residual GRO was detected in a very limited area of soil (Figure 8); and
- Adjacent to the former sand trap oil-water separator north of the former wash rack where elevated concentrations of DRO were detected (Figure 4).

The results from the remedial investigation have sufficiently delineated the nature and extent of COCs in soil and groundwater at the Property for evaluation and selection of a cleanup action under a feasibility study.



## 4.0 CONCEPTUAL SITE MODEL

This section provides a summary of the conceptual site model derived from the results of the remedial investigation conducted at the Property. Included in this section is a discussion of the ARARs; COCs; media of concern; selected cleanup standards, including cleanup levels and points of compliance; TEE; and contaminant fate and transport. The conceptual site model is used as a basis for developing technically feasible cleanup alternatives and selecting a final cleanup action in accordance with MTCA regulations.

### 4.1 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Cleanup of contaminated soil and groundwater at the Property will be conducted in accordance with MTCA, with the technical assistance of Ecology under the VCP, and in conjunction with redevelopment construction at the Property. Primary ARARs relating to the cleanup action include:

- MTCA, Chapter 70.105D of the Revised Code of Washington (RCW 70.105);
- MTCA Cleanup Regulations, WAC 173-340;
- Dangerous Waste Regulations, WAC 173-303; and
- *Guidance for Remediation of Petroleum Contaminated Soils* (Ecology 2011) (Ecology Guidance).

These primary ARARs are anticipated to be the most applicable to the cleanup action because they provide the framework for the cleanup action, including applicable and relevant regulatory guidelines, cleanup standards, waste disposal criteria, references for additional ARARs, and standards for documentation of the cleanup action.

Other applicable ARARs and guidance documents for cleanup of the Property may include:

- *Guidance for Site Checks and Site Assessments for Underground Storage Tanks* (Ecology 1991, revised 2003);
- Minimum Standards for Construction and Maintenance of Wells, Standards for Decommissioning a Well, WAC 173-160-381;
- Occupational Safety and Health Act, Part 1910 of Title 29 of the Code of Federal Regulations;
- Safety Standards for Construction Work, WAC 296-155;
- Washington State Solid Waste Management Laws and Regulations, RCW 70.95, and WAC 173-351 and 173-304;
- *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Interim Remedial Action* (Ecology 2009); and



- Accreditation of Environmental Laboratories, WAC 173-50.

#### 4.2 CONSTITUENTS OF CONCERN

The COCs for the Property are defined as the compounds that have been detected in soil and groundwater samples collected at the Property at concentrations that exceed or may exceed applicable MTCA Method A cleanup levels.

The COCs for soil are:

- DRO;
- ORO;
- GRO; and
- BTEX.

The COCs for groundwater are:

- DRO;
- ORO;
- GRO;
- Benzene;
- Naphthalenes; and
- Vinyl chloride.

#### 4.3 MEDIA OF CONCERN

Soil and groundwater were confirmed as the affected media of concern at the Property based on results of the remedial investigation. DRO, ORO, GRO, and BTEX were detected in soil, and DRO, ORO, GRO, benzene, naphthalenes, and vinyl chloride were detected in groundwater at concentrations exceeding MTCA Method A cleanup levels.

Soil vapor was identified as a suspected medium of concern at the Property based on historical concentrations of GRO and BTEX in soil; GRO, benzene, naphthalenes, and vinyl chloride in groundwater; and the potential for vapor intrusion into buildings following Property redevelopment. The potential for vapor intrusion at the Property will be mitigated by the excavation and removal of contaminated soil and by the dewatering and disposal of contaminated groundwater from the Property.

Concentrations of benzene and other VOCs detected in groundwater samples collected from monitoring wells and in reconnaissance groundwater samples collected from borings on the Property in 2014 did not exceed the updated 2015 groundwater screening levels protective of



indoor air, as originally promulgated in the Draft *Guidance for Evaluating Soil Gas Intrusion in Washington State: Investigation and Remediation* dated October 2009, prepared by Ecology (2009). Vapor intrusion considerations are discussed further in Section 5, Focused Feasibility Study.

#### 4.4 CLEANUP STANDARDS

As defined in WAC 173-340-700, cleanup standards consist of cleanup levels and the points of compliance at which the cleanup levels are to be attained. The cleanup standards for the Property have been established in accordance with WAC 173-340-700 through 173-340-760 to be protective of human health and the environment.

##### 4.4.1 Soil Cleanup Levels

The selected cleanup levels for COCs in soil are as follows:

- MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses (Table 740-1 in WAC 173-340-900)
  - GRO: 100 milligrams per kilogram (mg/kg) (due to the general absence of benzene);
  - DRO: 2,000 mg/kg;
  - ORO: 2,000 mg/kg;
  - Benzene: 0.03 mg/kg;
  - Toluene: 7 mg/kg;
  - Ethylbenzene: 6 mg/kg; and
  - Xylenes: 9 mg/kg.

##### 4.4.2 Groundwater Cleanup Levels

The selected cleanup levels for COCs in groundwater are as follows:

- MTCA Method A Cleanup Levels for Ground Water (Table 720-1 in WAC 173-340-900)
  - GRO: 800 µg/l (due to the general absence of benzene);
  - DRO: 500 µg/l;
  - ORO: 500 µg/l;
  - Benzene: 5 µg/l;
  - Total naphthalenes: 160 µg/l; and



- Vinyl chloride: 0.2 µg/l.<sup>1</sup>
- MTCA Method B Cleanup Level
  - 1-methylnaphthalene: 39 µg/l; and
  - 2-methylnaphthalene: 32 µg/l.

#### 4.4.3 Points of Compliance

The points of compliance are the locations at which cleanup levels for the COCs must be attained to meet the requirements of MTCA.

- In accordance with WAC 173-340-740(6), the point of compliance for soil is defined as all soil at the Property where COCs have been detected at concentrations exceeding applicable MTCA soil cleanup levels.
- In accordance with WAC 173-340-720(8), the point of compliance for groundwater is defined as the uppermost level of the saturated zone extending vertically to the lowest depth at the Property that potentially could be impacted by COCs.

#### 4.5 TERRESTRIAL ECOLOGICAL EVALUATION

A TEE is required by WAC 173-340-7490 where there has been a release of hazardous substances to soil. The regulation requires that one of the following actions be taken:

- Documenting a TEE exclusion using the criteria presented in WAC 173-340-7491;
- Conducting a simplified TEE in accordance with WAC 173-340-7492; or
- Conducting a site-specific TEE in accordance with WAC 173-340-7493.

Based on the criteria for TEE exclusion in WAC 173-340-7491(1)(c)(i), the Property qualifies for an exclusion from a TEE because there are fewer than 1.5 acres of contiguous undeveloped land on the Property or within 500 feet of any area of the Property. In addition, following redevelopment construction, the entire Property will be covered with buildings and pavement, with the exception of minor landscaped areas. No further consideration of ecological impacts is required under MTCA.

#### 4.6 CONTAMINANT FATE AND TRANSPORT

Releases from USTs have affected subsurface soil and unconfined shallow groundwater at the Property. Subsurface soil proximate to the former UST areas and the product line release area near the former Shop Building contains residual concentrations of DRO, ORO, GRO, and BTEX.

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<sup>1</sup> Vinyl chloride detected in groundwater at the Property is part of a large plume from an up-gradient source off the Property identified as Capital Industries, Inc. Active cleanup of vinyl chloride will not be practicable during the cleanup action for the Property.



Groundwater in and down-gradient of these sources areas has been affected by the migration of DRO, ORO, GRO, benzene, and naphthalenes. Based on groundwater sampling results, the concentrations of these COCs exceeding MTCA Method A cleanup levels are retained within the Property boundaries. Vinyl chloride is present in groundwater at the Property as part of a large plume originating from a source off the Property.



## 5.0 FOCUSED FEASIBILITY STUDY

The purpose of a feasibility study is to develop and evaluate cleanup action alternatives to facilitate selection of a final cleanup action for a property in accordance with WAC 173-340-350(8). A feasibility study typically includes an extensive development, screening, and evaluation process for numerous remedial alternatives. However, because of Property-specific conditions and plans for Property redevelopment, the current evaluation focused on one cleanup action capable of achieving the remediation goals based on consideration of applicable MTCA criteria, Property-specific conditions, and Farallon's professional experience. Therefore, the scope of the feasibility study for the Property was narrowed to a focused feasibility study.

This RI and FFS provide sufficient information to enable Ecology and the Property owner to reach agreement on selection of a final cleanup action specific to the Property. Implementation of the final cleanup action will be documented in the Environmental Media Management Plan for the Property, which will be submitted to Ecology for review and approval. The cleanup action will be performed under the VCP and implemented during Property redevelopment with the goal of obtaining a Property-specific NFA determination for the Property.

As part of the focused feasibility study, Farallon evaluated remediation technologies for the Property with respect to the cleanup requirements set forth in MTCA. The focused feasibility study considered the requirements under WAC 173-340-350, Site-specific conditions, and the criteria defined in WAC 173-340-360 for screening potentially feasible remedial alternatives for the Property. A cleanup action must satisfy the following threshold criteria, as specified in WAC 173-340-360(2):

- Protect human health and the environment;
- Comply with cleanup standards;
- Comply with applicable state and federal laws; and
- Provide for compliance monitoring.

These criteria represent the minimum standards for an acceptable cleanup action. In addition to meeting the threshold criteria, cleanup actions under MTCA must:

- Use permanent solutions to the maximum extent practicable; and
- Provide for a reasonable restoration time frame.

Farallon performed a preliminary screening of potential remediation technologies typically applied to sites contaminated with the same or comparable COCs to eliminate technologies that did not meet the minimum requirements for protectiveness, permanence, implementability, and cost as described above. Farallon eliminated a number of remediation technologies during the initial screening process, as set forth in MTCA under WAC 173-340-350(8)(b). These technologies





included but were not limited to: soil flushing and extraction; air sparge and soil vapor extraction; and groundwater pumping and treatment.

## 5.1 POTENTIAL CLEANUP ALTERNATIVES

The preliminary screening of potential remediation technologies identified the following cleanup alternatives as potentially applicable to the Property:

- No remedial action;
- Active in-situ remediation of soil and/or groundwater using a chemical oxidant or bioremediation; and
- Source removal by excavation of soil, and dewatering of groundwater containing concentrations of COCs exceeding MTCA cleanup levels.

Farallon evaluated technologies and alternatives that could be implemented in conjunction with the planned redevelopment of the Property, which includes construction of two large two-story warehouse buildings.

- "No remedial action" is not an applicable remedial alternative because concentrations of COCs are present in soil and groundwater at the Property at concentrations exceeding established MTCA Method A cleanup levels and constitute a potential threat to human health and/or the environment.
- In-situ remediation of soil using chemical or biological treatment was not technically feasible because of the planned redevelopment and the desired expedited time frame for cleanup. In addition, there are no proven in-situ technologies for remediation of DRO and ORO contaminants that would result in compliance with cleanup standards within a reasonable restoration time frame.

Source removal by excavation of soil and dewatering of groundwater satisfies the minimum threshold requirements for a cleanup action under WAC 173-340-360(2), is a permanent solution, and will achieve the cleanup levels at the points of compliance for COCs in the short term. Excavation will protect human health and the environment by permanently reducing the volume of hazardous substances in both soil and shallow groundwater at the Property. The restoration time frame is considered reasonable and the cleanup will be effective long-term. Implemented in combination with the redevelopment of the Property, the excavation alternative is cost-effective and highly implementable. A description of the selected alternative for the cleanup action is provided below.



## 5.2 RECOMMENDED CLEANUP ALTERNATIVE

Source removal by excavation of soil and dewatering of groundwater is considered the most practicable alternative for cleanup of the Property. Therefore, the cleanup action will consist of:

- Excavation and removal of soil with COCs exceeding MTCA Method A cleanup levels to depths up to a maximum of approximately 12 feet bgs.
- Collection of performance soil samples and analysis using a mobile laboratory during the excavations, and collection and analysis of confirmational soil samples to represent soil conditions at the final limits of the excavations.
- Transport of contaminated soil to an Ecology-approved and permitted facility for treatment and/or disposal.
- Capture of contaminated groundwater generated during excavation dewatering activities for treatment and discharge in accordance with local and state standards.
- Application of an oxygen-release compound at the base of the excavations north and west of the former Shop Building to enhance aerobic biodegradation of COCs in the groundwater plume down-gradient of these former source areas, and compliance groundwater monitoring to monitor natural attenuation processes.

This alternative satisfies the minimum threshold requirements for a cleanup action under WAC 173-340-360(2), is a permanent solution, and will achieve the cleanup levels at the points of compliance for the COCs. Excavation will protect human health and the environment by permanently reducing the volume of hazardous substances in both soil and shallow groundwater at the Property. The restoration time frame is considered reasonable and the cleanup will be effective in the long-term. Implemented in combination with the redevelopment of the Property, the excavation alternative is cost-effective and highly implementable.

Following completion of redevelopment activities at the Property, monitoring wells will be installed in and down-gradient of the groundwater plume for compliance groundwater monitoring. Natural attenuation processes, including enhancement using an oxygen-release compound, will degrade the COCs in groundwater once the sources have been removed. However, DRO and/or ORO may persist in groundwater at concentrations exceeding MTCA Method A cleanup levels following completion of the soil cleanup action at the Property.

With the exception of historical concentrations of benzene proximate to well RW-2, concentrations of benzene, naphthalenes, and other volatile COCs detected in groundwater samples at the Property do not exceed the 2015 groundwater screening levels protective of indoor air (Ecology 2009; 2015 update to Table B-1). Benzene was not detected at a concentration exceeding the laboratory reporting limit in any of the groundwater samples, including samples from well RW-2, collected during the most recent groundwater sampling event at the Property in 2014. Farallon expects that the excavation will result in complete removal of contaminated soil and groundwater proximate to



well RW-2. Based on the 2014 groundwater analytical results and pending further source removal actions, vapor intrusion does not represent a concern to future tenants at the Property.

The selected cleanup action is the most-aggressive and -permanent cleanup action possible at the Property and meets MTCA requirements. The selected cleanup action would rapidly remediate COCs at concentrations exceeding applicable MTCA cleanup levels that are present in soil, groundwater, and soil vapor at the Property by excavating and removing the COCs in soil and groundwater.

The following evaluation discusses how the recommended cleanup action meets MTCA threshold and other requirements set forth under WAC 173-340-360(2)(a) and (b):

- **Protection of Human Health and the Environment:** The cleanup action will protect human health and the environment by excavating and disposing of soil with concentrations of COCs exceeding MTCA cleanup levels and by removing the highest concentrations of COCs in groundwater through excavation dewatering. This source removal will allow natural attenuation processes to complete the degradation and reduction of COC concentrations in groundwater to less than MTCA Method A cleanup levels.
- **Compliance with Cleanup Standards:** The cleanup action will comply with cleanup standards by meeting MTCA cleanup levels for COCs in soil and groundwater at the points of compliance. The points of compliance as defined in WAC 173-340-200 will be the locations where cleanup levels established in accordance with WAC 173-340-720 through WAC 173-340-760 will be attained to meet the requirements of MTCA. Once the cleanup levels have been attained at the defined points of compliance, the Property will no longer be considered to be a threat to human health or the environment.

The point of compliance for soil is defined as all soil at the Property where COCs have been detected at concentrations exceeding MTCA Method A cleanup levels in in-situ soil samples.

The point of compliance for groundwater is defined as the uppermost level of the saturated zone extending vertically to the lowest depth that potentially could be impacted by the COCs at the Property. Results from groundwater samples collected from down-gradient monitoring wells MW-4 through MW6 have established that groundwater cleanup levels have not been exceeded for COCs near the down-gradient Property boundary.

- **Compliance with Applicable State and Federal Laws:** The recommended cleanup action alternative will comply with the requirements of MTCA and applicable federal laws. The cleanup action will be conducted as an independent cleanup action under the Ecology VCP in accordance with MTCA.
- **Provision for Compliance Monitoring:** The cleanup action for soil provides for compliance monitoring during excavation by collection of performance and confirmational soil samples at various depths and from the bottom and sidewalls at the limits of the



excavations. The cleanup action for groundwater provides for compliance monitoring after completion of the excavation by groundwater sampling at the points of compliance.

- **Permanence:** The cleanup action for soil and groundwater will result in permanent achievement of cleanup action objectives. It is anticipated that soil with concentrations of COCs exceeding MTCA cleanup levels within the excavation limits will be removed from the Property and disposed of at a licensed disposal facility. Excavation dewatering will remove groundwater with the highest concentrations of COCs, and natural attenuation process are expected to reduce residual COC concentrations to less than MTCA Method A cleanup levels down-gradient of the source areas on the Property.
- **Restoration Time Frame:** The cleanup action will meet threshold requirements and cleanup action objectives in a reasonable restoration time frame. Excavation, removal, and off-Property disposal of soil with concentrations of COCs exceeding MTCA cleanup levels will result in immediate achievement of cleanup action objectives for soil. Excavation dewatering during construction will remove groundwater with the highest concentrations of COCs. Removal of soil containing sources of COCs will allow natural attenuation processes to reduce COC concentrations in groundwater to less than MTCA Method A cleanup levels.
- **Reduction of Toxicity, Mobility, and Volume of Contaminants:** The cleanup action for soil and groundwater will permanently remove concentrations of COCs exceeding MTCA Method A cleanup levels in soil, and will remove and degrade COCs in groundwater at the Property. These results will permanently eliminate or reduce contaminant mass and toxicity.
- **Short-Term Risks:** The cleanup action involves short-term risks associated with the excavation and handling of soil and/or groundwater with concentrations of COCs exceeding MTCA cleanup levels. Potential short-term risks to human health from potential vapors, dust emissions, excavation equipment, and truck traffic may be increased during cleanup field activities. Health and safety measures and monitoring programs will be implemented to effectively minimize these short-term risks.
- **Implementability:** The cleanup action will be implemented at the Property in conjunction with Property redevelopment construction. Excavation and transportation of soil with concentrations of COCs is a common practice that has proven successful at many other properties. Dewatering of groundwater during excavation and subsurface construction activities also is a common practice. Soil and associated groundwater with concentrations of COCs exceeding MTCA cleanup levels can be accessed, dewatered, and removed using standard dewatering and excavating equipment.



## 6.0 CLEANUP ACTION PLAN

This section presents the approach for implementation of the cleanup action.

### 6.1 OBJECTIVE OF CLEANUP ACTION

The objective of the cleanup action is to permanently remediate COCs at concentrations exceeding MTCA cleanup levels in soil, groundwater, and soil vapor within the boundaries of the Property. The cleanup action will be protective of human health and the environment, and will result in a permanent cleanup action for the Property. The goal of the cleanup action is to meet the MTCA requirements for a Property-specific NFA determination for the Property from Ecology.

### 6.2 ELEMENTS OF CLEANUP ACTION

The cleanup action includes excavation of soil to a depth of approximately 12 feet bgs, dewatering activities as part of Property redevelopment, and the following specific tasks:

- Preparation of a Property-specific Health and Safety Plan (HASP);
- Decommissioning by removal of the existing 20,000-gallon diesel fuel UST in accordance with Ecology UST Regulations established in WAC 173-360, and the *Guidance for Site Checks and Site Assessments for Underground Storage Tanks* (Ecology 1991, revised 2003);
- Contingency planning for the decommissioning and removal of unidentified USTs that may be encountered during redevelopment excavation at the Property; and
- Decommissioning of existing monitoring wells MW-1 through MW-6 and well RW-2 in accordance with Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Wells).

### 6.3 PROPERTY PREPARATION

Prior to excavation, preparation activities will be conducted, including decommissioning of the 20,000-gallon diesel fuel UST and monitoring wells MW-1 through MW-6 and well RW-2, installation of Property security, temporary erosion-control measures, and traffic-control measures as necessary to meet permit requirements and protect workers within the work zones.

### 6.4 EXCAVATION

Prior to excavation, the known limits of soil with concentrations of one or more COCs exceeding MTCA Method A cleanup levels will be staked in the field. Following the stripping of surface asphalt pavement and concrete, an estimated 1,800 cubic yards of soil containing one or more COCs exceeding MTCA Method A cleanup levels will be removed from the three locations shown on Figure 4 and disposed of as nonhazardous soil at a licensed disposal facility. Additional



excavation may take place in the northwest UST area based on analytical results for soil samples collected prior to excavation.

The excavation subcontractor will excavate contaminated soil and segregate it from uncontaminated soil under the direction of a Farallon field representative. Soil containing concentrations of one or more COCs exceeding MTCA Method A cleanup levels will be loaded directly into haul trucks, as practicable, for transport off the Property.

Uncontaminated soil will be removed and stockpiled on the Property for re-use as backfill, if suitable for use as structural fill. During excavation, a Farallon field representative will examine uncontaminated soil for evidence of contamination such as visual staining or sheen, petroleum-like odors, or concentrations of measurable organic vapors exceeding measured background levels using a photoionization detector (PID).

Soil with field evidence of COCs will be segregated from observed clean soil, stockpiled separately, and sampled for analysis to assess options for disposal or reuse. The stockpiles of contaminated soil will be placed on plastic sheeting and covered to prevent potential contamination of clean soil. Three soil samples will be collected from contaminated soil stockpiles of up to 100 cubic yards, and five samples will be collected from contaminated soil stockpiles of 101 to 500 cubic yards in accordance with the Ecology (1991) guidance for stockpiled excavated soil. The contaminated soil stockpile samples will be analyzed for the COCs listed in Section 6.6.5, Analytical Methods and Turnaround Times.

## 6.5 EXCAVATION DEWATERING

The lower limit of the excavation is anticipated to extend below the current water table. Dewatering will be necessary to reach the depth limits of excavation, estimated to be 10 to 12 feet bgs. Groundwater is anticipated to be present at depths of between approximately 6.5 and 9 feet bgs. The dewatering will consist of pumping groundwater from the excavation into aboveground storage tanks. Groundwater samples will be collected from the aboveground storage tanks to assess the concentrations of COCs in groundwater within the excavation and to determine disposal options for the groundwater.

## 6.6 SOIL SEGREGATION AND STOCKPILING

The excavation subcontractor will excavate contaminated soil and segregate it from clean soil under the direction of a Farallon field representative to the extent practicable. Soil segregation will be based on soil sample analytical results from the remedial investigation, performance monitoring results, and field-screening results.

Three types of soil are anticipated to be encountered during the excavations:

- Category 1 clean soil, which contains no detectable concentrations of COCs and no other evidence of contamination. Clean soil will be considered for reuse on the Property as



structural fill, as appropriate, or will be disposed of off the Property at a facility or location selected by the Property owner or the excavation subcontractor.

- Category 2 petroleum-contaminated soil, which contains petroleum hydrocarbons at concentrations less than MTCA Method A soil cleanup levels, meets the disposal criteria for the disposal facility for Category 2 petroleum-contaminated soil; and/or exhibits other evidence of contamination such as visual staining, petroleum-like odors, or organic vapors above background levels measurable using a PID. Category 2 petroleum-contaminated soil will be disposed of as nonhazardous waste at a qualifying inert materials landfill and/or a Subtitle D landfill. Alternatively, Category 2 soil may be used on the Property as structural fill at locations above the known seasonal high groundwater level.
- Category 3 petroleum-contaminated soil, which contains one or more of the COCs at concentrations exceeding MTCA Method A cleanup levels; and/or exceeds the disposal criteria for the project disposal facility for Category 2 petroleum-contaminated soil. Category 3 petroleum-contaminated soil will be treated by thermal desorption and disposed of as nonhazardous waste at an inert materials landfill, and/or will be transported directly to a Subtitle D landfill.

Where practicable, Category 2 and Category 3 soil will be loaded directly into haul trucks to facilitate the most-efficient handling and transport.

Personnel for the excavation subcontractor performing the excavation of potentially contaminated soil will be 40-Hour Health and Safety Trained as hazardous waste operators in accordance with Part 1910.120 of Title 29 of the Code of Federal Regulations.

### **6.6.1 Identification of Contaminated Soil**

Determination of the extent of contaminated soil at each excavation area will be based on soil sample analytical results from the remedial investigation. Additional soil samples will be collected from test pits excavated at selected locations in advance of the excavation to provide supplementary analytical data for refining identification of the extent of COCs in the soil.

Field-screening will be performed during the excavation to further identify and classify the extent of COCs. Field-screening will consist of noting visual or olfactory evidence of contamination such as soil staining, discoloration, and petroleum odors, and use of a PID to screen for the presence of ionizable VOCs. A PID reading exceeding ambient or background concentrations will confirm the presence of VOCs in a sample. Field-screening results will be evaluated to determine whether laboratory analysis of soil samples is needed to further assess for the presence of COCs in the soil.

### **6.6.2 Performance and Confirmational Soil Sampling**

A 20- by 20-foot sampling grid will be established over the excavation areas at the Property to guide the excavation process and the collection of performance and confirmational soil samples. As the soil is excavated, performance soil samples will be collected from the bottom and outer



margins of the sampling grids. At the excavation sidewall limits, grab samples will be collected at a depth corresponding to the historical zone of seasonal groundwater level fluctuation (between approximately 6.5 and 11 feet bgs) where the highest COC concentrations would be expected. Bottom samples will be collected at the approximate centers of the grids. A licensed and certified mobile laboratory will be set up on the Property to provide rapid turnaround times for sample analyses.

If one or more of the COC concentrations in a soil sample exceed MTCA Method A cleanup levels, the sample will be considered a performance monitoring sample, and excavation will continue in that area, with collection and analysis of additional soil samples as necessary until the sample COC concentrations are reported at less than MTCA Method A cleanup levels. When COC concentrations for a soil sample are less than cleanup levels, the sample will be considered a confirmational sample, and the excavation in that grid will be considered complete. Sample locations will be determined using a global positioning system receiver and/or by measurement relative to surveyed reference markers positioned along the outer boundaries of the excavation areas.

Confirmational sampling will be conducted once performance sampling or field-screening results indicate that contaminated soil has been removed at the limits of excavation, and applicable MTCA cleanup levels likely have been attained. Confirmational monitoring will consist of collecting in-situ soil samples from the bottoms and sidewalls of the excavated areas to verify that COCs in soil at the margins of the excavation are less than MTCA cleanup levels and that the cleanup objectives have been achieved.

### **6.6.3 Soil Sample Identification**

Each performance and confirmational soil sample will be assigned a unique sample number. The sample number will be based on the associated grid number and will include the location within the grid and the depth or elevation of collection. Sample numbers will be written on the sample label and recorded on the Field Report form, the Sample Summary form, and the laboratory Chain of Custody form.

### **6.6.4 Soil Sample Collection and Handling Procedures**

The performance and confirmational soil samples will be collected and handled according to specific procedures, which include the following:

- Collecting discrete grab soil samples directly from the excavation sidewalls and bottom where the excavation is less than 4 feet deep, or from the center of the excavation track hoe bucket if the excavation is greater than 4 feet deep or under conditions that make sample collection directly from the excavation unsafe or impracticable. Samples will be collected using either stainless steel or plastic sampling tools. Non-disposable sampling tools and equipment will be decontaminated between uses as appropriate, with the exception of the track hoe bucket.





- Logging sampling information in the field notes, including sample depth or elevation, soil description, soil moisture, indications of potential COCs from visual observations, odor indications, and field-screening results using a PID.
- Transferring the collected soil sample into laboratory-supplied sample containers. Soil samples for analysis for VOCs will be collected and prepared in accordance with U.S. Environmental Protection Agency (EPA) Method 5035A sampling protocols. Sample containers will be completely filled to eliminate headspace, and the seals/caps will be firmly secured.
- Labeling the sample container with the date, time sampled, sample identification number, requested analysis, project name, project number, and the sampler's initials.
- Logging the sample on a Chain of Custody form, and placing the soil sample into a chilled cooler for submittal to the mobile laboratory.
- Discarding disposable sampling tools, supplies, and personal protective equipment as solid waste in the appropriate waste container at the Property.

#### **6.6.5 Analytical Methods and Turnaround Times**

Soil samples collected for performance and confirmational monitoring and for waste disposal classification will be analyzed by the mobile laboratory for specific COCs. Soil samples will be analyzed using one or more of the following analytical methods:

- DRO and ORO by Northwest Method NWTPH-Dx;
- GRO by Northwest Method NWTPH-Gx; and
- BTEX by EPA Method 8021B.

Following collection, the soil samples will be hand-delivered by Farallon to the mobile analytical laboratory set up adjacent to the excavation areas. Rapid same-day sample analytical turnaround times will increase cleanup efficiencies and prevent potential excavation delays.

Additional analyses that may be conducted for selected confirmational soil samples collected proximate to the former waste oil USTs and the former sand trap oil-water separator include:

- PAHs by EPA Method 8270D;
- VOCs by EPA Method 8260C; and
- MTCA metals by EPA 200/6000/7000 Series Methods.

These analyses will be performed at a fixed-base laboratory selected for the project.



Groundwater removed from the excavations during dewatering will be sampled to assess COC concentrations for treatment and/or disposal. Groundwater samples will be analyzed by the mobile laboratory using one or more of the following analytical methods:

- DRO and ORO by Northwest Method NWTPH-Dx;
- GRO by Northwest Method NWTPH-Gx; and
- BTEX by EPA Method 8021B.

Additional groundwater sample analyses that may be conducted if needed to meet the requirements for discharge to the sanitary sewer include:

- PAHs by EPA Method 8270D;
- VOCs by EPA Method 8260C; and
- MTCA metals by EPA 200/6000/7000 Series Methods.

These analyses will be performed at a fixed-base project laboratory.

Farallon will obtain the laboratory analytical results in electronic format. The data will undergo a quality assurance and quality control review at the time of receipt and will be compiled into the Farallon EQUIS database for data management.

#### **6.6.6 Waste Soil Disposal**

Contaminated soil disposal will be tracked using a Waste Inventory form. The analytical results for soil sampling conducted during the remedial investigation, test pit sampling, and performance soil sampling will be used to profile contaminated soil for disposal. Profiling information will be provided to the project disposal facilities to obtain approval for treatment and/or disposal of the Category 2 and Category 3 petroleum-contaminated soil. Documentation of the soil disposal will be maintained in the project file.

#### **6.6.7 Wastewater Disposal**

During excavation dewatering at the Property, groundwater will be removed using one or more temporary drainage sumps in each excavation area and will be pumped into large storage tanks to facilitate solids removal and turbidity reduction. Effluent from the storage tanks will be treated by carbon filtration, if necessary, to reduce COC concentrations to meet the requirements of the temporary discharge authorization that will be obtained from the King County Industrial Waste Program.

#### **6.6.8 Backfill and Property Restoration**

Following completion of soil removal at each excavation, the excavation will be backfilled and compacted by the excavation subcontractor to meet specifications provided by the geotechnical engineer for the redevelopment project.



## 7.0 DOCUMENTATION REQUIREMENTS

All elements of the cleanup action will be documented to meet the requirements of MTCA for a Property-specific NFA determination. A document control system will be implemented to manage data during the cleanup action, including the following documents, as appropriate: Field Report forms, maps, field-screening documentation, sampling documentation, Chain of Custody forms, laboratory analytical reports, photographs, and Waste Inventory forms. Transport tickets and disposal manifests for waste soil will be maintained in the Farallon project documentation files. Upon conclusion of the cleanup action, a report will be prepared summarizing the results of the cleanup action.

### 7.1 FIELD DOCUMENTATION

Field personnel will be required to keep a daily field log on a Field Report form. Field notes will be as descriptive and inclusive as possible, with the objective of being sufficiently detailed to allow independent parties to reconstruct the events of the cleanup action. Language will be objective, factual, and free of inappropriate terminology. At a minimum, field documentation will include the date, project number, project identification and location, weather conditions, sample collection procedures, field equipment used, and an explanation of any activities performed in a manner other than as specified in the CAP. In addition, when other forms are completed or used (e.g., Chain of Custody forms, maps) they will be referenced in and attached to the Field Report form.

Supplementary documentation forms will be used to augment the Field Report form, including Soil Sampling forms, Waste Inventory forms, and any other forms or documentation developed to document the cleanup action.

A Chain of Custody form or comparable form required by the mobile laboratory will be completed by the Farallon field representative at the time of sample collection. Chain-of-custody protocols are designed to create an accurate written record that can be used to trace the possession and handling of samples from the moment of field collection through laboratory analysis and reporting, and will be followed whenever samples are collected, transferred, stored, analyzed, or destroyed.

Samples submitted to the laboratory will be accompanied by a Chain of Custody or comparable form. This form will be checked for accuracy and completeness by the Farallon field representative. The form will be signed and dated by the Farallon representative when relinquishing samples to the laboratory, and by the laboratory technician or sample custodian to denote sample acceptance by the laboratory. The laboratory will assign each sample a unique sequential laboratory identification number that will be stamped or written on the form.

The Chain of Custody or comparable form will include the following information: project name, sample identification number (assigned by the sampler in the field), sample date, time of collection, sample media, number of containers, type of analysis required (if any), and any notes or instructions for the laboratory. Whenever the samples are transferred from one party to another,



both parties will sign the form and record the date and time of the transfer. In this manner, sample integrity is ensured from collection through analysis.

Sample labels will be filled out and affixed to appropriate containers during preparations for sample collection. Soil samples collected during the soil cleanup action will be uniquely identified, labeled, and documented in the field at the time of collection. Each sample container will have a label identifying the project number and name, the unique sample identification number, preservatives used (if applicable), required analyses, and the date and time at which the sample was collected.

## **7.2 HEALTH AND SAFETY**

A HASP is required for all field activities (WAC 173-340-810). Farallon will prepare a Property-specific HASP for use by Farallon personnel working at the Property. The HASP will comply with the requirements of the Occupational Safety and Health Act of 1970 and the Washington Industrial Safety and Health Act (RCW 49.17). Ecology approval of the HASP is not necessary.

## **7.3 CLOSURE REPORT**

Upon completion of the cleanup action, a Closure Report will be prepared and submitted to Ecology, and a request will be made for a Property-specific Partial Sufficiency Opinion as an intermediate step toward obtaining an NFA determination. The request for a Partial Sufficiency Opinion assumes that MTCA cleanup levels will have been achieved for soil only and that groundwater will require long-term monitoring of natural attenuation processes to document reduction of concentrations of DRO and ORO to less than MTCA Method A cleanup levels. The Closure Report will include a summary of the activities and results of the cleanup action at the Property, and will provide the technical basis to support the Partial Sufficiency Opinion. The Closure Report will include the following reporting and work elements:

- A summary of the subsurface investigations and cleanup actions completed at the Property;
- Reconciliation of contaminated soil transported, treated, and/or disposed of off the Property, and contaminated groundwater treated and discharged to the sanitary sewer;
- Preparation of figures and summary tables for soil and groundwater sample analytical results; and
- Conclusions regarding the effectiveness of the cleanup action and a request for a Property-specific Partial Sufficiency Opinion from Ecology.



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## 9.0 LIMITATIONS

### 9.1 GENERAL LIMITATIONS

The conclusions contained in this report/assessment are based on professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location. The conclusions contained herein are subject to the following inherent limitations:

- **Accuracy of Information.** Certain information used by Farallon in this report/assessment has been obtained, reviewed, and evaluated from various sources believed to be reliable. Farallon's conclusions, opinions, and recommendations are based in part on such information. Farallon's services did not include verification of its accuracy or authenticity. Should the information upon which Farallon relied prove to be inaccurate or unreliable, Farallon reserves the right to amend or revise its conclusions, opinions, and/or recommendations.
- **Reconnaissance and/or Characterization.** Farallon performed a reconnaissance and/or characterization of the Property that is the subject of this report/assessment to document current conditions. Farallon focused on areas deemed more likely to exhibit hazardous materials conditions. Contamination may exist in other areas of the Property that were not investigated or were inaccessible. Site activities beyond Farallon's control could change at any time after the completion of this report/assessment.

For the foregoing reasons, Farallon cannot and does not warrant or guarantee that the Property is free of hazardous or potentially hazardous substances or conditions, or that latent or undiscovered conditions will not become evident in the future. Farallon's observations, findings, and opinions can be considered valid only as of the date of the report hereof.

This report/assessment has been prepared in accordance with the contract for services between Farallon and Prologis, Inc., and currently accepted industry standards. No other warranties, representations, or certifications are made.

### 9.2 LIMITATION ON RELIANCE BY THIRD PARTIES

**Reliance by third parties is prohibited.** This report/assessment has been prepared for the exclusive use of Prologis, Inc. to address the unique needs of Prologis, Inc. at the Property at a specific point in time. Services have been provided to Prologis, Inc. in accordance with a contract for services between Farallon and Prologis, Inc., and generally accepted environmental practices for the subject matter at the time this report was prepared.

No other party may rely on this report unless Farallon agrees in advance to such reliance in writing. Any use, interpretation, or reliance upon this report/assessment by anyone other than Prologis, Inc. is at the sole risk of that party, and Farallon will have no liability for such unauthorized use, interpretation, or reliance.





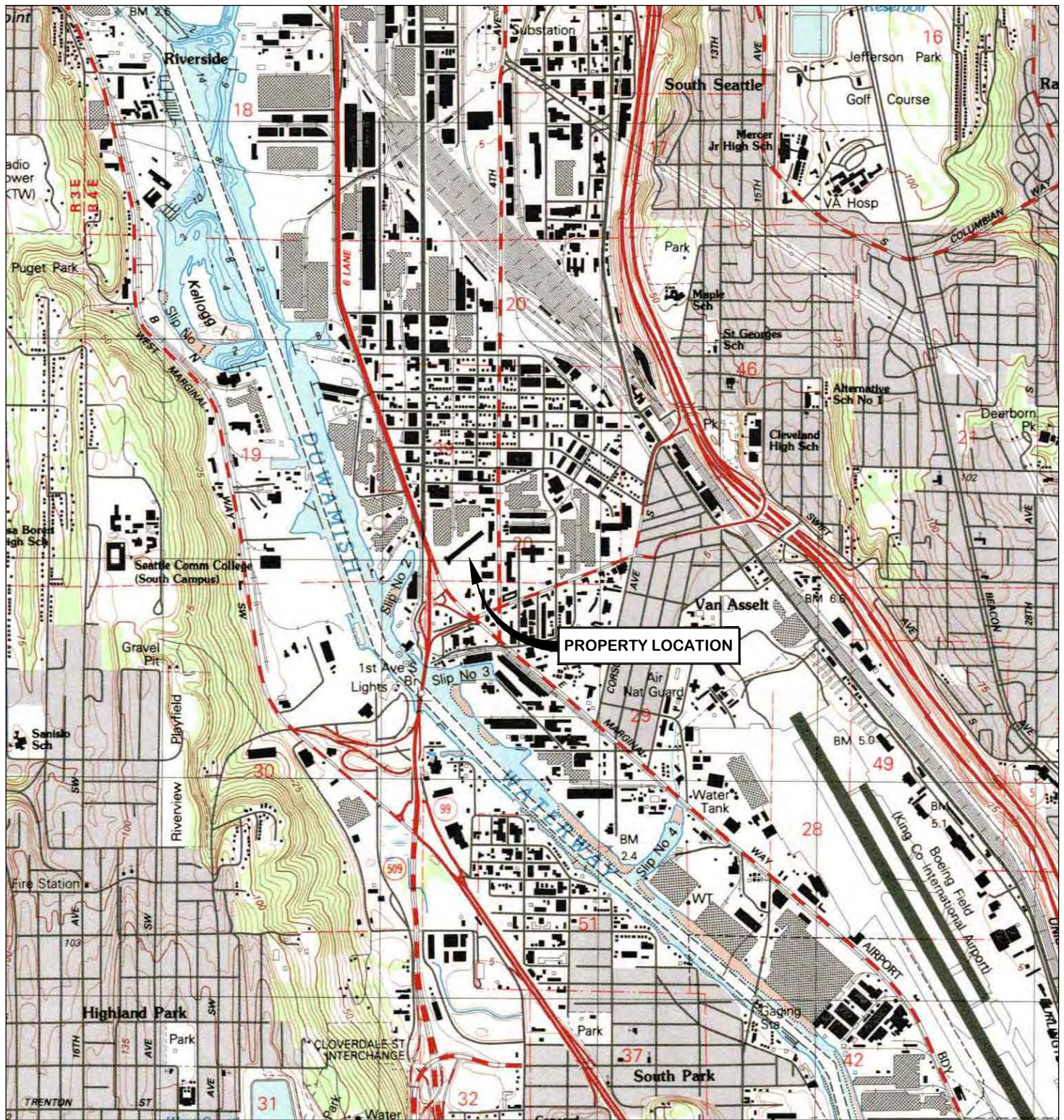
Do not rely on this report/assessment if:

- It was not prepared for you;
- It was not prepared for your project;
- It was not prepared for your specific site; or
- It was not prepared under an approved scope of work for which you are under contract with Farallon.

## **FIGURES**

REMEDIAL INVESTIGATION, FOCUSED FEASIBILITY STUDY,  
AND CLEANUP ACTION PLAN  
6050 East Marginal Way  
Seattle, Washington

Farallon PN: 1071-010



REFERENCE: 7.5 MINUTE USGS QUADRANGLE SEATTLE, WASHINGTON. DATED 1983



Washington  
Issaquah | Bellingham | Seattle

Oregon  
Portland | Bend | Baker City

California  
Oakland | Sacramento | Irvine

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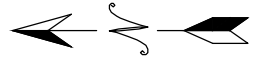
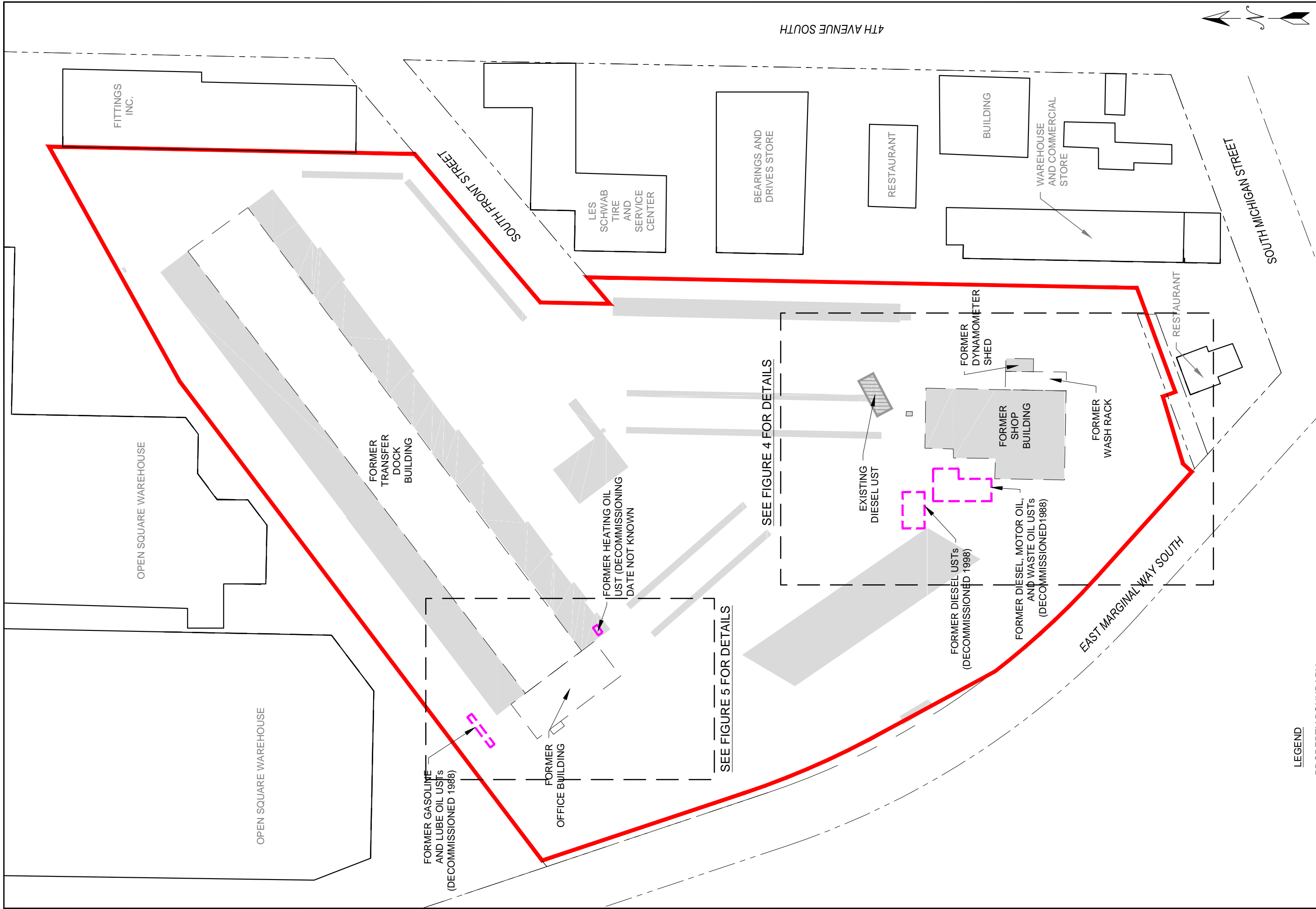
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Drawn By: DJR      Checked By: DLM

**FIGURE 1**  
PROPERTY VICINITY MAP  
6050 EAST MARGINAL WAY SOUTH  
SEATTLE, WASHINGTON

FARALLON PN: 1071-010

Date: 12/14/2015      Disk Reference: 1071-010\_A.dwg



4TH AVENUE SOUTH

SOUTH FRONT STREET  
MICHIGAN STREET

FITTINGS INC.

OPEN SQUARE WAREHOUSE

OPEN SQUARE WAREHOUSE

FORMER TRANSFER DOCK BUILDING

FORMER GASOLINE AND LUBE OIL USTs (DECOMMISSIONED 1988)

FORMER OFFICE BUILDING

FORMER HEATING OIL UST (DECOMMISSIONING DATE NOT KNOWN)

LES SCHWAB TIRE AND SERVICE CENTER

BEARINGS AND DRIVES STORE

RESTAURANT

BUILDING

WAREHOUSE AND COMMERCIAL STORE

FORMER DYNAMOMETER SHED

FORMER SHOP BUILDING

FORMER WASH RACK

RESTAURANT

SEE FIGURE 4 FOR DETAILS

SEE FIGURE 5 FOR DETAILS

EXISTING DIESEL UST

FORMER DIESEL USTs (DECOMMISSIONED 1988)

FORMER DIESEL MOTOR OIL AND WASTE OIL USTs (DECOMMISSIONED 1988)

EAST MARGINAL WAY SOUTH

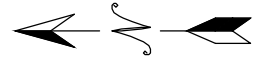
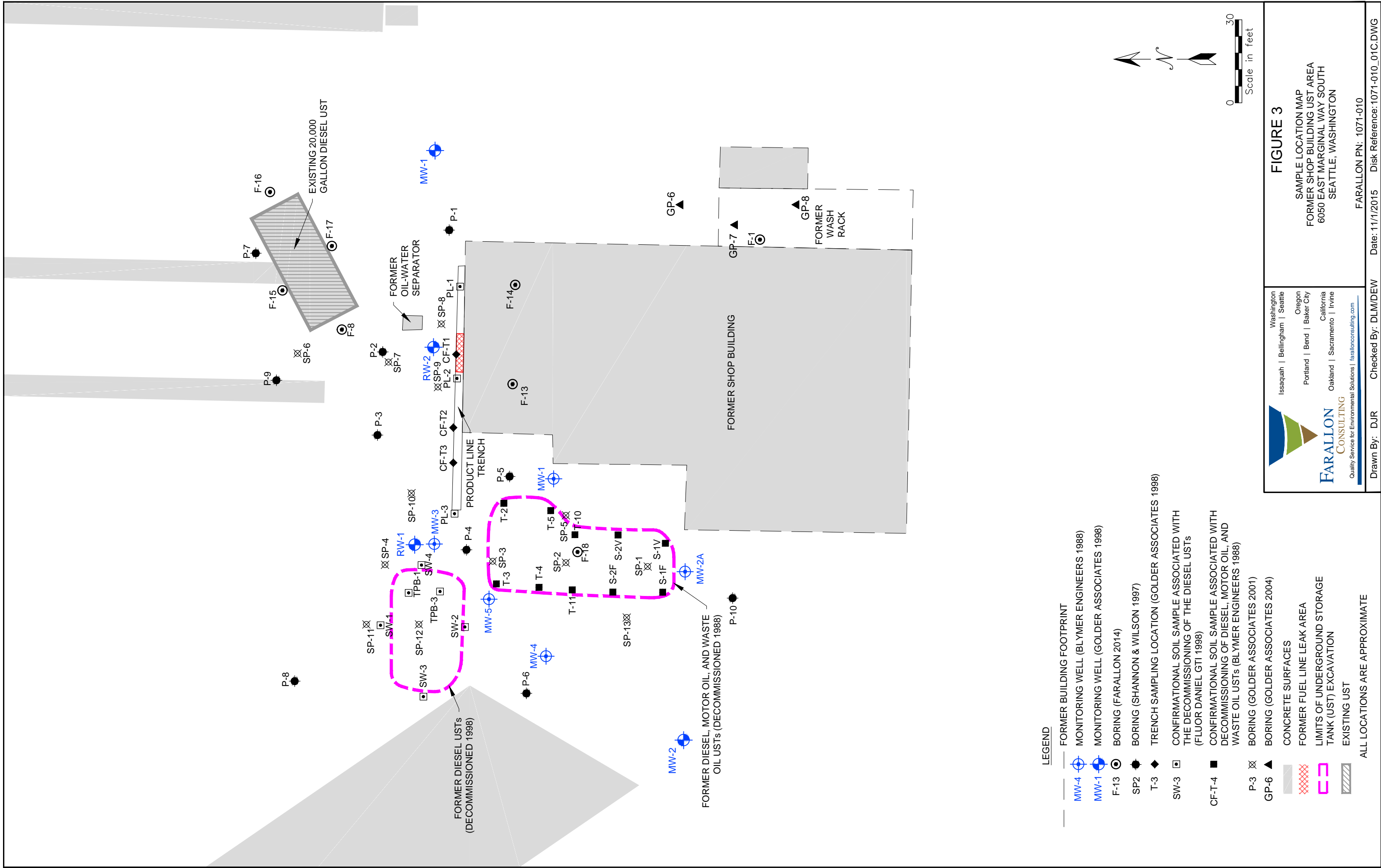
LEGEND

- PROPERTY BOUNDARY
  - PUBLIC ROAD RIGHT-OF-WAY
  - FORMER BUILDING FOOTPRINT
  - FORMER UNDERGROUND STORAGE TANK (UST) AREA
  - EXISTING UST
  - CONCRETE SURFACES
- ALL LOCATIONS ARE APPROXIMATE

FIGURE 2

FORMER PROPERTY FEATURES  
6050 EAST MARGINAL WAY SOUTH  
SEATTLE, WASHINGTON

Washington | Seattle  
Issaquah | Bellingham  
Oregon  
Portland | Bend | Baker City  
California  
Oakland | Sacramento | Irvine

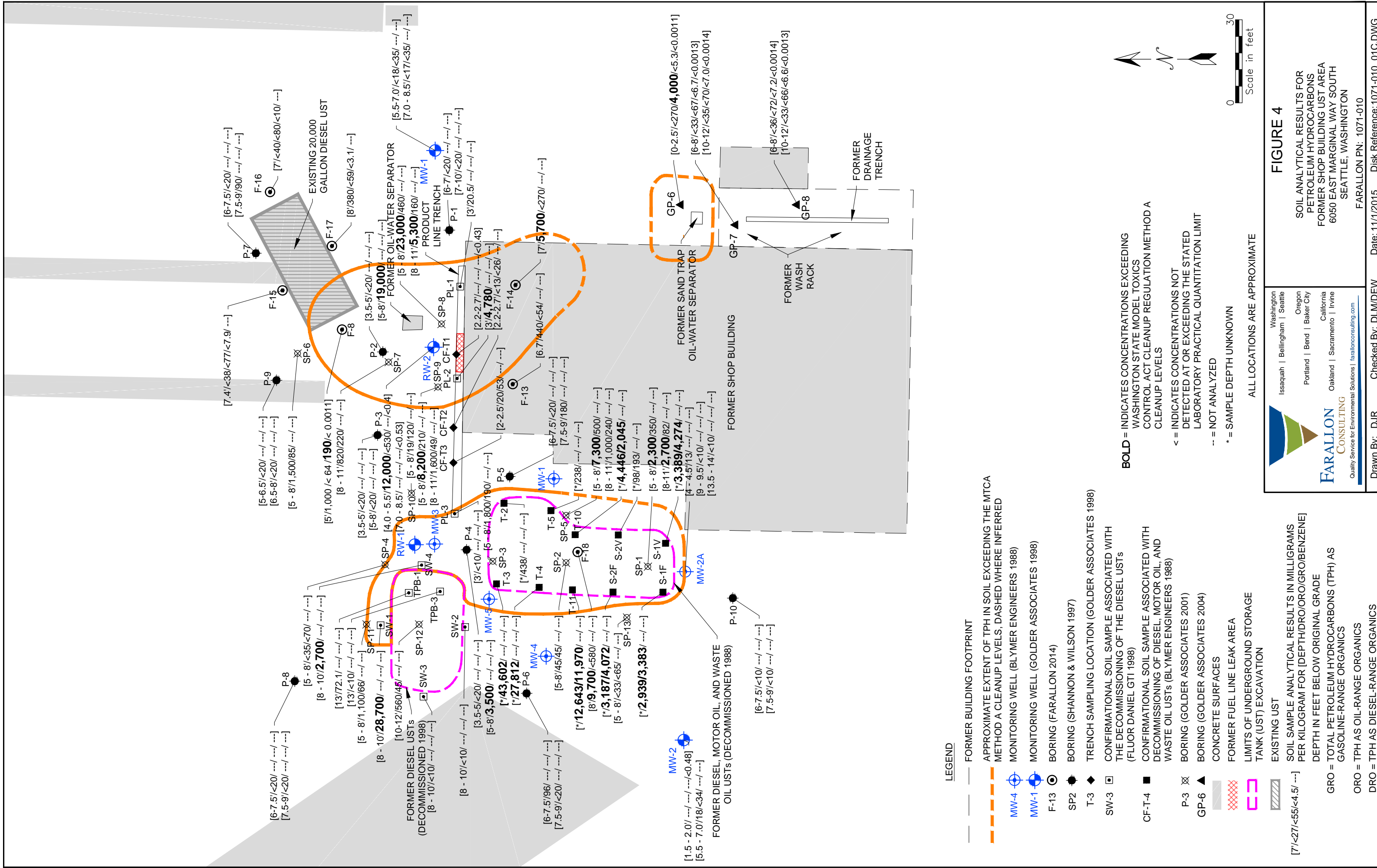


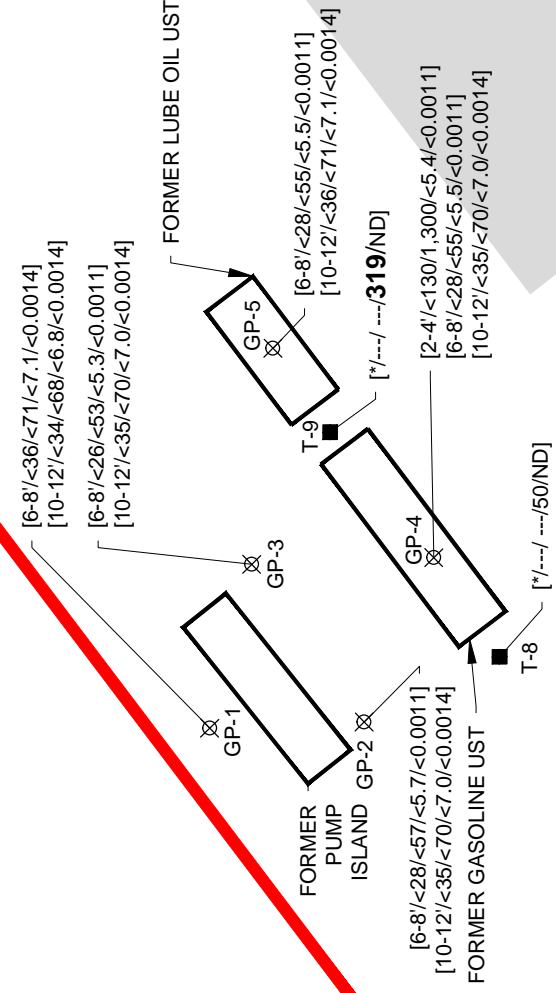
**FIGURE 3**

SAMPLE LOCATION MAP  
 FORMER SHOP BUILDING UST AREA  
 6050 EAST MARGINAL WAY SOUTH  
 SEATTLE, WASHINGTON

Washington | Bellingham | Seattle  
 Oregon  
 Portland | Bend | Baker City  
 California  
 Oakland | Sacramento | Irvine

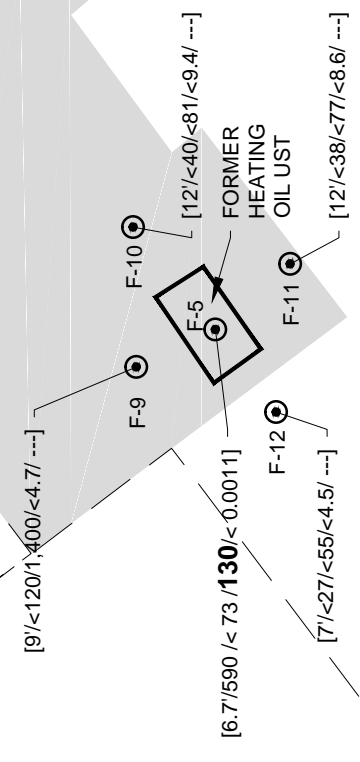
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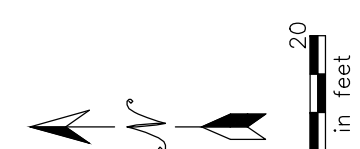
FORMER TRANSFER DOCK BUILDING

FORMER OFFICE BUILDING



**LEGEND**

- PROPERTY BOUNDARY
  - - - FORMER BUILDING FOOTPRINT
  - ▭ UNDERGROUND STORAGE TANK (UST) AREA
  - GP-3 ☒ BORING (GOLDER ASSOCIATES 2003)
  - F-13 ● BORING (FARALLON 2014)
  - T-8 ■ CONFIRMATIONAL SOIL SAMPLE ASSOCIATED WITH DECOMMISSIONING OF GASOLINE UST (BLYMER ENGINEERS 1988)
  - ▭ CONCRETE SURFACES
- ALL SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM [DEPTH/DRO/ORO/GRO/BENZENE]
- DEPTH IN FEET BELOW GROUND SURFACE
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- DRO = TPH AS DIESEL-RANGE ORGANICS
- BOLD** = INDICATES CONCENTRATIONS EXCEEDING WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD A CLEANUP LEVELS
- < = INDICATES CONCENTRATIONS NOT DETECTED AT OR EXCEEDING THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT
- - = NOT ANALYZED
- \* = SAMPLE DEPTH UNKNOWN
- ND = NOT DETECTED AT OR EXCEEDING THE LABORATORY DETECTION LIMITS; ACTUAL DETECTION LIMITS ARE NOT KNOWN
- ALL LOCATIONS ARE APPROXIMATE



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**FIGURE 5**

SOIL ANALYTICAL RESULTS  
FORMER NORTHWEST UST AREA  
6050 EAST MARGINAL WAY SOUTH  
SEATTLE, WASHINGTON

---

Washington | Bellingham | Seattle  
Oregon  
Portland | Bend | Baker City  
California  
Oakland | Sacramento | Irvine  
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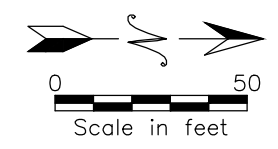
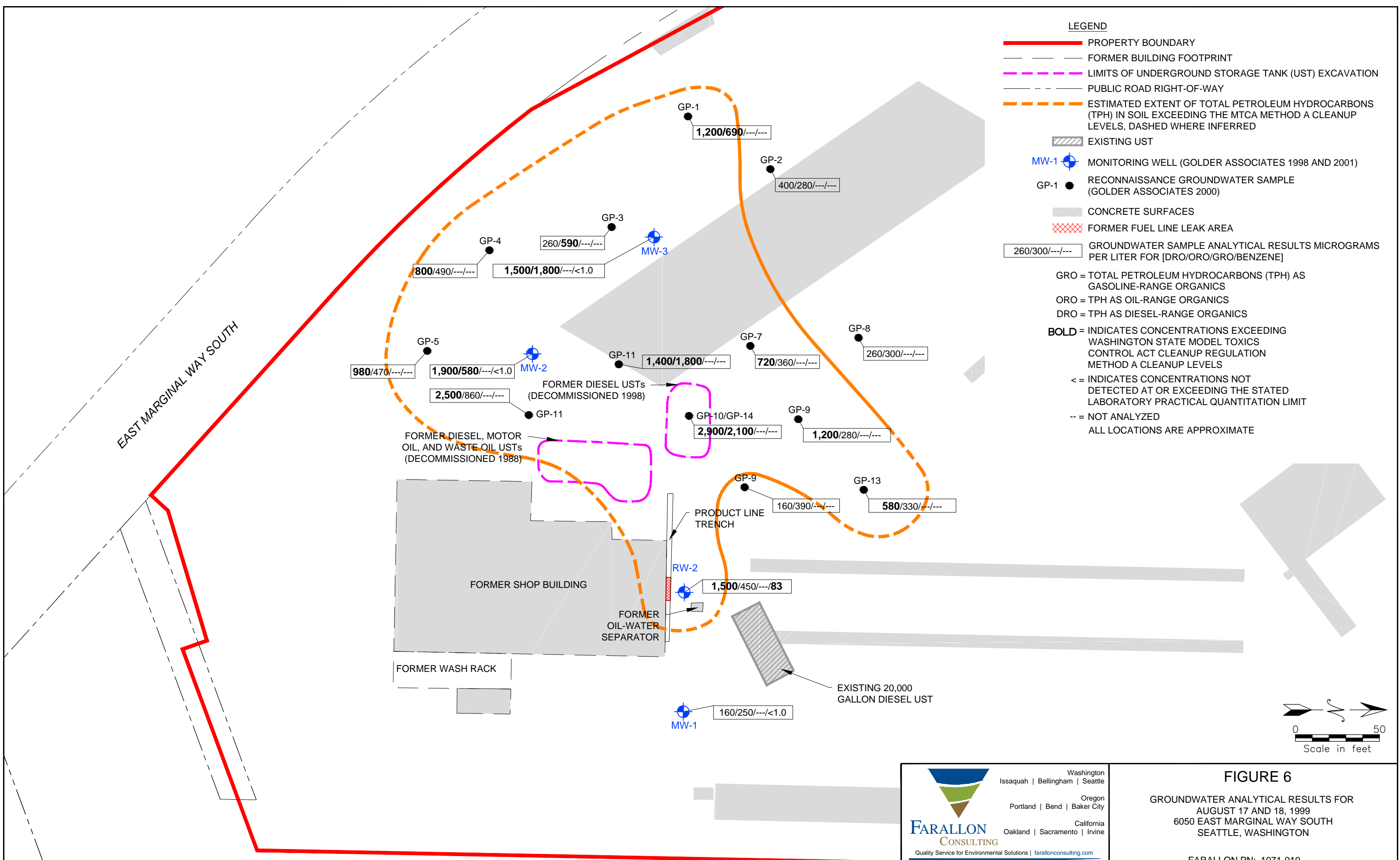
Drawn By: DJR

Checked By: DLM/DEW

Date: 11/1/2015 Disk Reference: 1071-010\_01C.DWG

**LEGEND**

- PROPERTY BOUNDARY
  - FORMER BUILDING FOOTPRINT
  - LIMITS OF UNDERGROUND STORAGE TANK (UST) EXCAVATION
  - PUBLIC ROAD RIGHT-OF-WAY
  - ESTIMATED EXTENT OF TOTAL PETROLEUM HYDROCARBONS (TPH) IN SOIL EXCEEDING THE MTCA METHOD A CLEANUP LEVELS, DASHED WHERE INFERRED
  - EXISTING UST
  - MONITORING WELL (GOLDER ASSOCIATES 1998 AND 2001)
  - RECONNAISSANCE GROUNDWATER SAMPLE (GOLDER ASSOCIATES 2000)
  - CONCRETE SURFACES
  - FORMER FUEL LINE LEAK AREA
  - 260/300/---/--- GROUNDWATER SAMPLE ANALYTICAL RESULTS MICROGRAMS PER LITER FOR [DRO/ORO/GRO/BENZENE]
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS
- BOLD** = INDICATES CONCENTRATIONS EXCEEDING WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD A CLEANUP LEVELS  
 < = INDICATES CONCENTRATIONS NOT DETECTED AT OR EXCEEDING THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT  
 -- = NOT ANALYZED  
 ALL LOCATIONS ARE APPROXIMATE



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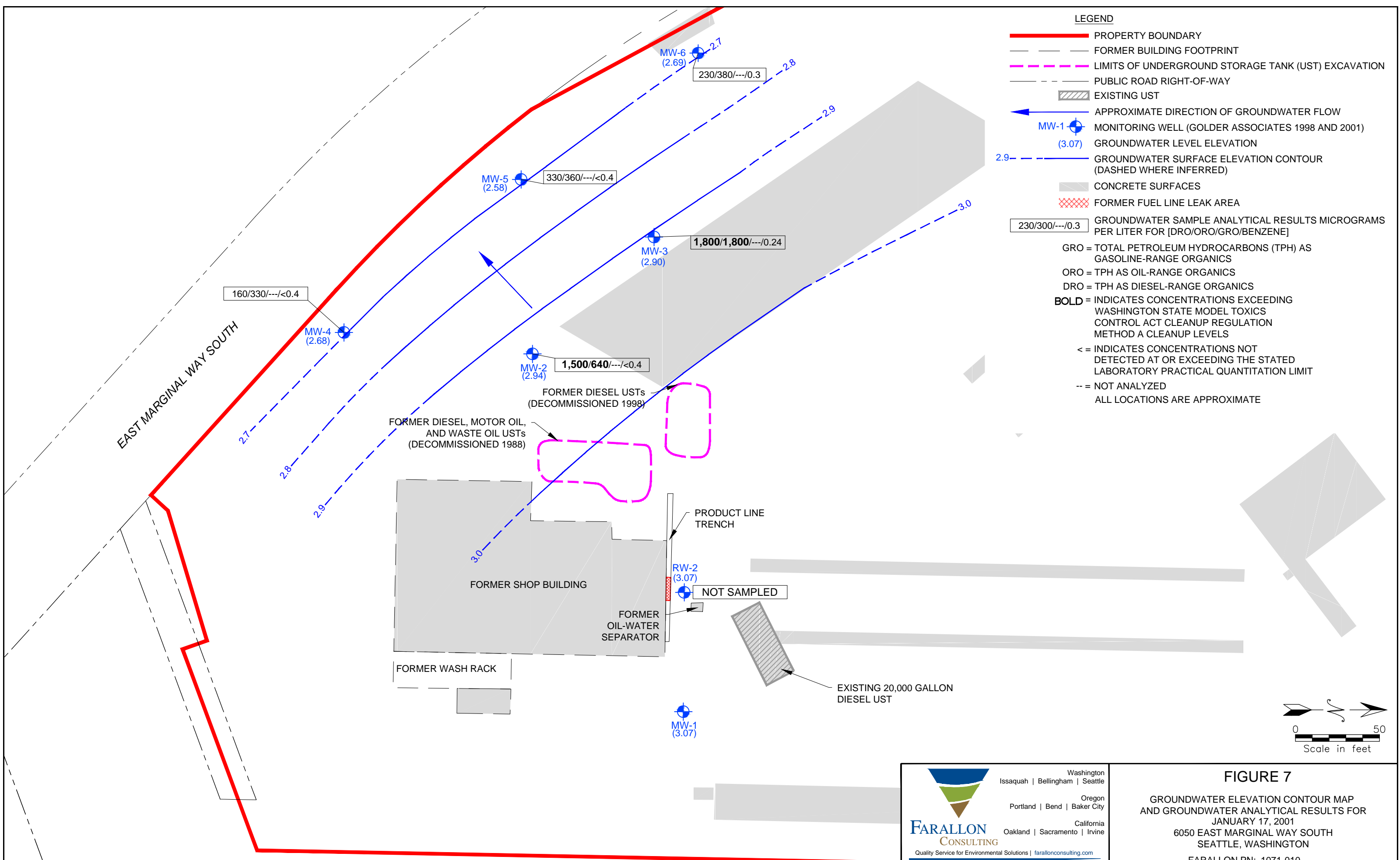
**FIGURE 6**  
 GROUNDWATER ANALYTICAL RESULTS FOR  
 AUGUST 17 AND 18, 1999  
 6050 EAST MARGINAL WAY SOUTH  
 SEATTLE, WASHINGTON

FARALLON PN: 1071-010



**LEGEND**

- PROPERTY BOUNDARY
- - - - - FORMER BUILDING FOOTPRINT
- - - - - LIMITS OF UNDERGROUND STORAGE TANK (UST) EXCAVATION
- - - - - PUBLIC ROAD RIGHT-OF-WAY
- EXISTING UST
- ← APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- ⊕ MW-1 (3.07) MONITORING WELL (GOLDER ASSOCIATES 1998 AND 2001)
- GROUNDWATER LEVEL ELEVATION
- - - - - GROUNDWATER SURFACE ELEVATION CONTOUR (DASHED WHERE INFERRED)
- CONCRETE SURFACES
- FORMER FUEL LINE LEAK AREA
- 230/300/---/0.3 GROUNDWATER SAMPLE ANALYTICAL RESULTS MICROGRAMS PER LITER FOR [DRO/ORO/GRO/BENZENE]
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS
- ORO = TPH AS OIL-RANGE ORGANICS
- DRO = TPH AS DIESEL-RANGE ORGANICS
- BOLD** = INDICATES CONCENTRATIONS EXCEEDING WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD A CLEANUP LEVELS
- < = INDICATES CONCENTRATIONS NOT DETECTED AT OR EXCEEDING THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT
- = NOT ANALYZED
- ALL LOCATIONS ARE APPROXIMATE



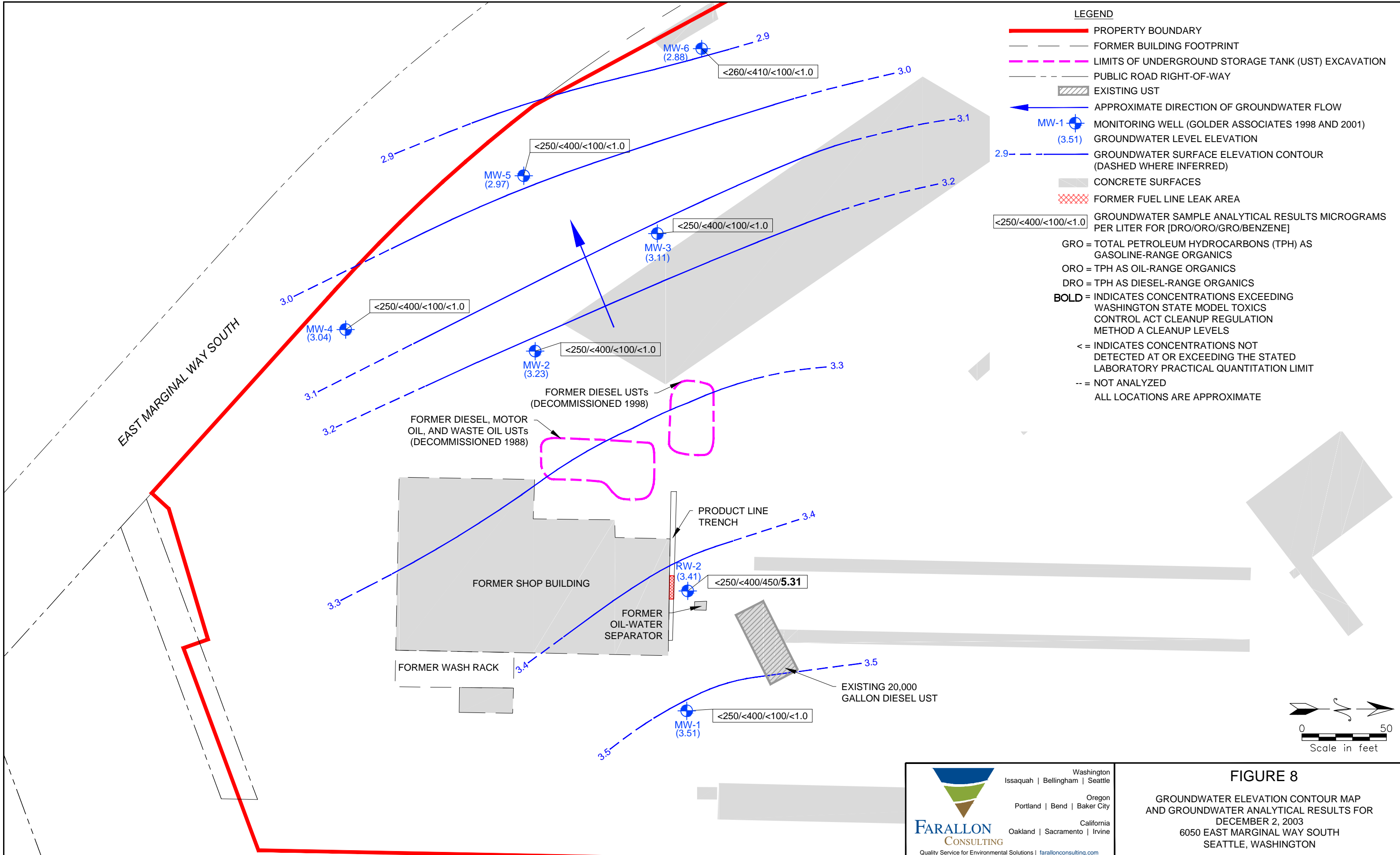
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Oregon  
Portland | Bend | Baker City

California  
Oakland | Sacramento | Irvine

**FIGURE 7**  
GROUNDWATER ELEVATION CONTOUR MAP  
AND GROUNDWATER ANALYTICAL RESULTS FOR  
JANUARY 17, 2001  
6050 EAST MARGINAL WAY SOUTH  
SEATTLE, WASHINGTON  
FARALLON PN: 1071-010



**FIGURE 8**

GROUNDWATER ELEVATION CONTOUR MAP  
AND GROUNDWATER ANALYTICAL RESULTS FOR  
DECEMBER 2, 2003  
6050 EAST MARGINAL WAY SOUTH  
SEATTLE, WASHINGTON

FARALLON PN: 1071-010

Washington  
Issaquah | Bellingham | Seattle

Oregon  
Portland | Bend | Baker City

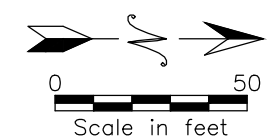
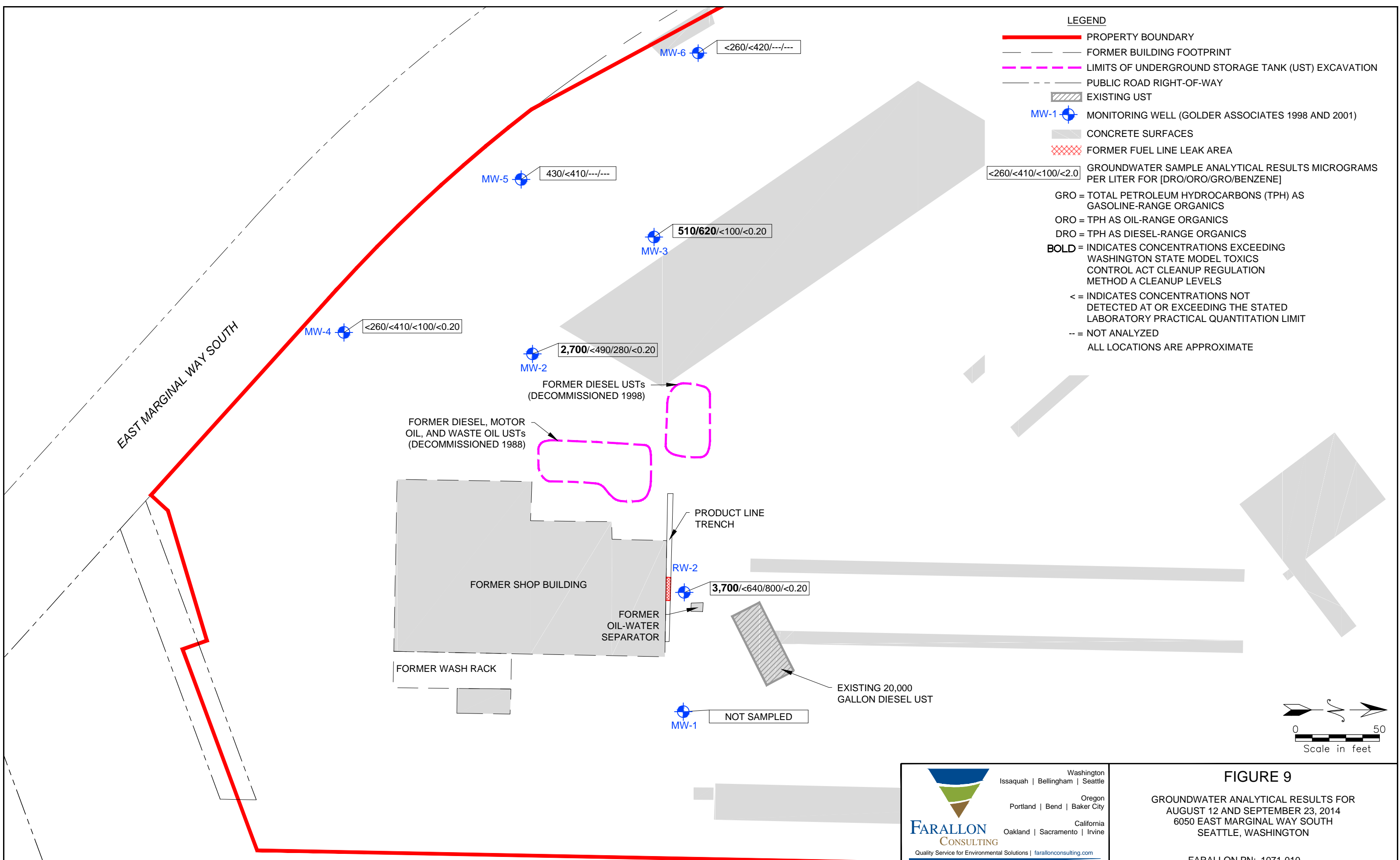
California  
Oakland | Sacramento | Irvine

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**LEGEND**

- PROPERTY BOUNDARY
  - FORMER BUILDING FOOTPRINT
  - LIMITS OF UNDERGROUND STORAGE TANK (UST) EXCAVATION
  - PUBLIC ROAD RIGHT-OF-WAY
  - EXISTING UST
  - MW-1 MONITORING WELL (GOLDER ASSOCIATES 1998 AND 2001)
  - CONCRETE SURFACES
  - FORMER FUEL LINE LEAK AREA
- <260/<410/<100/<2.0** GROUNDWATER SAMPLE ANALYTICAL RESULTS MICROGRAMS PER LITER FOR [DRO/ORO/GRO/BENZENE]
- GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS  
 ORO = TPH AS OIL-RANGE ORGANICS  
 DRO = TPH AS DIESEL-RANGE ORGANICS
- BOLD** = INDICATES CONCENTRATIONS EXCEEDING WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD A CLEANUP LEVELS
- <** = INDICATES CONCENTRATIONS NOT DETECTED AT OR EXCEEDING THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT
- = NOT ANALYZED
- ALL LOCATIONS ARE APPROXIMATE



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Portland | Bend | Baker City

California  
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**FIGURE 9**

GROUNDWATER ANALYTICAL RESULTS FOR  
 AUGUST 12 AND SEPTEMBER 23, 2014  
 6050 EAST MARGINAL WAY SOUTH  
 SEATTLE, WASHINGTON

FARALLON PN: 1071-010

## **TABLES**

REMEDIAL INVESTIGATION, FOCUSED FEASIBILITY STUDY,  
AND CLEANUP ACTION PLAN  
6050 East Marginal Way  
Seattle, Washington

Farallon PN: 1071-010

**Table 1**  
**Summary of Groundwater Elevation Data**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

<b>Monitoring Well Location</b>	<b>Date Measured</b>	<b>Top of Casing Elevation (feet)<sup>1</sup></b>	<b>Depth to Water (feet)<sup>2</sup></b>	<b>Groundwater Elevation (feet)<sup>3</sup></b>
MW-1_88 (Decommissioned 1/10/1990)	7/7/1988	99.23	7.78	91.45
	7/12/1988		8.02	91.21
	7/13/1988		7.79	91.44
	7/14/1988		8.39	90.84
	10/6/1988		8.41	90.82
	2/8/1989		7.58	91.65
	5/3/1989		7.23	92.00
	8/3/1989		7.51	91.72
	11/1/1989		7.54	91.69
MW-2A_88 (Decommissioned 1/10/1990)	7/7/1988	98.96	7.64	91.32
	7/12/1988		7.92	91.04
	7/13/1988		7.62	91.34
	7/14/1988		8.32	90.64
	10/6/1988		8.31	90.65
	2/8/1989		7.44	91.52
	5/3/1989		7.12	91.84
	8/3/1989		7.36	91.60
	11/1/1989		7.35	91.61
MW-3_88 (Decommissioned 1/10/1990)	7/7/1988	98.42	6.98	91.44
	7/12/1988		7.32	91.10
	7/13/1988		6.95	91.47
	7/14/1988		7.65	90.77
	10/6/1988		7.64	90.78
	2/8/1989		6.79	91.63
	5/3/1989		6.52	91.90
	8/3/1989		6.75	91.67
	11/1/1989		6.73	91.69
MW-4_88 (Decommissioned 1/10/1990)	7/7/1988	98.31	6.93	91.38
	7/12/1988		7.28	91.03
	7/13/1988		8.67*	89.64
	7/14/1988		7.64	90.67
	10/6/1988		7.63	90.68
	2/8/1989		6.90	91.41
	5/3/1989		6.40	91.91
	8/3/1989		6.71	91.60
	11/1/1989		6.68	91.63
MW-5_88 (Decommissioned 1/10/1990)	7/7/1988	98.73	7.31	91.42
	7/12/1988		7.66	91.07
	7/13/1988		7.25	91.48
	7/14/1988		8.01	90.72
	10/6/1988		7.98	90.75
	2/8/1989		7.14	91.59
	5/3/1989		6.82	91.91
	8/3/1989		7.10	91.63
	11/1/1989		7.08	91.65

**Table 1**  
**Summary of Groundwater Elevation Data**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

<b>Monitoring Well Location</b>	<b>Date Measured</b>	<b>Top of Casing Elevation (feet)<sup>1</sup></b>	<b>Depth to Water (feet)<sup>2</sup></b>	<b>Groundwater Elevation (feet)<sup>3</sup></b>
MW-1	8/17/1999	9.76	6.63	3.13
	1/17/2001		6.69	3.07
	6/7/2001		6.39	3.37
	12/3/2003		6.25	3.51
MW-2	8/17/1999	10.28	7.46	2.82
	1/17/2001		7.34	2.94
	6/7/2001		7.01	3.27
	12/3/2003		7.05	3.23
	8/12/2014		6.58	3.7
MW-3	8/17/1999	10.36	7.60	2.76
	1/17/2001		7.46	2.90
	6/7/2001		7.18	3.18
	12/3/2003		7.25	3.11
	8/12/2014		6.65	3.71
MW-4	1/17/2001	10.97	8.29	2.68
	6/7/2001		7.84	3.13
	12/3/2003		7.93	3.04
	8/12/2014		7.39	3.58
MW-5	1/17/2001	12.12	9.44	2.68
	6/7/2001		9.02	3.10
	12/3/2003		9.15	2.97
	9/23/2014		8.65	3.47
MW-6	1/17/2001	11.68	8.99	2.69
	6/7/2001		8.62	3.06
	12/3/2003		8.80	2.88
	9/23/2014		8.17	3.51
RW-2	8/17/1999	11.16	8.11	3.05
	1/17/2001		8.09	3.07
	6/7/2001		7.85	3.31
	12/3/2003		7.75	3.41
	8/12/2014		7.49	3.67

**NOTES:**

\* Reported measurement appears to be inaccurate.

<sup>1</sup> Elevation relative to an elevation datum of 100.00 feet for MW-1\_88, MW-2A\_88, MW-3\_88, MW-4\_88 and MW-5\_88.

Elevations based on National Geodetic Vertical Datum of 1929 for MW-1 through MW-6, and RW-2.

<sup>2</sup> In feet below top of well casing.

<sup>3</sup> Groundwater elevation = top of casing elevation - depth to water.

**Table 2**  
**Summary of Soil Analytical Results for TPH and BTEX**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Sampled By	Analytical Results (milligrams per kilogram)								
					DRO <sup>3</sup>	ORO <sup>3</sup>	GRO <sup>2</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	Ethylbenzene <sup>4</sup>	Total Xylenes <sup>4</sup>	m,p-Xylene	o-Xylene
T-1	T-1	Soil Pile Composite	04/25/1988	Blymyer <sup>6</sup>	41,294 a	---	---	---	---	---	---	---	---
T-2	T-2	Diesel Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	438 a	---	---	---	---	---	---	---	---
T-3	T-3	Diesel Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	43,602 a	---	---	---	---	---	---	---	---
T-4	T-4	Diesel Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	27,812 a	---	---	---	---	---	---	---	---
T-5	T-5	Diesel Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	238 a	---	---	---	---	---	---	---	---
T-6	T-6	Soil Pile Composite	04/25/1988	Blymyer <sup>6</sup>	---	---	80 a	N/D b	0.42 b	0.07 b	0.5 b	0.5 b	N/D b
T-7	T-7	Soil Pile Composite	04/25/1988	Blymyer <sup>6</sup>	---	---	731 a	N/D b	0.64 b	1.8 b	12.72 b	8.67 b	4.05 b
T-8	T-8	Gas Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	---	---	50 a	N/D b	0.18 b	N/D b	N/D b	N/D b	N/D b
T-9	T-9	Gas Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	---	---	319 a	N/D b	0.08 b	0.09 b	1.02 b	0.5 b	0.52 b
T-10	T-10	Diesel Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	4,446 a	2,045 c	---	---	---	---	---	---	---
T-11	T-11	Diesel Tank Excavation	04/25/1988	Blymyer <sup>6</sup>	12,643 a	11,970 c	---	---	---	---	---	---	---
S-1V	S-1V	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>6</sup>	3,389 a	4,274 c	---	---	---	---	---	---	---
S-1F	S-1F	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>6</sup>	2,939 a	3,383 c	---	---	---	---	---	---	---
S-2F	S-2F	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>6</sup>	3,187 a	4,072 c	---	---	---	---	---	---	---
S-2V	S-2V	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>6</sup>	98 a	193 c	---	---	---	---	---	---	---
MW-1_88	MW-1A	4 - 4.5	06/27/1988	Blymyer <sup>6</sup>	12 a	---	---	---	---	---	---	---	---
	MW-1B	9 - 9.5	06/27/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
	MW-1C	14 - 14.5	06/27/1988	Blymyer <sup>6</sup>	11 a	---	---	---	---	---	---	---	---
MW-2A_88	MW-2A	4 - 4.5	06/27/1988	Blymyer <sup>6</sup>	13 a	---	---	---	---	---	---	---	---
	MW-2B	9 - 9.5	06/27/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
	MW-2C	13.5 - 14	06/27/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
MW-3_88	MW-3A	4 - 4.5	06/27/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
	MW-3B	9 - 9.5	06/27/1988	Blymyer <sup>6</sup>	160 a	---	---	---	---	---	---	---	---
	MW-3C	14 - 14.5	06/27/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
MW-4_88	MW-4A	5	06/28/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
	MW-4B	10	06/28/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
	MW-4C	15	06/28/1988	Blymyer <sup>6</sup>	102 a	---	---	---	---	---	---	---	---
MW-5_88	MW-5A	5	06/28/1988	Blymyer <sup>6</sup>	4,797 a	---	---	---	---	---	---	---	---
	MW-5B	10	06/28/1988	Blymyer <sup>6</sup>	15 a	---	---	---	---	---	---	---	---
	MW-5C	15	06/28/1988	Blymyer <sup>6</sup>	<10 a	---	---	---	---	---	---	---	---
Soil Treatment Mound	MW-1122-A	Soil Pile	11/22/1988	GTI <sup>7</sup>	500 a	---	170 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-1122-B	Soil Pile	11/22/1988	GTI <sup>7</sup>	350 a	---	88 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-1122-C	Soil Pile	11/22/1988	GTI <sup>7</sup>	150 a	---	46 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-1122-D	Soil Pile	11/22/1988	GTI <sup>7</sup>	120 a	---	78 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-1122-E	Soil Pile	11/22/1988	GTI <sup>7</sup>	<10 a	---	11 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-1122-F	Soil Pile	11/22/1988	GTI <sup>7</sup>	82 a	---	58 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW23A	Soil Pile	2/3/1989	GTI <sup>7</sup>	170 a	---	52 a	<0.025 b	<1.0 b	<1.0 b	<1.0 b	---	---
Soil Treatment Mound	MW23B	Soil Pile	2/3/1989	GTI <sup>7</sup>	260 a	---	78 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW23C	Soil Pile	2/3/1989	GTI <sup>7</sup>	79 a	---	18 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW23D	Soil Pile	2/3/1989	GTI <sup>7</sup>	<10 a	---	18 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW23E	Soil Pile	2/3/1989	GTI <sup>7</sup>	120 a	---	110 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW23F	Soil Pile	2/3/1989	GTI <sup>7</sup>	330 a	---	41 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
<b>MTCA Method A Cleanup Levels<sup>5</sup></b>					<b>2,000</b>	<b>2,000</b>	<b>100</b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>NE</b>	<b>NE</b>

**Table 2**  
**Summary of Soil Analytical Results for TPH and BTEX**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Sampled By	Analytical Results (milligrams per kilogram)								
					DRO <sup>3</sup>	ORO <sup>3</sup>	GRO <sup>2</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	Ethylbenzene <sup>4</sup>	Total Xylenes <sup>4</sup>	m,p-Xylene	o-Xylene
Soil Treatment Mound	MW-36A	Soil Pile	3/6/1989	GTI <sup>7</sup>	320 a	---	<1 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-36B	Soil Pile	3/6/1989	GTI <sup>7</sup>	280 a	---	<1 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-36C	Soil Pile	3/6/1989	GTI <sup>7</sup>	430 a	---	<1 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-36D	Soil Pile	3/6/1989	GTI <sup>7</sup>	210 a	---	<1 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-36E	Soil Pile	3/6/1989	GTI <sup>7</sup>	190 a	---	<1 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	MW-36F	Soil Pile	3/6/1989	GTI <sup>7</sup>	150 a	---	<1 a	<0.025 b	<0.5 b	<0.5 b	<0.5 b	---	---
Soil Treatment Mound	DH52A	Soil Pile	5/2/1989	GTI <sup>7</sup>	170 a	---	---	---	---	---	---	---	---
Soil Treatment Mound	DH52C	Soil Pile	5/2/1989	GTI <sup>7</sup>	630 a	---	---	---	---	---	---	---	---
Soil Treatment Mound	DH52E	Soil Pile	5/2/1989	GTI <sup>7</sup>	100 a	---	---	---	---	---	---	---	---
Soil Treatment Mound	JD681/JD2	"Clean" Soil Pile Composite	6/8/1989	GTI <sup>7</sup>	21 a	---	---	---	---	---	---	---	---
Soil Treatment Mound	JD683/JD4	"Clean" Soil Pile Composite	6/8/1989	GTI <sup>7</sup>	520 a	---	---	---	---	---	---	---	---
Soil Treatment Mound	JD685/JD6	"Clean" Soil Pile Composite	6/8/1989	GTI <sup>7</sup>	<10 a	---	---	---	---	---	---	---	---
P-1	1764-P1-S-4	6 - 7	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P1-S-7	7 - 10	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
P-2	1764-P2-S-2	3.5 - 5	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P2-S-5	5 - 8	8/8/1997	S&W <sup>8</sup>	<b>19,000</b> d	---	---	---	---	---	---	---	---
P-3	1764-P3-S-2	3.5 - 5	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P3-S-5	5 - 8	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
P-4	1764-P4-S-2	3.5 - 5	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P4-S-5	5 - 8	8/8/1997	S&W <sup>8</sup>	<b>3,500</b> d	---	---	---	---	---	---	---	---
P-5	1764-P5-S-6	6 - 7.5	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P5-S-7.5	7.5 - 9	8/8/1997	S&W <sup>8</sup>	180 d	---	---	---	---	---	---	---	---
P-6	1764-P6-S-6	6 - 7.5	8/8/1997	S&W <sup>8</sup>	96 d	---	---	---	---	---	---	---	---
	1764-P6-S-7.5	7.5 - 9	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
P-7	1764-P7-S-6	6 - 7.5	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P7-S-7.5	7.5 - 9	8/8/1997	S&W <sup>8</sup>	90 d	---	---	---	---	---	---	---	---
P-8	1764-P8-S-6	6 - 7.5	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P8-S-7.5	7.5 - 9	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
P-9	1764-P9-S-5	5 - 6.5	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
	1764-P9-S-6.5	6.5 - 8	8/8/1997	S&W <sup>8</sup>	<20 d	---	---	---	---	---	---	---	---
P-10	1764-P10-S-6	6 - 7.5	8/8/1997	S&W <sup>8</sup>	<10 d	---	---	---	---	---	---	---	---
	1764-P10-S-7.5	7.5 - 9	8/8/1997	S&W <sup>8</sup>	<10 d	---	---	---	---	---	---	---	---
Product PipingTrench	CF-T1	2.2 - 2.7	4/7/1998	Golder <sup>9</sup>	---	---	---	<0.43 b	<0.43 b	<0.43 b	<1.29 b	<0.86 b	<0.43 b
Product PipingTrench	CF-T2	2.2 - 2.7	4/7/1998	Golder <sup>9</sup>	<13 d	<26 d	---	---	---	---	---	---	---
Product PipingTrench	CF-T3	2.0 - 2.5	4/7/1998	Golder <sup>9</sup>	20 d	53 d	---	---	---	---	---	---	---
MW-1	MW1-5.5	5.5 - 7.0	4/7/1998	Golder <sup>9</sup>	<18 d	<35 d	---	---	---	---	---	---	---
	MW1-7.0	7.0 - 8.5	4/7/1998	Golder <sup>9</sup>	<17 d	<35 d	---	---	---	---	---	---	---
MW-2	MW2-2.0	1.5 - 2.0	4/7/1998	Golder <sup>9</sup>	---	---	---	<0.48 b	<0.48 b	<0.48 b	<1.43 b	<0.95 b	<0.48 b
	MW2-5.5	5.5 - 7.0	4/7/1998	Golder <sup>9</sup>	18 d	<34 d	---	---	---	---	---	---	---
MW-3	MW3-5.0	5 - 6.5	4/7/1998	Golder <sup>9</sup>	<17 d	32 d	---	---	---	---	---	---	---
	MW3-6.5	6.5 - 8.0	4/7/1998	Golder <sup>9</sup>	<19 d	48 d	---	---	---	---	---	---	---
<b>MTCA Method A Cleanup Levels<sup>5</sup></b>					<b>2,000</b>	<b>2,000</b>	<b>100</b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>NE</b>	<b>NE</b>



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**6050 East Marginal Way South**  
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Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Sampled By	Analytical Results (milligrams per kilogram)								
					DRO <sup>3</sup>	ORO <sup>3</sup>	GRO <sup>2</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	Ethylbenzene <sup>4</sup>	Total Xylenes <sup>4</sup>	m,p-Xylene	o-Xylene
RW-1	RW1-7.0	7.0 - 8.5	4/7/1998	Golder <sup>9</sup>	13,000 d	520 d	---	<0.54 b	<0.54 b	<0.54 b	<1.64 b	<1.1 b	<0.54 b
	RW1-7.0D	7.0 - 8.5	4/7/1998	Golder <sup>9</sup>	8,800 d	<400 d	---	---	---	---	---	---	---
	RW1-13	13 - 14.5	4/7/1998	Golder <sup>9</sup>	18 d	<31 d	---	---	---	---	---	---	---
RW-2	RW2-4.0	4.0 - 5.5	4/8/1998	Golder <sup>9</sup>	12,000 d	<530 d	---	<0.4 b	4.4 b	7.4 b	48 b	30 b	18 b
	RW2-7.0	7.0 - 8.5	4/8/1998	Golder <sup>9</sup>	---	---	---	<0.53 b	<0.53 b	4.4 b	55 b	29 b	26 b
Diesel Tank Excavation North Sidewall	SW-1	8 - 10	7/27/1998	Fluor Daniel <sup>10</sup>	28,700 d	---	---	---	---	---	---	---	---
Diesel Tank Excavation South Sidewall	SW-2	8 - 10	7/27/1998	Fluor Daniel <sup>10</sup>	<10 d	---	---	---	---	---	---	---	---
Diesel Tank Excavation East Sidewall	SW-3	8 - 10	7/27/1998	Fluor Daniel <sup>10</sup>	<10 d	---	---	---	---	---	---	---	---
Diesel Tank Excavation West Sidewall	SW-4	8 - 10	7/27/1998	Fluor Daniel <sup>10</sup>	2,700 d	---	---	---	---	---	---	---	---
Diesel Tank Excavation Base - NE Corner	TPB-1	13	7/27/1998	Fluor Daniel <sup>10</sup>	72.1 d	---	---	---	---	---	---	---	---
Diesel Tank Excavation Base - SE Corner	TPB-3	13	7/27/1998	Fluor Daniel <sup>10</sup>	<10 d	---	---	---	---	---	---	---	---
East End of Product Lines	PL-1	3	7/29/1998	Fluor Daniel <sup>10</sup>	20.5 d	---	---	---	---	---	---	---	---
Center of Product Lines	PL-2	3	7/29/1998	Fluor Daniel <sup>10</sup>	4,780 d	---	---	---	---	---	---	---	---
West End of Product Lines	PL-3	3	7/29/1998	Fluor Daniel <sup>10</sup>	<10 d	---	---	---	---	---	---	---	---
SP-1	SP1-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	2,300	350	---	---	---	---	---	---	---
	SP1-(8-11)	8-11	1/11/2001	Golder <sup>9</sup>	2,700	82	---	<0.023	0.094	0.22	0.82	0.39	0.43
SP-2	SP2-(5-8)	5-8	1/11/2001	Golder <sup>9</sup>	45	45	---	---	---	---	---	---	---
SP-3	SP3-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	1,800	190	---	---	---	---	---	---	---
SP-4	SP4-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	<35	<70	---	---	---	---	---	---	---
SP-5	SP5-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	7,300	500	---	<0.019	0.25	2.9	6.1	3.8	2.3
	SP5-(8-11)	8 - 11	1/11/2001	Golder <sup>9</sup>	1,000	240	---	---	---	---	---	---	---
SP-6	SP6-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	1,500	85	---	<0.027	0.09	0.76	1.98	1.1	0.88
SP-7	SP7-(8-11)	8 - 11	1/11/2001	Golder <sup>9</sup>	820	220	---	---	---	---	---	---	---
SP-8	SP8-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	23,000	460	---	0.16	1.5	18	43	24	19
	SP8-(8-11)	8 - 11	1/11/2001	Golder <sup>9</sup>	5,300	160	---	---	---	---	---	---	---
SP-9	SP9-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	8,200	210	---	0.073	0.44	5.8	9.7	8.1	1.6
	SP9-(8-11)	8 - 11	1/11/2001	Golder <sup>9</sup>	1,600	49	---	---	---	---	---	---	---
SP-10	SP10-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	19	120	---	---	---	---	---	---	---
SP-11	SP11-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	1,100	66	---	<0.025	<0.05	<0.05	0.28	0.17	0.11
SP-12	SP12-(10-12)	10-12	1/11/2001	Golder <sup>9</sup>	560	45	---	---	---	---	---	---	---
SP-13	SP13-(5-8)	5 - 8	1/11/2001	Golder <sup>9</sup>	<33	<65	---	---	---	---	---	---	---
GP-1	GP-1 (6-8)	6 - 8	12/2/2003	Golder <sup>9</sup>	<36	<71	<7.1	<0.0014	0.0020	<0.0014	<0.0043	<0.0029	<0.0014
	GP-1 (10-12)	10 - 12	12/2/2003	Golder <sup>9</sup>	<34	<68	<6.8	<0.0014	<0.0014	<0.0014	<0.0041	<0.0027	<0.0014
GP-2	GP-2 (6-8)	6 - 8	12/2/2003	Golder <sup>9</sup>	<28	<57	<5.7	<0.0011	<0.0011	<0.0011	<0.0034	<0.0023	<0.0011
	GP-2 (10-12)	10 - 12	12/2/2003	Golder <sup>9</sup>	<35	<70	<7.0	<0.0014	<0.0014	<0.0014	<0.0042	<0.0028	<0.0014
GP-3	GP-3 (6-8)	6 - 8	12/2/2003	Golder <sup>9</sup>	<26	<53	<5.3	<0.0011	<0.0011	<0.0011	<0.0032	<0.0021	<0.0011
	GP-3 (10-12)	10 - 12	12/2/2003	Golder <sup>9</sup>	<35	<70	<7.0	<0.0014	<0.0014	<0.0014	<0.0042	<0.0028	<0.0014
GP-4	GP-4 (2-4)	2 - 4	12/2/2003	Golder <sup>9</sup>	<130	1,300	<5.4	<0.0011	<0.0011	<0.0011	<0.0033	<0.0022	<0.0011
	GP-44 (2-4')	2 - 4 (duplicate)	12/2/2003	Golder <sup>9</sup>	<130	800	<5.4	<0.0011	0.0011	<0.0011	<0.0033	<0.0022	<0.0011
	GP-4 (6-8)	6 - 8	12/2/2003	Golder <sup>9</sup>	<28	<55	<5.5	<0.0011	<0.0011	<0.0011	<0.0033	<0.0022	<0.0011
	GP-4 (10-12)	10 - 12	12/2/2003	Golder <sup>9</sup>	<35	<70	<7.0	<0.0014	<0.0014	<0.0014	<0.0042	<0.0028	<0.0014
<b>MTCA Method A Cleanup Levels<sup>5</sup></b>					<b>2,000</b>	<b>2,000</b>	<b>100</b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>NE</b>	<b>NE</b>

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**Seattle, Washington**  
**Farallon PN: 1071-010**

Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Sampled By	Analytical Results (milligrams per kilogram)								
					DRO <sup>3</sup>	ORO <sup>3</sup>	GRO <sup>2</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	Ethylbenzene <sup>4</sup>	Total Xylenes <sup>4</sup>	m,p-Xylene	o-Xylene
GP-5	GP-5 (6-8)	6 - 8	12/2/2003	Golder <sup>9</sup>	<28	<55	<5.5	<0.0011	<0.0011	<0.0011	<0.0033	<0.0022	<0.0011
	GP-5 (10-12)	10 - 12	12/2/2003	Golder <sup>9</sup>	<36	<71	<7.1	<0.0014	<0.0014	<0.0014	<0.0042	<0.0028	<0.0014
GP-6	GP-6 (0-2.5)	0 - 2.5	12/2/2003	Golder <sup>9</sup>	<270	<b>4,000</b>	<5.3	<0.0011	<0.0011	<0.0011	<0.0032	<0.0021	<0.0011
GP-7	GP-7 (6-8')	6 - 8	12/2/2003	Golder <sup>9</sup>	<33	<67	<6.7	<0.0013	<0.0013	<0.0013	<0.0040	<0.0027	<0.0013
	GP-7 (10-12')	10 - 12	12/2/2003	Golder <sup>9</sup>	<35	<70	<7.0	<0.0014	<0.0014	<0.0014	<0.0043	<0.0029	<0.0014
GP-8	GP-8 (6-8')	6 - 8	12/2/2003	Golder <sup>9</sup>	<36	<72	<7.2	<0.0014	0.0016	<0.0014	<0.0043	<0.0029	<0.0014
	GP-8 (10-12')	10 - 12	12/2/2003	Golder <sup>9</sup>	<33	<66	<6.6	<0.0013	<0.0013	<0.0013	<0.0039	<0.0026	<0.0013
F-5	F5-6.7-081314	6.7	08/13/2014	Farallon	590	< 73	<b>130</b>	< 0.0011	< 0.0056	0.010	0.0069	---	---
F-8	F8-5.0-081314	5	08/13/2014	Farallon	1,000	< 64	<b>190</b>	< 0.0011	< 0.0054	0.0039	0.014	0.014	< 0.0011
F-9	F9-9.0-092214	9	09/22/2014	Farallon	<120	1,400	<4.7	---	---	---	---	---	---
F-10	F10-12.0-092214	12	09/22/2014	Farallon	<40	<81	<9.4	---	---	---	---	---	---
F-11	F11-12.0-092214	12	09/22/2014	Farallon	<38	<77	<8.6	---	---	---	---	---	---
F-12	F12-7.0-092214	7	09/22/2014	Farallon	<27	<55	<4.5	---	---	---	---	---	---
F-13	F13-6.7-092214	6.7	09/22/2014	Farallon	440	<54	---	---	---	---	---	---	---
F-14	F14-7.0-092214	7	09/22/2014	Farallon	<b>5,700</b>	<270	---	---	---	---	---	---	---
F-15	F15-7.4-092214	7.4	09/22/2014	Farallon	<38	<77	<7.9	---	---	---	---	---	---
F-16	F16-7.0-092214	7	09/22/2014	Farallon	<40	<80	<10	---	---	---	---	---	---
F-17	F17-8.0-092214	8	09/22/2014	Farallon	380	<59	<3.1	---	---	---	---	---	---
F-18	F18-8.0-092214	8	09/22/2014	Farallon	<b>9,700</b>	<580	---	---	---	---	---	---	---
<b>MTCA Method A Cleanup Levels<sup>5</sup></b>					<b>2,000</b>	<b>2,000</b>	<b>100</b>	<b>0.03</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>NE</b>	<b>NE</b>

**NOTES:**

Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

--- Denotes sample not analyzed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by Northwest Method NWTPH-Gx unless otherwise noted.

<sup>3</sup>Analyzed by Northwest Method NWTPH-Dx unless otherwise noted.

<sup>4</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260B or 8260C unless otherwise noted.

<sup>5</sup>MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>6</sup>Blymyer Engineers, Inc.

<sup>7</sup>Groundwater Technology, Inc.

<sup>8</sup>Shannon & Wilson, Inc.

<sup>9</sup>Golder Associates Inc.

<sup>10</sup>Fluor Daniel GTI, Inc.

<sup>11</sup>Analyzed by EPA Method 8015 Modified.

<sup>12</sup>Analyzed by EPA Method 8020.

<sup>13</sup>Analyzed by EPA Method 418.1.

<sup>14</sup>Analyzed by Washington Total Petroleum Hydrocarbons as Diesel (WTPH-D) Method

DRO = Total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

N/D = Not detected and historical reporting limit is unknown

ORO = TPH as oil-range organics

**Table 3a**  
**Summary of Soil Analytical Results for VOCs**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Depth (feet) <sup>2</sup>	Sample Date	Sampled By	Analytical Results <sup>1</sup> (milligrams per kilogram)																		
					1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	2-Butanone (Methyl ethyl ketone)	Acetone	Carbon Disulfide	cis-1,2-Dichloroethene	Isopropylbenzene	Methyl tertiary butyl ether	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Tert-Butylbenzene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride	
S-1V	S-1V <sup>a</sup>	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>5</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1	<1	--	
S-1F	S-1F <sup>a</sup>	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>5</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<1	<1	<1	--	
Product Piping Trench	CF-T1 <sup>b</sup>	2.2 - 2.7	4/7/1998	Golder <sup>6</sup>	--	--	--	--	--	--	<0.43	--	--	--	--	--	--	--	--	--	--	--	
MW-2	MW2-2.0 <sup>b</sup>	1.5 - 2.0	4/7/1998	Golder <sup>6</sup>	--	--	--	--	--	--	<0.48	--	--	--	--	--	--	--	--	--	--	--	
RW-1	RW1-7.0 <sup>b</sup>	7.0 - 8.5	4/7/1998	Golder <sup>6</sup>	--	--	--	--	--	--	<0.54	--	--	--	--	--	--	--	--	--	--	--	
RW-2	RW2-4.0 <sup>b</sup>	4.0 - 5.5	4/8/1998	Golder <sup>6</sup>	--	--	--	--	--	--	<0.4	--	--	--	--	--	--	--	--	--	--	--	
	RW2-7.0 <sup>b</sup>	7.0 - 8.5	4/8/1998	Golder <sup>6</sup>	--	--	--	--	--	--	<0.53	--	--	--	--	--	--	--	--	--	--	--	
SP-1	SP1-(8-11)	8 - 11	1/11/2001	Golder <sup>6</sup>	--	--	--	--	--	--	<0.23	--	--	--	--	--	--	--	--	--	--	--	
SP-5	SP5-(5-8)	5 - 8	1/11/2001	Golder <sup>6</sup>	--	--	--	--	--	--	<0.19	--	--	--	--	--	--	--	--	--	--	--	
SP-6	SP6-(5-8)	5 - 8	1/11/2001	Golder <sup>6</sup>	--	--	--	--	--	--	<0.27	--	--	--	--	--	--	--	--	--	--	--	
SP-8	SP8-(5-8)	5 - 8	1/11/2001	Golder <sup>6</sup>	--	--	--	--	--	--	<0.21	--	--	--	--	--	--	--	--	--	--	--	
SP-9	SP9-(5-8)	5 - 8	1/11/2001	Golder <sup>6</sup>	--	--	--	--	--	--	<0.22	--	--	--	--	--	--	--	--	--	--	--	
SP-11	SP11-(5-8)	5 - 8	1/11/2001	Golder <sup>6</sup>	--	--	--	--	--	--	<0.25	--	--	--	--	--	--	--	--	--	--	--	
GP-1	GP-1 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	<0.0071	<0.0071	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	
	GP-1 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	0.0084	0.036	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	
GP-2	GP-2 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0011	<0.0011	<0.0057	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	
	GP-2 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	<0.0070	0.094	0.0026	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	
GP-3	GP-3 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0011	<0.0011	<0.0053	<0.0053	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	
	GP-3 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	0.034	0.15	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	
GP-4	GP-4 (2-4)	2 - 4	12/2/2003	Golder <sup>6</sup>	<0.0011	<0.0011	<0.0054	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	
	GP-44 (2-4) <sup>a</sup>	2 - 4 (duplicate)	12/2/2003	Golder <sup>6</sup>	<0.0011	<0.0011	<0.0054	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.0013	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	
	GP-4 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0011	<0.0011	<0.0055	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	
GP-4	GP-4 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	0.017	0.090	0.0027	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	
	GP-5 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0011	<0.0011	<0.0055	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	
GP-5	GP-5 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	0.048	0.23	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	
	GP-6 (0-2.5)	0 - 2.5	12/2/2003	Golder <sup>6</sup>	0.0012	<0.0011	<0.0053	<0.0053	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.0015	<0.0011	<0.0011	<0.0011	<0.0011	0.0052	<0.0011	<0.0011	<0.0011	
GP-7	GP-7 (6-8')	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0013	<0.0013	<0.0067	0.012	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	
	GP-7 (10-12')	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	0.015	0.076	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	
GP-8	GP-8 (6-8')	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0014	<0.0014	<0.0072	<0.0072	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	0.0096	<0.0014	<0.0014	<0.0014	
	GP-8 (10-12')	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0013	<0.0013	0.011	0.040	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	
F-5	F5-6.7-081314	6.7	08/13/2014	Farallon	0.027	< 0.0011	0.026	0.077	0.0021	< 0.0011	0.016	< 0.0011	0.12	0.19	0.049	0.052	0.062	0.0020	< 0.0011	< 0.0011	< 0.0011	< 0.0011	
F-8	F8-5.0-081314	5	08/13/2014	Farallon	0.026	0.0082	0.0096	0.029	< 0.0011	< 0.0011	0.011	< 0.0011	0.017	0.032	0.013	0.0066	0.042	0.0017	< 0.0011	< 0.0011	< 0.0011	< 0.0011	
<b>MTCA Method A Cleanup Levels<sup>3</sup></b>					NE	NE	NE	NE	NE	NE	NE	NE	0.1	5	NE	NE	NE	NE	0.05	NE	0.03	NE	
<b>MTCA Method B Cleanup Levels (Direct Contact and Ingestion Pathway)<sup>4</sup></b>					NE	800	48,000	72,000	8,000	720	8,000	556	1,600	4,000	8,000	NE	8,000	8,000	476	1,600	12	0.67	
<b>MTCA Method B Cleanup Levels (Protection of Groundwater, Vadose/Saturated Zones)<sup>4</sup></b>					NE	NE	NE	28.9/2.07	NE	NE	NE	NE	0.103/0.00723	5	NE	NE	NE	NE	NE	0.0499/0.00276	0.543/0.0325	0.0252/0.00152	0.00167/0.0000885

**NOTES:**

Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A or B cleanup levels.  
 < denotes analyte not detected at or exceeding the reporting limit listed.  
 -- denotes sample not analyzed.

Only select analytes and analytes with detections exceeding the laboratory reporting limit are shown.  
<sup>1</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260C unless otherwise noted.  
<sup>2</sup>Depth in feet below ground surface.

<sup>3</sup>MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>4</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from

CLARC Master spreadsheet downloaded on 9/24/2015 from https://fortress.wa.gov/ecy/clarc/CLARCDATA/Tables.aspx

<sup>5</sup>Blymyer Engineers, Inc.

<sup>6</sup>Golder Associates Inc.

<sup>a</sup>Analyzed by EPA Method 601.

<sup>b</sup>Analyzed by EPA Method 8020.

Farallon = Farallon Consulting, L.L.C.

NE = Cleanup level not established

VOCs = volatile organic compounds

**Table 3b  
Summary of Soil Analytical Results for Other VOCs  
6050 East Marginal Way South  
Seattle, Washington  
Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Depth (feet) <sup>2</sup>	Sample Date	Sampled By	Analytical Results <sup>1</sup> (milligrams per kilogram)															
					Methylene Chloride	1,1-Dichloroethene	1,2-Dichloroethane	Chloroform	Freon	1,1,1-Trichloroethane	Bromodichloromethane	Carbon Tetrachloride	1,2-Dichloropropane	trans-1,3-dichloropropene	cis-1,3-Dichloropropene	1,1,2-Trichloroethane	Chlorodibromomethane	Bromoform	1,1,2,2-Tetrachloroethane	Chlorobenzene
S-1V	S-1V <sup>a</sup>	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>5</sup>	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
S-1F	S-1F <sup>a</sup>	Waste Oil Tank Excavation	06/29/1988	Blymyer <sup>5</sup>	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-1	GP-1 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0071	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	GP-1 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0068	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
GP-2	GP-2 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	GP-2 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0070	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
GP-3	GP-3 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0053	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	GP-3 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0070	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
GP-4	GP-4 (2-4)	2 - 4	12/2/2003	Golder <sup>6</sup>	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	GP-44 (2-4')	2 - 4 (duplicate)	12/2/2003	Golder <sup>6</sup>	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	GP-4 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	GP-4 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0070	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
GP-5	GP-5 (6-8)	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	GP-5 (10-12)	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0071	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
GP-6	GP-6 (0-2.5)	0 - 2.5	12/2/2003	Golder <sup>6</sup>	<0.0053	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
GP-7	GP-7 (6-8')	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0067	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
	GP-7 (10-12')	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0070	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
GP-8	GP-8 (6-8')	6 - 8	12/2/2003	Golder <sup>6</sup>	<0.0072	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014
	GP-8 (10-12')	10 - 12	12/2/2003	Golder <sup>6</sup>	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
<b>MTCA Method A Cleanup Levels<sup>3</sup></b>					<b>0.02</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>2</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
<b>MTCA Method B Cleanup Levels (Direct Contact and Ingestion Pathway)<sup>4</sup></b>					<b>500</b>	<b>4,000</b>	<b>11</b>	<b>32.3</b>	<b>NE</b>	<b>160,000</b>	<b>16.1</b>	<b>14.3</b>	<b>27.8</b>	<b>NE</b>	<b>NE</b>	<b>17.5</b>	<b>11.9</b>	<b>127</b>	<b>5</b>	<b>1,600</b>
<b>MTCA Method B Cleanup Levels (Protection of Groundwater, Vadose/Saturated Zones)<sup>4</sup></b>					<b>0.0215/0.00148</b>	<b>0.0457/0.00246</b>	<b>0.0231/0.00156</b>	<b>0.0736/0.00479</b>	<b>NE</b>	<b>1.49/0.0843</b>	<b>0.0392/0.0026</b>	<b>0.0416/0.00219</b>	<b>0.0253/0.00167</b>	<b>NE</b>	<b>NE</b>	<b>0.0277/0.00181</b>	<b>0.0276/0.00182</b>	<b>0.362/0.0229</b>	<b>0.00122/0.00008</b>	<b>0.862/0.0511</b>

NOTES:

Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A or B cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

<sup>a</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 601.

<sup>1</sup>Analyzed by EPA Method 8260B unless otherwise noted.

<sup>2</sup>Depth in feet below ground surface, if known.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses,

Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>4</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from

CLARC Master spreadsheet downloaded on 9/24/2015 from <https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx>

<sup>5</sup>Blymyer Engineers, Inc.

<sup>6</sup>Golder Associates Inc.

Farallon = Farallon Consulting, L.L.C.

NE = Cleanup level not established

VOCs = volatile organic compounds

**Table 4**  
**Summary of Soil Analytical Results for PCBs**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Depth (feet) <sup>1</sup>	Sample Date	Sampled By	Analytical Results <sup>2</sup> (milligrams per kilogram)						
					Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
F-5	F5-6.7-081314	6.7	08/13/2014	Farallon	< 0.069	< 0.069	< 0.069	< 0.069	< 0.069	< 0.069	< 0.069
F-8	F8-5.0-081314	5.0	08/13/2014	Farallon	<0.064	<0.064	<0.064	<0.064	<0.064	<0.064	<0.064
F-13	F13-6.7-092214	6.7	09/22/2014	Farallon	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054
F-18	F18-8.0-092214	8.0	09/22/2014	Farallon	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056

**NOTES:**

< denotes analyte not detected at or exceeding the reporting limit listed.

<sup>1</sup>Depth in feet below ground surface.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8082A.

Farallon = Farallon Consulting, L.L.C.

PCB = polychlorinated biphenyl compound

**Table 5  
Summary of Soil Analytical Results for PAHs  
6050 East Marginal Way South  
Seattle, Washington  
Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Depth (feet) <sup>2</sup>	Sample Date	Sampled By	Analytical Results <sup>1</sup> (milligrams per kilogram)																	
					Polycyclic Aromatic Hydrocarbons (PAHs)										Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)						Total cPAHs TTEC	
					2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene		Dibenz(a,h)anthracene
Product Piping Trench	CF-T1 <sup>b</sup>	2.2 - 2.7	4/7/1998	Golder <sup>5</sup>	<0.013	0.21	<0.014	<0.012	<0.0092	0.21	0.21	<0.015	<0.01	0.68	0.052	0.097	<0.0077	<0.012	<0.0061	<0.012	<0.0083	0.01122
MW-2	MW2-2.0 <sup>b</sup>	1.5 - 2.0	4/7/1998	Golder <sup>5</sup>	0.14	0.071	<0.015	0.12	0.033	0.18	0.15	0.049	0.22	0.19	0.06	0.17	0.063	0.047	0.049	<0.012	<0.0088	0.06874
RW-1	RW1-7.0 <sup>b</sup>	7.0 - 8.5	4/7/1998	Golder <sup>5</sup>	34	1.8	<0.017	2.2	<0.011	<0.011	2.5	<b>6.2</b>	7	0.62	0.094	<0.0098	<0.0094	<0.015	<0.0074	<0.014	<0.01	0.015569
RW-2	RW2-4.0 <sup>b</sup>	4.0 - 5.5	4/8/1998	Golder <sup>5</sup>	16	1.1	<0.014	<0.012	<0.011	<0.0085	1.9	<b>8.1</b>	4.9	0.7	<0.0065	<0.0079	<0.0076	<0.012	<0.006	<0.012	<0.0082	0.0053545
	RW2-7.0 <sup>b</sup>	7.0 - 8.5	4/8/1998	Golder <sup>5</sup>	11	0.93	<0.017	<0.015	<0.011	<0.011	2	<b>6.5</b>	3.6	0.63	<0.008	<0.0098	<0.0094	<0.015	<0.0074	<0.014	<0.01	0.006569
SP-1	SP1-(8-11)	8 - 11	1/11/2001	Golder <sup>5</sup>	6.5	0.41	0.51	<0.022	<0.022	<0.022	0.87	0.23	1.3	0.07	<0.022	0.037	<0.022	<0.022	<0.022	<0.022	<0.022	0.00697
SP-5	SP5-(5-8)	5 - 8	1/11/2001	Golder <sup>5</sup>	3.7	0.69	0.48	<0.018	<0.018	<0.018	1.3	3.7	2.6	0.78	0.11	0.097	<0.018	<0.018	<0.018	<0.018	<0.018	0.02457
SP-6	SP6-(5-8)	5 - 8	1/11/2001	Golder <sup>5</sup>	4.1	0.26	<0.027	<0.027	<0.027	<0.027	0.55	1.7	0.92	0.16	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	0.020385
SP-8	SP8-(5-8)	5 - 8	1/11/2001	Golder <sup>5</sup>	50	5.7	1.3	<0.1	<0.1	<0.1	6	<b>19</b>	10	2.3	<0.1	0.22	<0.1	<0.1	<0.1	<0.1	<0.1	0.0772
SP-9	SP9-(5-8)	5 - 8	1/11/2001	Golder <sup>5</sup>	23	3.8	<0.1	<0.1	<0.1	<0.1	4.1	<b>7.4</b>	4.7	0.94	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0755
SP-11	SP11-(5-8)	5 - 8	1/11/2001	Golder <sup>5</sup>	3	<0.023	0.29	<0.023	<0.023	0.054	0.39	0.97	0.67	0.035	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	0.017365
<b>MTCA Method A Cleanup Levels<sup>3</sup></b>					NE	NE	NE	NE	NE	NE	NE	<b>5</b>	NE	NE							<b>0.1</b>	
<b>MTCA Method B Cleanup Levels (Direct Contact and Leaching Pathway)<sup>4</sup></b>					<b>320</b>	<b>4,800</b>	NE	<b>24,000</b>	NE	<b>3,200</b>	<b>3,200</b>	<b>1,600</b>	NE	<b>2,400</b>							<b>0.137</b>	
<b>MTCA Method B Cleanup Levels (Protection of Groundwater, Vadose/Saturated Zones)<sup>4</sup></b>					NE	<b>97.9/4.98</b>	NE	<b>2,270/114</b>	NE	<b>631/31.6</b>	<b>101/5.12</b>	<b>4.45/0.236</b>	NE	<b>655/32.8</b>							<b>2.33/0.116</b>	

**NOTES:**

Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A or B cleanup levels.  
 < denotes analyte not detected at or exceeding the reporting limit listed.  
 Only select analytes and analytes with detections exceeding the laboratory reporting limit are shown.  
<sup>1</sup>Analyzed by U.S. Environmental Protection Agency Method 8270 unless otherwise noted.  
<sup>2</sup>Depth in feet below ground surface.  
<sup>3</sup>MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.  
<sup>4</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from CLARC Master spreadsheet downloaded on 9/24/2015 from <https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx>  
<sup>5</sup>Golder Associates Inc.

Farallon = Farallon Consulting, L.L.C.  
 NE = Cleanup level not established  
 TTEC = Total Toxicity Equivalent Concentration  
 VOCs = volatile organic compounds

**Table 6**  
**Summary of Soil Analytical Results for Metals**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Depth (feet bgs) <sup>1</sup>	Sampled By	Analytical Results (milligrams per kilogram) <sup>2</sup>							
					Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
S-1V	S-1V	06/29/1988	Waste Oil Tank Excavation	Blymyer <sup>5</sup>	<0.1	<2	<0.1	9.1	14.2	<0.05	<0.1	<0.1
S-1F	S-1F	06/29/1988	Waste Oil Tank Excavation	Blymyer <sup>5</sup>	<0.1	<2	<0.1	7.2	9.9	<0.05	<0.1	<0.1
S-2F	S-2F	06/29/1988	Waste Oil Tank Excavation	Blymyer <sup>5</sup>	<0.1	<2	<0.1	9.9	11.0	<0.05	<0.1	<0.1
S-2V	S-2V	06/29/1988	Waste Oil Tank Excavation	Blymyer <sup>5</sup>	<0.1	<2	<0.1	11.3	8.6	<0.05	<0.1	<0.1
<b>MTCA Method A Soil Cleanup Levels, Unrestricted Land Use<sup>3</sup></b>					<b>20</b>	<b>NE</b>	<b>2</b>	<b>2,000</b>	<b>250</b>	<b>2</b>	<b>NE</b>	<b>NE</b>
<b>MTCA Method B Cleanup Levels (Direct Contact and Leaching Pathway)<sup>4</sup></b>					<b>0.0667</b>	<b>16,000</b>	<b>80</b>	<b>120,000</b>	<b>NE</b>	<b>NE</b>	<b>400</b>	<b>400</b>
<b>MTCA Method B Cleanup Levels (Protection of Groundwater, Vadose/Saturated Zones)<sup>4</sup></b>					<b>2.92/0.146</b>	<b>1,650/82.6</b>	<b>0.69/0.0349</b>	<b>480,000/24,000</b>	<b>3,000/150</b>	<b>2.09/0.105</b>	<b>5.2/0.264</b>	<b>13.6/0.687</b>

**NOTES:**

< denotes analyte not detected at or exceeding the reporting limit listed.

Results in **bold** denote concentrations exceed regulatory screening level.

<sup>1</sup>Depth in feet below ground surface (bgs) or general location if unknown.

<sup>2</sup>Analysis method unknown.

<sup>3</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>4</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from CLARC Master spreadsheet downloaded on 9/24/2015 from <https://fortress.wa.gov/ecy/clarc/CLARCDatatables.aspx>

<sup>5</sup>Blymyer Engineers, Inc.

NE = Cleanup level not established

**Table 7**  
**Summary of Soil Analytical Results for Volatile and Extractable Petroleum Hydrocarbons**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sample Depth	Sample By	Analytical Results (milligrams per kilogram) <sup>1</sup>												
					Volatile Petroleum Hydrocarbons (VPH)				Extractable Petroleum Hydrocarbons (EPH)								
					Aliphatic Fractions			Aromatic Fraction	Aliphatic Fractions					Aromatic Fractions			
					EC 5-6	EC >6-8	EC >8-10	EC >8-10	C8-C10	C10-C12	C12-C16	C16-C21	C21-C34	C10-C12	C12-C16	C16-C21	C21-C34
Product Piping Trench	CF-T1	4/7/1998	2.2 - 2.7	Golder <sup>2</sup>	<1.3	<1.7	3.2	7.4	10	130	1,000	1,100	110	25	270	630	48
MW-2	MW2-2.0	4/7/1998	1.5 - 2.0	Golder <sup>2</sup>	<1.4	<1.9	<2.9	<2.4	6	32	270	310	410	2.7	22	120	120
RW-1	RW1-7.0	4/7/1998	7.0 - 8.5	Golder <sup>2</sup>	<1.6	<2.2	20	16	180	1,200	5,600	4,200	750	110	980	2,200	350
RW-2	RW2-4.0	4/8/1998	4.0 - 5.5	Golder <sup>2</sup>	<1.2	34	<48	630	330	840	2,400	2,100	250	250	920	1,200	100
	RW2-7.0	4/8/1998	7.0 - 8.5	Golder <sup>2</sup>	<1.6	61	<64	490	280	670	1,900	1,700	240	180	680	1,000	88
SP-1	SP1-(8-11)	1/11/2001	8 - 11	Golder <sup>2</sup>	<0.7	1.6	17	15	76	380	940	320	37	46	250	200	22
SP-5	SP5-(5-8)	1/11/2001	5 - 8	Golder <sup>2</sup>	<0.58	5.2	98	98	200	660	2,000	1,700	300	180	710	750	120
SP-6	SP6-(5-8)	1/11/2001	5 - 8	Golder <sup>2</sup>	<0.82	3.9	18	19	<6.6	30	98	87	27	10	38	48	20
SP-8	SP8-(5-8)	1/11/2001	5 - 8	Golder <sup>2</sup>	0.86	44	310	350	830	2,400	8,700	6,500	730	110	530	870	100
SP-9	SP9-(5-8)	1/11/2001	5 - 8	Golder <sup>2</sup>	0.83	12	190	190	220	670	3,200	2,700	210	260	970	1,100	96
SP-11	SP11-(5-8)	1/11/2001	5 - 8	Golder <sup>2</sup>	<0.75	<0.5	3.8	4.4	<5.9	30	170	130	40	<5.9	18	35	10

**NOTES:**

< denotes analyte not detected at or exceeding the reporting limit listed.

<sup>1</sup> Samples collected in 1998 analyzed by Washington TPH Interim Policy Method VPH/EPH. Samples collected in 2001 analyzed by Washington State Department of Ecology Method for Determination of VPH/EPH Modified.

<sup>2</sup> Golder Associates Inc.



**Table 8**  
**Summary of Groundwater Analytical Results for TPH and BTEX**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sampled By	Analytical Results <sup>1</sup> (micrograms per liter)																
				DRO <sup>1</sup>	ORO <sup>1</sup>	GRO <sup>2</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethylbenzene <sup>3</sup>	Total Xylenes <sup>3</sup>	m,p-Xylene	o-Xylene								
Diesel Tank Excavation	W-1	04/1988	Blymyer <sup>5</sup>	2,538,000	a	---	---	---	---	---	---	---	---							
Gas Tank Excavation	W-2	04/1988	Blymyer <sup>5</sup>	---	---	158,000	a	13	b	9	b	317	b	2,054	b	1,790	b	264	b	
Oil Tank Excavation	W-1	6/29/1988	Blymyer <sup>5</sup>	2,862,000	a	3,812,000	c	---	---	---	---	---	---	---	---	---	---			
MW-1_88	MW-1	07/12/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-1	10/6/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-1	2/8/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-1	5/2/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW1	8/3/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
MW-2A_88	MW-2A	06/29/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-2A	10/6/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-2A	2/8/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-2A	5/2/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW2A	8/3/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
MW-3_88	MW-3	06/29/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-3	10/6/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-3	2/8/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-3	5/2/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW3	8/3/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
MW-4_88	MW-4	06/29/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-4	10/6/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-4	2/8/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-4	5/2/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW4	8/3/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
MW-5_88	MW-5	06/29/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-5	10/6/1988	Blymyer <sup>5</sup>	< 1,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-5	2/8/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW-5	5/2/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
	MW5	8/3/1989	Blymyer <sup>5</sup>	< 10,000	a	---	---	---	---	---	---	---	---	---	---	---	---			
P-1	1764-P1-W	8/8/1997	S&W <sup>6</sup>	< 200	d	---	---	---	---	---	---	---	---	---	---	---				
P-2	1764-P2-W	8/8/1997	S&W <sup>6</sup>	2,200,000	d	---	---	---	---	---	---	---	---	---	---	---				
P-3	1764-P3-W	8/8/1997	S&W <sup>6</sup>	< 200	d	---	---	---	---	---	---	---	---	---	---	---				
P-4	1764-P4-W	8/8/1997	S&W <sup>6</sup>	1,700	d	---	---	---	---	---	---	---	---	---	---	---				
<b>MTCA Method A Cleanup Levels<sup>4</sup></b>				<b>500</b>		<b>500</b>		<b>1,000</b>		<b>5</b>		<b>1,000</b>		<b>700</b>		<b>1,000</b>		<b>NE</b>		<b>NE</b>

**Table 8**  
**Summary of Groundwater Analytical Results for TPH and BTEX**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sampled By	Analytical Results <sup>1</sup> (micrograms per liter)																
				DRO <sup>1</sup>		ORO <sup>1</sup>		GRO <sup>2</sup>	Benzene <sup>3</sup>		Toluene <sup>3</sup>		Ethylbenzene <sup>3</sup>		Total Xylenes <sup>3</sup>		m,p-Xylene		o-Xylene	
P-5	1764-P5-W	8/8/1997	S&W <sup>6</sup>	< 200	d	---	---	---	---	---	---	---	---	---	---	---	---	---		
P-6	1764-P6-W	8/8/1997	S&W <sup>6</sup>	< 200	d	---	---	---	---	---	---	---	---	---	---	---	---	---		
P-7	1764-P7-W	8/8/1997	S&W <sup>6</sup>	400	d	---	---	---	---	---	---	---	---	---	---	---	---	---		
P-8	1764-P8-W	8/8/1997	S&W <sup>6</sup>	< 200	d	---	---	---	---	---	---	---	---	---	---	---	---	---		
P-9	1764-P9-W	8/8/1997	S&W <sup>6</sup>	< 200	d	---	---	---	---	---	---	---	---	---	---	---	---	---		
P-10	1764-P10-W	8/8/1997	S&W <sup>6</sup>	< 100	d	---	---	---	---	---	---	---	---	---	---	---	---	---		
MW-1	MW-1	4/8/1998	Golder <sup>7</sup>	< 240	d	<470	d	---	< 1	b	< 1	b	< 1	b	---	< 2	b	< 1	b	
	MW-1D	4/8/1998	Golder <sup>7</sup>	---		---		---	< 1	b	< 1	b	< 1	b	---	< 2	b	< 1	b	
	MW-1	8/17/1999	Golder <sup>7</sup>	160		250		---	< 1	e	< 1	e	< 1	e	< 2	e	---	---	---	
	MW-1	1/17/2001	Golder <sup>7</sup>	110		290		---	<0.4	f	<0.4	f	<0.4	f	<1.2	f	<0.8	f	<0.4	f
	MW-1	6/7/2001	Golder <sup>7</sup>	120		360		---	ND		---		---		---		---	---	---	
MW-2	MW-2	12/3/2003	Golder <sup>7</sup>	<250		<400		<100	<1.0		<1.0		<1.0		<1.0		---	---	---	
	MW-2	4/8/1998	Golder <sup>7</sup>	<b>2,200</b>	d	<b>660</b>	d	---	< 1	b	< 1	b	< 1	b	---	< 2	b	< 1	b	
	MW-2	8/17/1999	Golder <sup>7</sup>	<b>1,900</b>		<b>580</b>		---	< 1	e	< 1	e	< 1	e	< 2	e	---	---	---	
	MW-2	1/17/2001	Golder <sup>7</sup>	<b>1,500</b>		<b>640</b>		---	<0.4	f	<0.4	f	<0.4	f	0.069	f	<0.8	f	0.069	f
	MW-2	6/7/2001	Golder <sup>7</sup>	<b>1,100</b>		<b>670</b>		---	ND		---		---		---		---	---	---	
MW-3	MW-2	12/3/2003	Golder <sup>7</sup>	<250		<400		<100	<1.0		<1.0		<1.0		<1.0		---	---	---	
	MW-2-081214	08/12/2014	Farallon	<b>2,700</b>		< 490		280	< 0.20		< 1.0		< 0.20		< 0.60		---	---	---	
	MW-3	4/8/1998	Golder <sup>7</sup>	<b>1,000</b>	d	<b>1,100</b>	d	---	< 1	b	< 1	b	< 1	b	---	< 2	b	< 1	b	
	MW-3	8/17/1999	Golder <sup>7</sup>	<b>1,500</b>		<b>1,800</b>		---	< 1	e	< 1	e	< 1	e	< 2	e	---	---	---	
	MW-3	1/17/2001	Golder <sup>7</sup>	<b>1,800</b>		<b>1,800</b>		---	0.24	f	<0.4	f	<0.4	f	0.048	f	<0.8	f	0.048	f
	MW-3	6/7/2001	Golder <sup>7</sup>	<b>1,400</b>		<b>1,600</b>		---	0.2		---		---		---		---	---	---	
RW-1	MW-3	12/3/2003	Golder <sup>7</sup>	<250		<400		<100	<1.0		<1.0		<1.0		<1.0		---	---	---	
	MW-3-081214	08/12/2014	Farallon	<b>510</b>		<b>620</b>		< 100	< 0.20		< 1.0		< 0.20		< 0.60		---	---	---	
	RW-1	4/8/1998	Golder <sup>7</sup>	<b>1,400</b>	d	<470	d	---	< 1	b	< 1	b	< 1	b	---	< 2	b	< 1	b	
	RW-2	4/8/1998	Golder <sup>7</sup>	<b>5,400</b>	d	<b>680</b>	d	---	<b>210</b>	b	13	b	100	b	---	220	b	88	b	
RW-2	RW-2	8/17/1999	Golder <sup>7</sup>	<b>1,500</b>		450		---	<b>83</b>	e	< 1	e	20	e	45	e	---	---	---	
	RW-2	12/3/2003	Golder <sup>7</sup>	<250		<400		450	<b>5.31</b>		<1.0		<1.0		<1.0		---	---	---	
	RW-2-081214	08/12/2014	Farallon	<b>3,700</b>		< 640		800	< 0.20		< 1.0		< 0.20		< 0.60		---	---	---	
Bottom of Diesel Tank Excavation	TP-1	7/27/1998	GTI, Inc.	<b>138,000</b>	d	---		---	---		---		---		---		---	---	---	
GP-1	GP-1	8/18/1999	Golder <sup>7</sup>	<b>1,200</b>		<b>690</b>		---	---		---		---		---		---	---	---	
GP-2	GP-2	8/18/1999	Golder <sup>7</sup>	400		280		---	---		---		---		---		---	---	---	
GP-3	GP-3	8/18/1999	Golder <sup>7</sup>	260		<b>590</b>		---	---		---		---		---		---	---	---	
GP-4	GP-4	8/18/1999	Golder <sup>7</sup>	<b>800</b>		490		---	---		---		---		---		---	---	---	
GP-5	GP-5	8/18/1999	Golder <sup>7</sup>	<b>980</b>		< 470		---	---		---		---		---		---	---	---	
GP-6	GP-6	8/18/1999	Golder <sup>7</sup>	<b>1,400</b>		<b>1,800</b>		---	---		---		---		---		---	---	---	
GP-7	GP-7	8/18/1999	Golder <sup>7</sup>	<b>720</b>		360		---	---		---		---		---		---	---	---	
<b>MTCA Method A Cleanup Levels<sup>4</sup></b>				<b>500</b>		<b>500</b>		<b>1,000</b>	<b>5</b>		<b>1,000</b>		<b>700</b>		<b>1,000</b>		<b>NE</b>		<b>NE</b>	

**Table 8**  
**Summary of Groundwater Analytical Results for TPH and BTEX**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sampled By	Analytical Results <sup>1</sup> (micrograms per liter)								
				DRO <sup>1</sup>	ORO <sup>1</sup>	GRO <sup>2</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethylbenzene <sup>3</sup>	Total Xylenes <sup>3</sup>	m,p-Xylene	o-Xylene
GP-8	GP-8	8/18/1999	Golder <sup>7</sup>	260	300	---	---	---	---	---	---	---
GP-9	GP-9	8/18/1999	Golder <sup>7</sup>	1,200	280	---	---	---	---	---	---	---
GP-10	GP-10	8/18/1999	Golder <sup>7</sup>	29,000	2,100	---	---	---	---	---	---	---
GP-10	GP-14 (duplicate of GP-10)	8/18/1999	Golder <sup>7</sup>	34,000	2,500	---	---	---	---	---	---	---
GP-11	GP-11	8/18/1999	Golder <sup>7</sup>	2,500	860	---	---	---	---	---	---	---
GP-12	GP-12	8/18/1999	Golder <sup>7</sup>	160	390	---	---	---	---	---	---	---
GP-13	GP-13	8/18/1999	Golder <sup>7</sup>	580	330	---	---	---	---	---	---	---
MW-4	MW-4	1/17/2001	Golder <sup>7</sup>	160	330	---	<0.4 f	<0.4 f	<0.4 f	<1.2 f	<0.8 f	<0.4 f
	MW-4	6/7/2001	Golder <sup>7</sup>	140	330	---	ND	---	---	---	---	---
	MW-4	12/3/2003	Golder <sup>7</sup>	<250	<400	<100	<1.0	<1.0	<1.0	<1.0	---	---
	MW-4-081214	08/12/2014	Farallon	<260	<410	<100	<0.20	<1.0	<0.20	<0.60	---	---
MW-5	MW-5	1/17/2001	Golder <sup>7</sup>	330	360	---	<0.4 f	<0.4 f	<0.4 f	<1.2 f	<0.8 f	<0.4 f
	MW-5	6/7/2001	Golder <sup>7</sup>	200	250	---	ND	---	---	---	---	---
	MW-5	12/3/2003	Golder <sup>7</sup>	<250	<400	<100	<1.0	<1.0	<1.0	<1.0	---	---
	MW-5-092314	09/23/2014	Farallon	430	<410	---	---	---	---	---	---	---
MW-6	MW-6	1/17/2001	Golder <sup>7</sup>	230	380	---	0.3 f	<0.4 f	<0.4 f	<1.2 f	<0.8 f	<0.4 f
	MW-6	6/7/2001	Golder <sup>7</sup>	180	320	---	0.32	---	---	---	---	---
	MW-6	12/3/2003	Golder <sup>7</sup>	<260	<410	<100	<1.0	<1.0	<1.0	<1.0	---	---
	MW-6-092314	09/23/2014	Farallon	<260	<420	---	---	---	---	---	---	---
GP-1A	GP-1	12/2/2003	Golder <sup>7</sup>	<250	<400	<100	<1 f	<1 f	<1 f	<3 f	<2 f	<1 f
GP-2A	GP-2	12/2/2003	Golder <sup>7</sup>	<260	<410	<100	<1 f	<1 f	<1 f	<3 f	<2 f	<1 f
GP-3A	GP-3	12/2/2003	Golder <sup>7</sup>	<260	<420	<100	<1 f	<1 f	<1 f	<3 f	<2 f	<1 f
GP-4A	GP-4	12/2/2003	Golder <sup>7</sup>	<260	<420	<100	<1 f	<1 f	<1 f	<3 f	<2 f	<1 f
GP-5A	GP-5	12/2/2003	Golder <sup>7</sup>	<260	<410	<100	<1 f	<1 f	<1 f	<3 f	<2 f	<1 f
GP-7A	GP-7	12/2/2003	Golder <sup>7</sup>	<280	<440	<100	<1 f	<1 f	<1 f	<3 f	<2 f	<1 f
GP-8A	GP-8	12/2/2003	Golder <sup>7</sup>	<250	<400	<100	<1 f	<1 f	<1 f	<3 f	<2 f	<1 f
F-1	F1-GW-081314	08/13/2014	Farallon	340	< 420	< 100	< 0.20	< 1.0	< 0.20	< 0.60	---	---
F-2	F2-GW-081314	08/13/2014	Farallon	< 290	< 460	< 100	< 0.20	< 1.0	< 0.20	< 0.60	---	---
F-3	F3-GW-081314	08/13/2014	Farallon	< 260	< 420	< 100	< 0.20	3.9	< 0.20	< 0.60	---	---
F-4	F4-GW-081314	08/13/2014	Farallon	< 260	< 410	< 100	< 0.20	< 1.0	< 0.20	< 0.60	---	---
F-5	F5-GW-081314	08/13/2014	Farallon	340	< 460	< 100	< 0.20	< 1.0	< 0.20	< 0.60	---	---
F-6	F6-GW-081314	08/13/2014	Farallon	< 270	< 440	< 100	< 0.20	< 1.0	< 0.20	< 0.60	---	---
F-7	F7-GW-081314	08/13/2014	Farallon	< 260	< 410	< 100	< 0.20	< 1.0	< 0.20	< 0.60	---	---
<b>MTCA Method A Cleanup Levels<sup>4</sup></b>				<b>500</b>	<b>500</b>	<b>1,000</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>		

**Table 8**  
**Summary of Groundwater Analytical Results for TPH and BTEX**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sampled By	Analytical Results <sup>1</sup> (micrograms per liter)								
				DRO <sup>1</sup>	ORO <sup>1</sup>	GRO <sup>2</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethylbenzene <sup>3</sup>	Total Xylenes <sup>3</sup>	m,p-Xylene	o-Xylene
F-8	F8-GW-081314	08/13/2014	Farallon	<b>5,700</b>	< 790	790	< 0.20	< 1.0	0.30	< 0.60	---	---
F-10	F10-GW-092214	09/22/14	Farallon	<250	<400	<100	---	---	---	---	---	---
F-11	F11-GW-092214	09/22/14	Farallon	<260	<420	<100	---	---	---	---	---	---
<b>MTCA Method A Cleanup Levels<sup>4</sup></b>				<b>500</b>	<b>500</b>	<b>1,000</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>	<b>NE</b>	<b>NE</b>

**NOTES:**

Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

--- Denotes sample not analyzed.

<sup>1</sup>Analyzed by Northwest Method NWTPH-Dx unless otherwise noted.

<sup>2</sup>Analyzed by Northwest Method NWTPH-Gx unless otherwise noted.

<sup>3</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260C unless otherwise noted.

<sup>4</sup>MTCA Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>5</sup>Blymyer Engineers, Inc.

<sup>6</sup>Shannon & Wilson, Inc.

<sup>7</sup>Golder Associates Inc.

<sup>a</sup>Analyzed by EPA Method 8015.

<sup>b</sup>Analyzed by EPA Method 8020.

<sup>c</sup>Analyzed by EPA Method 418.1.

<sup>d</sup>Analyzed by Washington Total Petroleum Hydrocarbons as Diesel (WTPH-D) Method.

<sup>e</sup>Analyzed by EPA Method 8021B/5030B Modified.

<sup>f</sup>Analyzed by EPA Method 8260B.

Farallon = Farallon Consulting, L.L.C.

DRO = TPH as diesel-range organics

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

ND = Not detected and reporting limit is unknown

NE = Cleanup level not established

TPH = Total petroleum hydrocarbons

**Table 9a  
Summary of Groundwater Analytical Results for VOCs  
6050 East Marginal Way South  
Seattle, Washington  
Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sample By	Analytical Results <sup>1</sup> (micrograms per liter)														
				1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	cis-1,2-Dichloroethene	Isopropylbenzene	Methyl tertiary butyl ether	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Tert-Butylbenzene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride
W-1	Waste Oil Tank Excavation <sup>a</sup>	6/29/1988	Blymyer <sup>4</sup>	--	--	--	--	--	--	--	--	--	--	--	<1,000	<1,000	--	--
MW-1	MW-1	1/17/2001	Golder <sup>5</sup>	<0.4	<0.4	<0.4	<0.4	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-1	6/7/2001	Golder <sup>5</sup>	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	ND
	MW-1	12/3/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	MW-2	1/17/2001	Golder <sup>5</sup>	<0.4	<0.4	<0.4	<0.4	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.056
	MW-2	6/7/2001	Golder <sup>5</sup>	--	ND	0.061	ND	--	--	--	--	--	--	--	--	--	--	ND
	MW-2	12/3/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
	MW-2-081214	08/12/2014	Farallon	< 0.20	< 0.20	< 0.20	0.42	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	0.28	0.30	< 0.20	< 0.20	< 0.20	<b>0.23</b>
MW-3	MW-3	1/17/2001	Golder <sup>5</sup>	<0.4	0.064	0.085	0.064	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.084
	MW-3	6/7/2001	Golder <sup>5</sup>	--	ND	0.11	ND	--	--	--	--	--	--	--	--	--	--	ND
	MW-3	12/3/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
	MW-3-081214	08/12/2014	Farallon	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
MW-4	MW-4	1/17/2001	Golder <sup>5</sup>	<0.4	<0.4	0.13	<0.4	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<b>0.48</b>
	MW-4	6/7/2001	Golder <sup>5</sup>	--	ND	0.15	ND	--	--	--	--	--	--	--	--	--	--	<b>0.24</b>
	MW-4	12/3/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
	MW-4-081214	08/12/2014	Farallon	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<b>0.30</b>
MW-5	MW-5	1/17/2001	Golder <sup>5</sup>	<0.4	<0.4	<0.4	<0.4	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-5	6/7/2001	Golder <sup>5</sup>	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	ND
	MW-5	12/3/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	MW-6	1/17/2001	Golder <sup>5</sup>	<0.4	<0.4	<0.4	<0.4	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<b>0.38</b>
	MW-6	6/7/2001	Golder <sup>5</sup>	--	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	<b>0.4</b>
	MW-6	12/3/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
RW-2	RW-2	12/3/2003	Golder <sup>5</sup>	0.589	<1	<1	5.26	--	<2	<1	5.5	<1	3.29	<1	<1	<1	<1	<1
	RW-2-081214	08/12/2014	Farallon	< 0.20	< 0.20	0.21	13	< 0.20	< 1.0	6.6	19	< 0.20	7.6	0.26	< 0.20	< 0.20	< 0.20	< 0.20
GP-1A	GP-1	12/2/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-2A	GP-2	12/2/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-3A	GP-3	12/2/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-4A	GP-4	12/2/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-5A	GP-5	12/2/2003	Golder <sup>5</sup>	<1	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-7A	GP-7	12/2/2003	Golder <sup>5</sup>	<1	<1	10.2	<1	--	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-8A	GP-8	12/2/2003	Golder <sup>5</sup>	<1	<1	1.69	<1	--	<2	<1	<1	<1	<1	<1	0.554	<1	<1	<1
F1	F1-GW-081314	08/13/2014	Farallon	< 0.20	< 0.20	0.21	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
F2	F2-GW-081314	08/13/2014	Farallon	< 0.20	< 0.20	0.80	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
F3	F3-GW-081314	08/13/2014	Farallon	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	0.74	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
F4	F4-GW-081314	08/13/2014	Farallon	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
F5	F5-GW-081314	08/13/2014	Farallon	< 0.20	< 0.20	< 0.20	< 0.20	0.66	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
F6	F6-GW-081314	08/13/2014	Farallon	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
MTCA Method A Cleanup Levels <sup>2</sup>				NE	NE	NE	NE	20	160	NE	NE	NE	NE	NE	5	NE	5	0.2
MTCA Method B Cleanup Levels <sup>3</sup>				NE	80	16	800	24.3	160	400	800	NE	800	800	20.8	160	0.54	24

**Table 9a  
Summary of Groundwater Analytical Results for VOCs  
6050 East Marginal Way South  
Seattle, Washington  
Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sample By	Analytical Results <sup>1</sup> (micrograms per liter)														
				1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	cis-1,2-Dichloroethene	Isopropylbenzene	Methyl tertiary butyl ether	Naphthalene	n-Butylbenzene	n-Propylbenzene	p-Isopropyltoluene	Sec-Butylbenzene	Tert-Butylbenzene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride
F7	F7-GW-081314	08/13/2014	Farallon	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
F8	F8-GW-081314	08/13/2014	Farallon	0.80	< 0.20	< 0.20	15	< 0.20	2.8	4.6	19	0.23	6.8	0.29	< 0.20	< 0.20	< 0.20	< 0.20
MTCA Method A Cleanup Levels <sup>2</sup>				NE	NE	NE	NE	20	160	NE	NE	NE	NE	NE	5	NE	5	0.2
MTCA Method B Cleanup Levels <sup>3</sup>				NE	80	16	800	24.3	160	400	800	NE	800	800	20.8	160	0.54	24

**NOTES:**

Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A or B cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

Only select analytes and analytes with detections exceeding the laboratory reporting limit are shown.

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260 B or 8260C unless otherwise noted.

<sup>2</sup>MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>3</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from

CLARC Master spreadsheet downloaded on 9/24/2015 from <https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx>

<sup>4</sup>Blymyer Engineers, Inc.

<sup>5</sup>Golder Associates Inc.

<sup>6</sup>Analyzed by EPA Method 601.

Farallon = Farallon Consulting, L.L.C.

ND = Not detected and reporting limit is unknown

NE = Cleanup level not established

VOCs = volatile organic compounds

**Table 9b**  
**Summary of Groundwater Analytical Results for Other VOCs**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sampled By	Analytical Results <sup>1</sup> (micrograms per liter)																		
				Methylene Chloride	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	trans-1,2-Dichloroethene	Chloroform	Chloromethane	Freon	1,1,1-Trichloroethane	Bromodichloromethane	Carbon Tetrachloride	1,2-Dichloropropane	trans-1,3-dichloropropene	cis-1,3-Dichloropropene	1,1,2-Trichloroethane	Chlorodibromomethane	Bromoform	1,1,2,2-Tetrachloroethane	Chlorobenzene
W-1	Waste Oil Tank Excavation <sup>1</sup>	6/29/1988	Blymyer <sup>4</sup>	<1,000	--	<1,000	<1,000	<1,000	<1,000	--	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
MW-1	MW-1	1/17/2001	Golder <sup>5</sup>	0.065	0.062	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-1	6/7/2001	Golder <sup>5</sup>	ND	ND	--	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
	MW-1	12/3/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-2	MW-2	1/17/2001	Golder <sup>5</sup>	0.089	0.11	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-2	6/7/2001	Golder <sup>5</sup>	ND	ND	--	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
	MW-2	12/3/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-3	MW-3	1/17/2001	Golder <sup>5</sup>	0.064	<0.4	<0.4	0.053	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-3	6/7/2001	Golder <sup>5</sup>	ND	ND	--	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
	MW-3	12/3/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-4	MW-4	1/17/2001	Golder <sup>5</sup>	0.087	0.12	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-4	6/7/2001	Golder <sup>5</sup>	ND	0.13	--	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
	MW-4	12/3/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-5	MW-5	1/17/2001	Golder <sup>5</sup>	0.08	0.23	<0.4	<0.4	<0.4	0.088	0.096	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-5	6/7/2001	Golder <sup>5</sup>	ND	0.25	--	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
	MW-5	12/3/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW-6	MW-6	1/17/2001	Golder <sup>5</sup>	0.1	0.097	<0.4	<0.4	<0.4	<0.4	0.055	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	MW-6	6/7/2001	Golder <sup>5</sup>	ND	0.078	--	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
	MW-6	12/3/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
RW-2	RW-2	12/3/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-1A	GP-1	12/2/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-2A	GP-2	12/2/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-3A	GP-3	12/2/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-4A	GP-4	12/2/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-5A	GP-5	12/2/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-7A	GP-7	12/2/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
GP-8A	GP-8	12/2/2003	Golder <sup>5</sup>	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MTCA Method A Cleanup Levels <sup>2</sup>				<b>5</b>	<b>NE</b>	<b>NE</b>	<b>5</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>200</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
MTCA Method B Cleanup Levels <sup>3</sup>				<b>21.9</b>	<b>7.68</b>	<b>400</b>	<b>0.481</b>	<b>160</b>	<b>1.41</b>	<b>NE</b>	<b>NE</b>	<b>16,000</b>	<b>0.706</b>	<b>0.625</b>	<b>1.22</b>	<b>NE</b>	<b>NE</b>	<b>0.768</b>	<b>0.521</b>	<b>5.54</b>	<b>0.219</b>	<b>160</b>

**NOTES:**

Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A or B cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

Only select analytes and analytes with detections exceeding the laboratory reporting limit are shown.

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260C unless otherwise noted.

<sup>2</sup>MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>3</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from

CLARC Master spreadsheet downloaded on 9/24/2015 from <https://fortress.wa.gov/eey/clarc/CLARCDataTables.aspx>

<sup>4</sup>Blymyer Engineers, Inc.

<sup>5</sup>Golder Associates Inc.

<sup>6</sup>Analyzed by EPA Method 601.

ND - Not detected and reporting limit is unknown.

NE = Cleanup level not established

VOCs = volatile organic compounds

**Table 10  
Summary of Groundwater Analytical Results for PAHs  
6050 East Marginal Way South  
Seattle, Washington  
Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sampled By	Analytical Results <sup>1</sup> (micrograms per liter)													Carcinogenic Polycyclic Aromatic Hydrocarbons						Total cPAHs TTEC						
				Polycyclic Aromatic Hydrocarbons													Benzo(a)anthracene	Benzo(a)Pyrene	Benzo(b)Fluoranthene	Benzo(j,k)Fluoranthene	Benzo(k)Fluoranthene	Chrysene		Dibenzo(a,h)Anthracene	Indeno(1,2,3-cd)Pyrene				
				1-Methylnaphthalene	2-Chloronaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(g,h,i)Perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene														
MW-1	MW-1 <sup>a</sup>	4/8/1998	Golder <sup>4</sup>	--	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	0.07
	MW-1	1/17/2001	Golder <sup>4</sup>	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.06
MW-2	MW-2 <sup>a</sup>	4/8/1998	Golder <sup>4</sup>	--	< 0.1	0.18	0.84	< 0.1	< 0.1	< 0.1	0.8	< 0.1	0.72	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.08
	MW-2	1/17/2001	Golder <sup>4</sup>	--	< 0.08	< 0.08	0.32	< 0.08	< 0.08	< 0.08	0.32	< 0.08	0.22	0.47	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.06
MW-3	MW-2-081214	08/12/2014	Farallon	0.60	--	< 0.094	0.33	< 0.094	< 0.094	< 0.0094	< 0.094	0.18	0.17	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	< 0.094	--	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	0.01
	MW-3 <sup>a</sup>	4/8/1998	Golder <sup>4</sup>	--	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96	0.72
MW-4	MW-3	1/17/2001	Golder <sup>4</sup>	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.06
	MW-4	1/17/2001	Golder <sup>4</sup>	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.06
MW-5	MW-5	1/17/2001	Golder <sup>4</sup>	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.06
	MW-5-092314	09/23/14	Farallon	< 0.095	--	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	--	< 0.0095	< 0.0095	< 0.0095	< 0.0095	< 0.0095	< 0.0095	< 0.0095	< 0.0095	0.01
MW-6	MW-6	1/17/2001	Golder <sup>4</sup>	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	--	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.06
	MW-6-092315	09/23/14	Farallon	< 0.096	--	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	< 0.096	--	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0096	< 0.0096	0.01
RW-1	RW-1 <sup>a</sup>	4/8/1998	Golder <sup>4</sup>	--	< 0.093	26	1.1	< 0.093	0.15	< 0.093	< 0.093	2.9	11	2.5	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	< 0.093	0.07
RW-2	RW-2 <sup>a</sup>	4/8/1998	Golder <sup>4</sup>	--	< 0.098	<b>39</b>	1.3	< 0.098	< 0.098	< 0.098	< 0.098	2.1	43	2.3	0.27	< 0.098	< 0.098	< 0.098	< 0.098	--	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	0.07
	RW-2-081214	08/12/2014	Farallon	<b>39</b>	--	<b>38</b>	1.2	0.17	0.14	< 0.0094	< 0.094	3.9	1.3	1.5	< 0.094	< 0.094	< 0.094	< 0.094	--	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	< 0.0094	0.01	
F-7	F7-GW-081314	08/13/2014	Farallon	< 0.099	--	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	< 0.099	--	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	0.01
			<b>MTCA Method A Cleanup Levels<sup>2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.1</b>
			<b>MTCA Method B Cleanup Levels<sup>3</sup></b>	<b>1.51</b>	<b>NE</b>	<b>32</b>	<b>960</b>	<b>NE</b>	<b>4,800</b>	<b>NE</b>	<b>640</b>	<b>640</b>	<b>160</b>	<b>NE</b>	<b>480</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>0.012</b>

**NOTES:**  
Results in **bold** denote concentrations exceed applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A or B cleanup levels.  
< denotes analyte not detected at or exceeding the reporting limit listed.  
Only select analytes and analytes with detections exceeding the laboratory reporting limit are shown.  
<sup>1</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8270 or 8270D.  
<sup>2</sup>MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.  
<sup>3</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from CLARC Master spreadsheet downloaded on 9/24/2015 from <https://fortress.wa.gov/cey/clar/CLARCDataTables.aspx>  
<sup>4</sup>Golder Associates Inc.  
<sup>a</sup>Analyzed by EPA Method 8270.

Farallon = Farallon Consulting, L.L.C.  
NE = Cleanup level not established  
PAHs = polycyclic aromatic hydrocarbons



**Table 11**  
**Summary of Groundwater Analytical Results for Metals**  
**6050 East Marginal Way South**  
**Seattle, Washington**  
**Farallon PN: 1071-010**

Sample Location	Sample Identification	Sample Date	Sampled By	Analytical Results <sup>1</sup> (micrograms per liter)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
Oil Tank Excavation	W-1	6/29/1988	Blymyer <sup>4</sup>	<100	<2,000	<100	800	<b>1,900</b>	<50	<100	<100
MW-1_88	MW-1	10/6/1988	Blymyer <sup>4</sup>	--	--	--	<100	<100	--	--	--
MW-2A_88	MW-2A	10/6/1988	Blymyer <sup>4</sup>	--	--	--	<100	<b>100</b>	--	--	--
MW-3_88	MW-3	10/6/1988	Blymyer <sup>4</sup>	--	--	--	<100	<100	--	--	--
MW-4_88	MW-4	10/6/1988	Blymyer <sup>4</sup>	--	--	--	<100	<100	--	--	--
MW-5_88	MW-5	10/6/1988	Blymyer <sup>4</sup>	--	--	--	<100	<100	--	--	--
<b>MTCA Method A Cleanup Levels<sup>2</sup></b>				<b>5</b>	<b>NE</b>	<b>5</b>	<b>50</b>	<b>15</b>	<b>2</b>	<b>NE</b>	<b>NE</b>
<b>MTCA Method B Cleanup Levels<sup>3</sup></b>				<b>0.0583</b>	<b>3,200</b>	<b>8</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>80</b>	<b>80</b>

**NOTES:**

-- denotes sample not reported

< denotes analyte not detected at or exceeding the reporting limit listed.

Results in **bold** denote concentrations exceed regulatory screening level.

<sup>1</sup>Method of analysis unknown.

<sup>2</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

<sup>3</sup>Washington State Cleanup Levels and Risk Calculations under MTCA, Standard Method B Formula Values for Soil from

CLARC Master spreadsheet downloaded on 9/24/2015 from <https://fortress.wa.gov/ecy/clarc/CLARCDATATables.aspx>

<sup>4</sup>Blymyer Engineers, Inc.

NE = Cleanup level not established

**APPENDIX A  
BORING LOGS**

REMEDIAL INVESTIGATION, FOCUSED FEASIBILITY STUDY,  
AND CLEANUP ACTION PLAN  
6050 East Marginal Way  
Seattle, Washington

Farallon PN: 1071-010



# GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

1

## Drilling Log

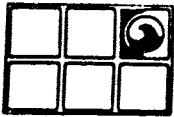
### MONITORING WELL

Project Blymyer/Seattle Owner Consolidated Freightways  
 Location Seattle, WA Project Number 201-799-5012  
 Date Drilled 6/27/88 Total Depth of Hole 24 ft Diameter 7.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 9 ft. 24-hrs. \_\_\_\_\_  
 Screen: Dia. 2 in. Length 20 fr. Slot Size 020 in.  
 Casing: Dia. 4 in. Length 4 ft. Type PVC  
 Drilling Company Soil Sampling Drilling Method Hollow Stem Auger  
 Driller C. Kevirtis Log by M. Winters

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					Asphalt ± 2 inches over base coarse, ±4 inches
2					Brown fine to medium sand with some gravel (medium dense, moist, no hydrocarbon odor)
4			A 19 12 12		(grades, dark gray-brown, no gravel)
6				SP	Dark gray-brown, clayey silt with some fine sand (soft, moist to wet, no hydrocarbon odor)
8			B 1 1	ML	Encountered water 6/27/88 (0945 hr.) (grades more sand, wet)
12					Dark gray-brown fine to medium sand (medium dense, wet, no hydrocarbon odor)
14			C 2 2 2		
16				SP	
18					
20			2 4 6		
22					
24					Drilled to 24 feet, installed monitoring well



# GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

## Drilling Log

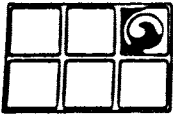
Project Blymyer/Seattle MONITORING WELL  
 Location Seattle, WA Owner Consolidated Freightways  
 Date Drilled 6/27/88 Project Number 201-799-5012  
 Total Depth of Hole 14.5ft Diameter 7.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 8.5 ft -24-hrs \_\_\_\_\_  
 Screen: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Slot Size \_\_\_\_\_  
 Casing: Dia. \_\_\_\_\_ Length \_\_\_\_\_ Type \_\_\_\_\_  
 Drilling Company Soil Sampling Drilling Method Hollow Stem Auger  
 Driller C. Kervirtis Log by M. Winters

Sketch Map

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Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					Asphalt ± 2 inches over base coarse, ± 4 inches
2					Brown fine to medium sand with some gravel (medium dense, moist, no hydrocarbon odor)
4			A 12 10 8		(grades no gravel)
6				SP	
8			B 2 2 3		Encountered water 6/27/88 (1145 hr.)
10					Dark gray-brown fine sandy silt with some clay (soft, wet, no hydrocarbon odor)
12			C 2 2	ML	
14			28	SP	Dark gray-brown fine to medium sand (medium dense, wet, no hydrocarbon odor)
16					Drilled to 14.5 feet, rig refusal on wood, backfilled boring with bentonite and concrete
18					
20					
22					
24					



# GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

2A

## Drilling Log

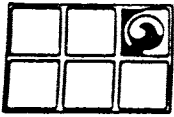
### MONITORING WELL

Project Blymyer/Seattle Owner Consolidated Freightways  
 Location Seattle, WA Project Number 201-799-5012  
 Date Drilled 6/27/88 Total Depth of Hole 24 ft. Diameter 7.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 8.5 ft. 24-hr. \_\_\_\_\_  
 Screen: Dia. 2 in. Length 20 ft. Slot Size .020 in.  
 Casing: Dia. 2 in. Length 4 ft. Type PVC  
 Drilling Company Soil Sampling Drilling Method Hollow Stem Auger  
 Driller C. Ketvirtis Log by M. Winters

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					Asphalt ± 2 inches over base coarse, ± 4 inches
2					Brown fine to medium sand with some gravel (medium dense, moist, no hydrocarbon odor)
4					(grades no gravel)
6				SP	
8		V			▼ Encountered water 6/27/88 (1215 hr.)
10					Dark gray-brown fine sandy silt with some clay (soft, wet, no hydrocarbon odor)
12				ML	
14					Dark gray-brown fine to medium sand (medium dense, wet, no hydrocarbon odor)
16					
18					
20				SP	
22					
24					Drilled to 24 feet, installed monitoring well



# GROUNDWATER TECHNOLOGY

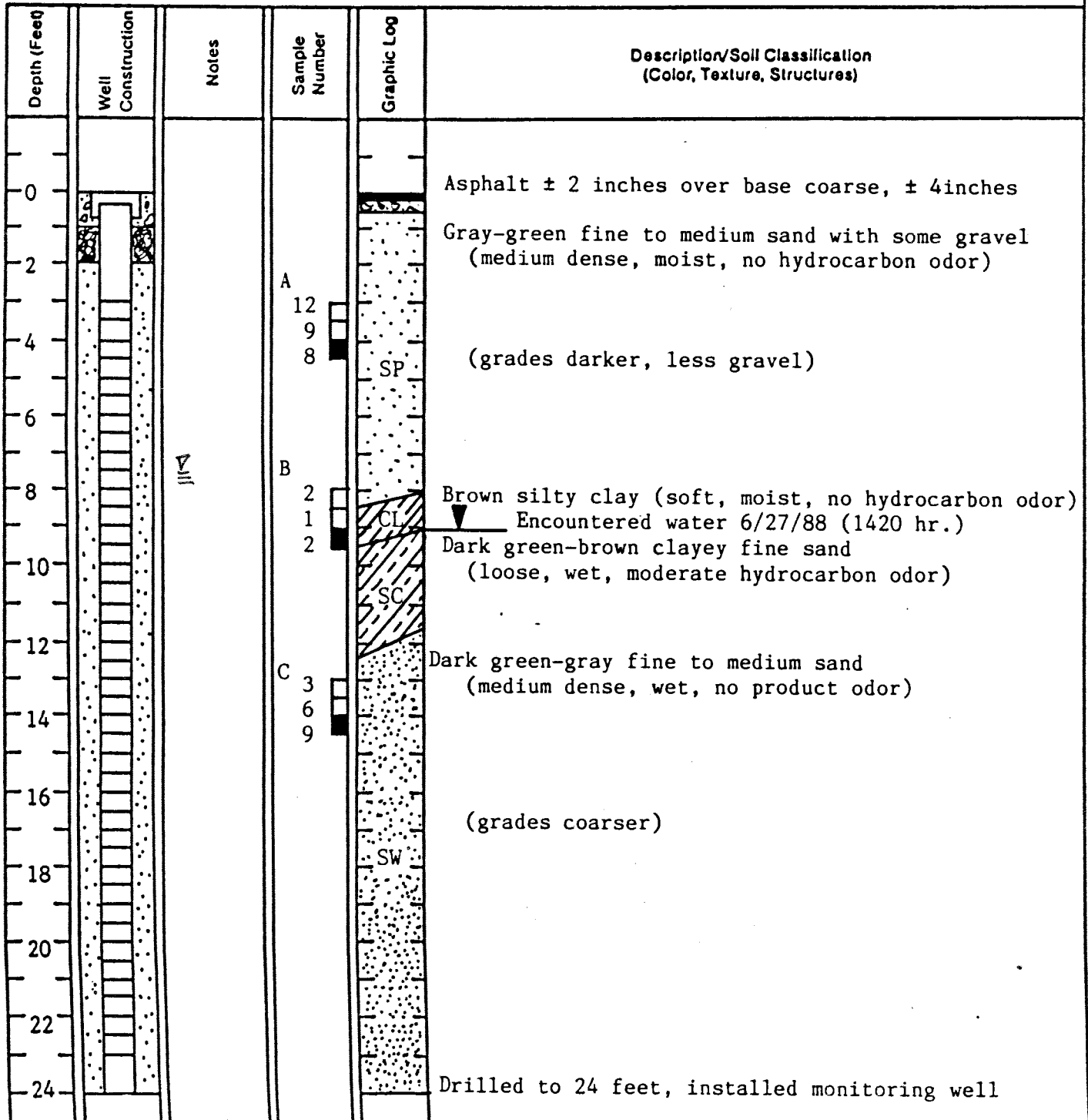
Division of Oil Recovery Systems, Inc.

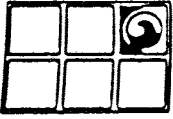
## Drilling Log

MONITORING WELL 3

Project Blymyer/Seattle Owner Consolidated Freightways  
 Location Seattle, WA Project Number 201-799-5012  
 Date Drilled 6/27/88 Total Depth of Hole 24ft. Diameter 7.5in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 9 ft. 24-hrs. \_\_\_\_\_  
 Screen: Dia. 2 in. Length 20 ft. Slot Size .020 in.  
 Casing: Dia. 2 in. Length 4 ft. Type PVC  
 Drilling Company Soil Sampling Drilling Method Hollow Stem Auger  
 Driller C. Ketvirtis Log by M. Winters

Sketch Map
Notes





# GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

## Drilling Log

### MONITORING WELL

Project Blymyer/Seattle Owner Consolidated Freightways  
 Location Seattle, WA Project Number 201-799-5012  
 Date Drilled 6/28/88 Total Depth of Hole 24ft. Diameter 7.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 9 ft. 24-hr. \_\_\_\_\_  
 Screen: Dia 2 in. Length 20 ft. Slot Size .020 in.  
 Casing: Dia 2 in. Length 4 ft. Type PVC  
 Drilling Company Soil Sampling Drilling Method Hollow Stem Auger  
 Driller C. Ketvirtis Log by M. Winters

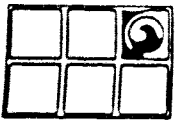
Sketch Map

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Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					Asphalt ± 2 inches over base, coarse, ± 4 inches (slight hydrocarbon odor)
2			A		Brown fine to medium sand with some gravel (medium dense, moist, no product odor)
4			7 4 4		(grades dark gray-brown, finer, no gravel)
6				SP	(slight hydrocarbon odor)
8			B		Encountered water 6/28/88 (0840 hr.)
10			1 1 1	ML	Dark gray-brown clayey silt with sand (soft, wet, no product odor)
12			C		
14			3 3 3		Gray-brown fine to medium sand (loose, wet, no product odor)
16					
18				SP	
20					
22					
24					

Drilled to 24 feet, installed monitoring well



# GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

## Drilling Log

Project Blymyer/Seattle MONITORING WELL 5  
 Owner Consolidated Freightways  
 Location Seattle, WA Project Number 201-799-5012  
 Date Drilled 6/28/88 Total Depth of Hole 24 ft. Diameter 10.5 in.  
 Surface Elevation \_\_\_\_\_ Water Level, Initial 9 ft. 24-hr. \_\_\_\_\_  
 Screen: Dia. 4 in. Length 20 ft. Slot Size .020 in.  
 Casing: Dia. 4 in. Length 3 ft. Type PVC  
 Drilling Company Soil Sampling Drilling Method Hollow Stem Auger  
 Driller C. Ketvirtis Log by M. Winters

Sketch Map

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Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					Asphalt ± 2 inches over base coarse, ± 4 inches
2					Gray-green fine to medium sand with some gravel (medium dense, moist, moderate hydrocarbon odor)
4			A		
6			6	SP	(grades darker, no gravel, strong hydrocarbon odor, visible free product)
4			4		
6			4		
8					Dark gray-brown clayey silt with sand (soft, moist to wet, moderate hydrocarbon odor)
8			B		
10			2		
10			1		Encountered water 6/28/88 (0950 hr.) (grades wet, no product odor)
10			2	ML	
12					(grades more sand)
12			C		
14			2		Dark gray-brown fine to medium sand (loose, wet, no product odor)
14			1		
14			2		
16					
18					
20				SP	
22					
24					Drilled to 24 feet, installed monitoring well



# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: Consolidated Freightways	Project Number: T-1768-01	Well Number: P1
Logged By: A. Tirao	Surface Elevation: —	Well Location: 24 N 4E 20 1/4 29 Twtnshp Range Section 1/4, 1/4
Drilling Method: Strataprobe	Hole Diameter: 2"	Casing Size/Type: —
Date Started: 8/8/97	Drilling Company: TEG	Depth to Water: ~7 Encountered 7.46 Static
Date Completed:	Driller: Todd	Methods of Decontamination Prior to Drilling: Alconox, water rinse

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								Ground Surface
1								
2								
3								
4		4'-7'	0835	0		67	GM	Gray, silty, fine to medium sandy, fine GRAVEL; dry.
5								
6							SP	Black and tan, fine to medium SAND; moist to wet.
7		7'-10'	0843	0		83	SP/SM	Black, fine to medium SAND, grading to brown and gray, silty, fine to medium SAND; wet; stratified with black, fine to medium sand; wood piece at 9 feet.
8								
9								
10								BOTTOM OF PROBE 10 FEET
11								
12								
13								



Name of Job  
Location of Job

LOG OF BORING

Date  
Job No.  
FIG. NO.

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: <b>Consolidated Freightways</b>	Project Number: <b>T-1768-01</b>	Well Number: <b>P2</b>
Logged By: <b>A. Tirao</b>	Surface Elevation: <b>—</b>	Well Location: <b>24N 4E 20-29</b> Township Range Section 1/4, 1/4
Drilling Method: <b>Stratprobe</b>	Hole Diameter: <b>2"</b>	Casing Size/Type: <b>—</b>
Date Started: <b>8/8/97</b>	Drilling Company: <b>TEG</b>	Depth to Water: <b>~7.5</b> Encountered Static
Date Completed:	Driller: <b>Todd</b>	Methods of Decontamination Prior to Drilling: <b>Alconox, water rinse</b>

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								Ground Surface
1								
2		2'-5'	0910	0		100	GM/SP-SM	Gray and brown, silty, sandy, fine GRAVEL and slightly silty, fine to medium SAND; dry to moist.
3								
4							SP	Brown, fine to medium SAND; moist.
5		5'-8'	0915	232		83	ML/SP	Gray, slightly clayey SILT and brown, fine to medium SAND; moist to wet; strong hydrocarbon odor and sheen on soil.
6								
7								
8								BOTTOM OF PROBE 8 FEET
9								
10								

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Name of Job  
Location of Job

**LOG OF BORING**

Date  
Job No.  
**FIG. NO.**

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: <u>Consolidated Freightways</u>		Project Number: <u>T-1768-01</u>	Well Number: <u>P3</u>
Logged By: <u>A. Tirao</u>		Surface Elevation: <u>—</u>	Well Location: <u>24N 4E 20 29</u> Twshp Range Section 1/4, 1/4
Drilling Method: <u>Stratoprobe</u>	Hole Diameter: <u>2"</u>	Casing Size/Type: <u>—</u>	Depth to Water: <u>~6.5</u> Encountered Static
Date Started: <u>8/8/97</u>	Drilling Company: <u>TEG</u>		Methods of Decontamination Prior to Drilling: <u>Alconox, water rinse</u>
Date Completed:	Driller: <u>Todd</u>		

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								Ground Surface
1								
2		2'-5'	0947	0		100	GM	Gray, silty, fine to medium, sandy, fine GRAVEL; dry.
3							SP	Brown, fine to medium SAND; dry to moist.
4								
5		5'-8'	0951	0		83	SP	Brown, fine to medium SAND; moist.
6							ML	Grayish brown, slightly clayey SILT; moist to wet.
7							SP	Dark gray, fine to medium SAND; wet.
8								BOTTOM OF PROBE 8 FEET
9								
10								

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Name of Job  
 Location of Job

**LOG OF BORING**

Date  
 Job No.  
**FIG. NO.**

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: Consolidated Freightways		Project Number: T-1768-01	Well Number: P4
Logged By: A Tirao		Surface Elevation: —	Well Location: 24N 4E 20 1/2 29 Twonshp Range Section 1/4, 1/4
Drilling Method: Strataprabe	Hole Diameter: 2"	Casing Size/Type: —	Depth to Water: ~8 Encountered Static
Date Started: 8/8/97	Drilling Company: TEG		Methods of Decontamination Prior to Drilling: Alconox, water rinse
Date Completed:	Driller: Todd		

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								Ground Surface
1								
2		2'-5'	1033	0		83	GM/SP	Gray, silty, fine to medium, sandy, fine GRAVEL and tan, fine to medium SAND; dry.
3								
4							SP/ML	Brown fine to medium SAND and SILT; dry to moist.
5		5'-8'	1040	17.6		50	GM/ML	Brown and gray, silty, fine to medium sandy, fine GRAVEL, slightly clayey SILT, and fine to medium SAND; moist to wet; hydrocarbon odor, slight sheen on soil.
6								
7								
8								BOTTOM OF PROBE 8 FEET
9								
10								

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Name of Job  
 Location of Job

**LOG OF BORING**

Date  
 Job No.  
**FIG. NO.**

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: <u>Consolidated Freightways</u>		Project Number: <u>T-1768-01</u>	Well Number: <u>P5</u>
Logged By: <u>A. Tirao</u>		Surface Elevation: <u>—</u>	Well Location: <u>24N 4E 20:29</u> Twship Range Section 1/4, 1/4
Drilling Method: <u>Stratoprobe</u>	Hole Diameter: <u>2"</u>	Casing Size/Type: <u>—</u>	Depth to Water: <u>~7.5</u> Encountered <u>8.05</u> Static
Date Started: <u>8/8/97</u>	Drilling Company: <u>TEG</u>		Methods of Decontamination Prior to Drilling: <u>Alconox, water rinse</u>
Date Completed:	Driller: <u>Todd</u>		

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								— Ground Surface —
1		0'-3'	1123	0		100	GM	Gray, silty, fine to medium sandy, fine GRAVEL; dry.
2							SP-SM	Dark brown, slightly silty, fine to medium SAND; dry to moist.
3							SP	Tap, fine to medium SAND; dry to moist.
4		3'-6'	1129	0		83	SP	Dark brown, medium SAND; dry to moist.
5								
6				7.3			ML	Tan and gray, slightly fine sandy to clean, SILT; moist to wet; slight hydrocarbon odor, sheen.
7								
8								
9								
10								BOTTOM OF PROBE 9 FEET

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Name of Job  
Location of Job

**LOG OF BORING**

Date  
Job No.

**FIG. NO.**

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: Consolidated Freightways	Project Number: T-1768-01	Well Number: P6
Logged By: A. Tirao	Surface Elevation: _____	Well Location: 24N 4E 20 <sup>1</sup> / <sub>2</sub> 29 Township Range Section 1/4, 1/4
Drilling Method: Stratoprobe	Hole Diameter: 2"	Casing Size/Type: _____
Date Started: 8/8/97	Drilling Company: TEG	Depth to Water: <u>~7</u> Encountered <u>7.89</u> Static
Date Completed:	Driller: Todd	Methods of Decontamination Prior to Drilling: Alconox, water rinse

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								Ground Surface
1								
2								
3								
4								
5								
6		6'-9'	1225	10.3		100	SP	Dark brown, fine to medium SAND; dry.
7								
8			1230	0.4			ML	Dark gray, slightly clayey SILT; moist to wet.
9								
10								BOTTOM OF PROBE 9 FEET

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Name of Job  
 Location of Job

**LOG OF BORING**

Date  
 Job No.  
**FIG. NO.**

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: <i>Consolidated Freightways</i>		Project Number: <i>T-1768-01</i>	Well Number: <i>P7</i>
Logged By: <i>A. Tirao</i>		Surface Elevation: <i>—</i>	Well Location: <i>24N 4E 20 29</i> Twshp Range Section 1/4, 1/4
Drilling Method: <i>Stratoprobe</i>	Hole Diameter: <i>2"</i>	Casing Size/Type: <i>—</i>	Depth to Water: <i>~7.5</i> Encountered <i>7.00</i> Static
Date Started: <i>8/8/97</i>	Drilling Company: <i>TEG</i>		Methods of Decontamination Prior to Drilling: <i>Alconox, water rinse</i>
Date Completed:	Driller: <i>Todd</i>		

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
1								Ground Surface
2								
3								
4								
5								
6		<i>6'-9'</i>	<i>1305</i>	<i>0</i>		<i>100</i>	<i>GM/ML</i>	<i>Brown and gray, silty, sandy GRAVEL, slightly clayey SILT, and fine to medium SAND; dry to wet; slight hydrocarbon odor (7.5 feet)</i>
7			<i>1312</i>	<i>0</i>				
8								
9								
10								<i>BOTTOM OF PROBE 4 FEET</i>

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Name of Job  
Location of Job

**LOG OF BORING**

Date  
Job No.  
**FIG. NO.**

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: <i>Consolidated Freightways</i>		Project Number: <i>T-1768-01</i>	Well Number: <i>P8</i>
Logged By: <i>A. Tirao</i>		Surface Elevation: <i>—</i>	Well Location: <i>24N 4E 20 1/4 29</i> Township Range Section 1/4, 1/4
Drilling Method: <i>Stratoprobe</i>	Hole Diameter: <i>2"</i>	Casing Size/Type: <i>—</i>	Depth to Water: <i>~ 7.2</i> Encountered Static
Date Started: <i>8/8/97</i>	Drilling Company: <i>TEG</i>		Methods of Decontamination Prior to Drilling: <i>Alconox, water rinse</i>
Date Completed:	Driller: <i>Td&amp;A</i>		

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								— Ground Surface —
1								
2								
3								
4								
5								
6		<i>6'-9'</i>	<i>1345</i>	<i>0</i>		<i>100</i>	<i>SP / ML</i>	<i>Tan and gray, fine to medium SAND, SILT, and fine sandy SILT; dry to wet.</i>
7								
8			<i>1352</i>	<i>0</i>				
9								
10								<i>BOTTOM OF PROBE 4 FEET</i>

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Name of Job  
Location of Job

**LOG OF BORING**

Date  
Job No.  
**FIG. NO.**



# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: <i>Consolidated Freightways</i>		Project Number: <i>T-1768-01</i>	Well Number: <i>P9</i>
Logged By: <i>A. Tirao</i>		Surface Elevation: <i>—</i>	Well Location: <i>24N 4E 20 1/4 29</i> Twshp Range Section 1/4, 1/4
Drilling Method: <i>Stratoprobe</i>	Hole Diameter: <i>2"</i>	Casing Size/Type: <i>—</i>	Depth to Water: <i>~7</i> Encountered Static
Date Started: <i>8/8/97</i>	Drilling Company: <i>TEG</i>		Methods of Decontamination Prior to Drilling: <i>Alconox, water rinse</i>
Date Completed:	Driller: <i>Todd</i>		

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								— Ground Surface
1								
2								
3								
4								
5		5'-6'	1415	0		100		Brown and gray, silty, sandy GRAVEL, slightly clayey SILT, and fine to medium SAND; dry to wet.
6			1420	0				
7								
8								BOTTOM OF PROBE @ FEET.
9								
10								

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Name of Job  
 Location of Job

**LOG OF BORING**

Date  
 Job No.  
**FIG. NO.**

# ENVIRONMENTAL FIELD DRILLING LOG

Project Name: <i>Consolidated Freightways</i>	Project Number: <i>T-1768-01</i>	Well Number: <i>P10</i>
Logged By: <i>A. Tirao</i>	Surface Elevation: <i>—</i>	Well Location: <i>24N 4E 20 1/4 29</i> Township Range Section 1/4, 1/4
Drilling Method: <i>Stratoprobe</i>	Hole Diameter: <i>2"</i>	Casing Size/Type: <i>—</i>
Date Started: <i>8/8/97</i>	Drilling Company: <i>TEG</i>	Depth to Water: <i>~7'</i> Encountered Static
Date Completed:	Driller: <i>Todd</i>	Methods of Decontamination Prior to Drilling: <i>Alconox, rinse water</i>

Depth in Feet	Sample Type & No.	Sample Depth Interval	Time	Concentration	Blow Count	Recovery Length / %	USCS	Soil Description
								Ground Surface
1								
2								
3								
4								
5								
6		<i>6'-9'</i>	<i>1509</i>	<i>0</i>		<i>100</i>	<i>SP</i>	<i>Brown, fine to medium SAND; moist.</i>
7								
8			<i>1515</i>	<i>0</i>			<i>ML</i>	<i>Grayish brown, slightly clayey SILT; moist to wet.</i>
9							<i>SP</i>	<i>Dark gray, fine to medium SAND; wet.</i>
10								<i>BOTTOM OF PROBE 9 FEET</i>

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Name of Job  
Location of Job

LOG OF BORING

Date  
Job No.  
FIG. NO.

PROJECT: CF/Risk Assessment/WA

# RECORD OF BOREHOLE MW-1

SHEET 1 OF 1

PROJECT NUMBER: 983 1065

BORING LOCATION:

DATUM:

BORING DATE: 4/7/98

DEPTH FEET	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS/FT.			MONITORING WELL GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	PID	WATER CONTENT, PERCENT Wp		WI
0	4-inch I.D. Hollow Stem Auger	Moderate brown, silty fine to coarse SAND and fine GRAVEL, dry (FILL)	SP							0.6			
		Loose, moderate brown and olive gray, silty fine to coarse SAND, becoming wet below -6 ft bgs, trace wood pieces at -8.0 ft bgs	SM										
			1		SS	6-10-7	17	0.7					
			2		SS	11-20-12	32	0.7					
			3		SS	6-9-10	19	2.2					
10		Compact, olive gray, silty fine to medium SAND, wet	SM-SP										
	4	SS	9-19-20		39	1.8							
	5	SS	?		?	2.0							
15		Total depth 15.5 ft bgs											
20													
25													
30													

DRILL RIG: CME 75

DRILLING CONTRACTOR: Cascade Drilling

DRILLER: B. Gose

LOGGED: G. Zimmerman

CHECKED:

DATE: 4/17/98



PROJECT: CF/Risk Assessment/WA

# RECORD OF BOREHOLE MW-2

SHEET 1 OF 1

PROJECT NUMBER: 983 1065

BORING LOCATION:

DATUM:

BORING DATE: 4/7/98

DEPTH FEET	BORING METHOD	SOIL PROFILE			SAMPLES			PENETRATION RESISTANCE BLOWS/FT.			MONITORING WELL GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	PID		WATER CONTENT, PERCENT Wp — W — WI
0	4-inch I.D. Hollow Stem Auger	Moderate brown and gray, silty medium to coarse SAND and fine GRAVEL, petroleum odor (FILL)										
5		Loose, olive gray, fine to medium sandy SILT, trace stratified layers clayey SILT, wet below 6.0 ft, petroleum odor	SM		1	SS	7-7-10	17	4.6		■	
					2	SS	6-7-8	15	4.3		■	
					3	SS	4-7-8	15	2.1		■	
10		Compact, dark gray, unstratified, silty fine to medium SAND, wet, no odor	SM-SP		4	SS	10-13-16	29	2.4		■	
15		Increase in grain size of sand to fine to coarse SAND			5	SS	4-7-8	15	1.3		■	
		Total depth 15.5 ft bgs										
20												
25												
30												

DRILL RIG: CME 75

LOGGED: G. Zimmeman

DRILLING CONTRACTOR: Cascade Drilling

CHECKED:

DRILLER: B. Gose

DATE: 4/17/98



PROJECT: CF/Risk Assessment/WA

# RECORD OF BOREHOLE MW-3

SHEET 1 OF 1

PROJECT NUMBER: 983 1065

BORING LOCATION:

DATUM:

BORING DATE: 4/7/98

DEPTH FEET	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS/FT. ■			MONITORING WELL GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	PID	WATER CONTENT, PERCENT Wp — W — WI		WATER LEVEL
0	4-inch I.D. Hollow Stem Auger	Gray, silty fine to coarse SAND and fine GRAVEL, dry (FILL)								3.3			
5		Compact, dark gray, silty fine to medium SAND, stratified layers of clayey silt, trace wood pieces, becoming wet below 6.5 ft	SM			1	SS	14-13-16	29	1.0			
						2	SS	10-12-12	24	1.1			
						3	SS	8-15-20	35	1.3			
10		Compact, dark gray, unstratified, silty fine to medium SAND, wet	SM-SP			4	SS	8-14-21	36	1.1			
15					5	SS	?	?	1.2				
		Total depth 15.5 ft bgs											

DRILL RIG: CME 75

DRILLING CONTRACTOR: Cascade Drilling

DRILLER: B. Gose

LOGGED: G. Zimmerman

CHECKED:

DATE: 4/17/98



PROJECT: CF/Risk Assessment/WA

# RECORD OF BOREHOLE RW-1

SHEET 1 OF 1

PROJECT NUMBER: 983 1065

BORING LOCATION:

DATUM:

BORING DATE: 4/7/98

DEPTH FEET	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS/FT. ■			MONITORING WELL GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	PID	WATER CONTENT, PERCENT Wp — W — Wi		WATER LEVEL
0	6-inch I.D. Hollow Stem Auger	Moderate yellowish brown, silty fine to medium SAND, some fine gravel, dry (FILL)								0.6			
5		Compact, moderate yellowish brown and medium gray, silty fine to medium SAND, damp	SM		1	SS	11-11-10	21	32				
					2	SS	6-5-7	12	120				
			Loose, olive gray, clayey SILT, some wood pieces, little fine to medium sand, wet Potential free product observed in sample	SM-ML		3	SS	7-5-7	12	125			
10			Compact, dark gray, silty fine to medium SAND, wet	SM-SP		4	SS	7-9-12	21	28			
15					5	SS	7-15-22	37	17				
		Total depth 15.5 ft bgs											

DRILL RIG: CME 75

LOGGED: G. Zimmerman

DRILLING CONTRACTOR: Cascade Drilling

CHECKED:

DRILLER: B. Gose

DATE: 4/17/98



PROJECT: CF/Risk Assessment/WA

# RECORD OF BOREHOLE RW-2

SHEET 1 OF 1

PROJECT NUMBER: 983 1065

BORING LOCATION:

DATUM:

BORING DATE: 4/7/98

DEPTH FEET	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS/FT. ■					MONITORING WELL GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG DEPTH	NUMBER	TYPE	BLOWS / 6 IN. 140 lb. hammer 30 inch drop	N	PID	WATER CONTENT, PERCENT Wp — W — WI			WATER LEVEL		
0	6-inch I.D. Hollow Stem Auger	Moderate yellowish brown, silty fine to coarse SAND and fine GRAVEL, dry, petroleum odor (FILL)													
		Compact, olive gray, silty fine to coarse SAND, unstratified, strong petroleum odor, becoming wet below -6 ft	SM		1	SS	40-32-50	82	512						
5		Olive gray, clayey SILT			2	SS	17-15-14	29	450						
		Loose to compact, dark gray, silty fine to medium SAND, wet, petroleum odor in sample	SM-SP		3	SS	6-10-15	25	412						
10					4	SS	10-8-8	16	368						
15				5	SS	5-10-15	25	189							
		Total depth 15.5 ft bgs													

DRILL RIG: CME 75

DRILLING CONTRACTOR: Cascade Drilling

DRILLER: B. Gose

LOGGED: G. Zimmerman

CHECKED:

DATE: 4/17/98



# RECORD OF BOREHOLE MW-4

SHEET 1 of 1

PROJECT: CF-Seattle  
 PROJECT NUMBER: 983-1065.810  
 LOCATION: CF-Seattle

DRILLING METHOD: 4" HSA  
 DRILLING DATE: 01/10/2001  
 DRILL RIG: CME-75

DATUM: MSL  
 AZIMUTH: N/A  
 COORDINATES: not surveyed

ELEVATION:  
 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS GRAPHIC		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
											$W_p$ $\frac{W}{W_p}$ $\frac{W}{W_p}$ $\frac{W}{W_p}$				
0	4" ID Hollow Stem Auger with 140lb drop hammer	0.0 - 0.5 Asphalt			0.5									Well cap and flush mount monument locked  Bentonite seal  Filter pack with silica sand    2" PVC .01" Slotted pipe    bottom of hole	
		0.5 - 3.0 Gravel, sand, red brick with metal debris (FILL)			3.0										
		3.0 - 17.0 Compact to Dense, dusky yellowish brown to dark grey weekly stratified fine sandy SILT, silt fine sand, moist to wet (ALLUVIUM)													
5						1	MC	13-13-13	26	$\frac{1.5}{1.5}$					
						2	MC	4-5-5	10	$\frac{1.5}{1.5}$					
10		Wet below 8.5 ft													
			SM-ML												
					3	MC	7-8-8	16	$\frac{1.5}{1.5}$						
					4	MC	11-20-21	41	$\frac{1.5}{1.5}$						
15		Becoming dense in fine sands													
		Boring completed at 17.0 ft.													
17.0															
20															
25															
30															
35															
40															

DRAFT

BOREHOLE RECORD 9831065.GPJ GLDR\_WA\_GDT 2/15/01

1 in to 5 ft  
 DRILLING CONTRACTOR: Cascade  
 DRILLER: Cody

LOGGED: GLZ  
 CHECKED:  
 DATE:





# RECORD OF BOREHOLE MW-5

SHEET 1 of 1

PROJECT: CF-Seattle  
 PROJECT NUMBER: 983-1065.810  
 LOCATION: CF- Seattle

DRILLING METHOD: 4" HSA  
 DRILLING DATE: 01/10/2001  
 DRILL RIG: CME-75

DATUM: MSL  
 AZIMUTH: N/A  
 COORDINATES: not surveyed

ELEVATION:  
 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS / ft				NOTES WATER LEVELS GRAPHIC		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
											$W_p$ $W_L$				
0	4" ID Hollow Stem Auger with 140lb drop hammer	0.0 - 0.5 Asphalt			0.5										Well cap and flush mount monument locked  Bentonite seal  Filter pack with silica sand   2" PVC .01" Slotted pipe   bottom of hole
0.5 - 6.0		Loose, medium light gray, fine to coarse SAND and gravel (FILL)													
6.0 - 7.0		Compact, dark gray, Silty fine SAND, damp to wet (ALLUVIUM)	SM		6.0	1	MC	15-17-17	34	$\frac{1.5}{1.5}$					
7.0 - 13.0		Firm, Olive gray, nonstratified SILT, damp to wet (ALLUVIUM)	ML		7.0	2	MC	2-3-5	8	$\frac{1.5}{1.5}$					
13.0 - 17.0		Compact, grayish black, nonstratified, silty fine SAND, wet (ALLUVIUM)	SP-SM		13.0	4	MC	4-4-11	15	$\frac{1.3}{1.5}$					
17.0		Boring completed at 17.0 ft.			17.0	5	MC	10-18-17	35	$\frac{1.5}{1.5}$					

DRAFT

BOREHOLE RECORD 9831065.GPJ GLDR\_WA.GDT 2/15/01

1 in to 5 ft  
 DRILLING CONTRACTOR: Cascade  
 DRILLER: Cody

LOGGED: GLZ  
 CHECKED:  
 DATE:



# RECORD OF BOREHOLE MW-6

SHEET 1 of 1

PROJECT: CF-Seattle  
 PROJECT NUMBER: 983-1065.810  
 LOCATION: CF-Seattle

DRILLING METHOD: 4" HSA  
 DRILLING DATE: 01/10/2001  
 DRILL RIG: CME-75

DATUM: MSL  
 AZIMUTH: N/A  
 COORDINATES: not surveyed

ELEVATION:  
 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS GRAPHIC	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
					DEPTH (ft)						$W_p$  -----  $W_w$				
0	4" ID Hollow Stem Auger with 140lb drop hammer	0.0 - 3.0 Fine to medium SAND and Gravel (CLEAN FILL)		X											Well cap and flush mount monument locked  Bentonite seal  Filter pack with silica sand    2" PVC .01" Slotted pipe    bottom of hole
3.0		3.0 - 8.5 Compact, dusky yellowish brown, non-stratified silty fine sand, moist to wet (ALLUVIUM)	SM	.	3.0	1	MC	9-9-9	18	1.5 1.5					
8.5		8.5 - 10.0 Loose, olive gray, weakly stratified, fine sandy SILT, wet (ALLUVIUM)	ML		8.5	2	MC	3-3-3	6	1.5 1.5					
10.0		10.0 - 17.0 Loose, dark gray, non-stratified, silty fine SAND, wet (ALLUVIUM)	SM	.	10.0	3	MC	3-4-4	8	1.5 1.5					
15.0		Becoming compact			4	MC	4-5-17	22	1.5 1.5						
17.0	Boring completed at 17.0 ft.				17.0										

DRAFT

ATD

BOREHOLE RECORD 9831065.GPJ GLDR\_WA.GDT 2/15/01

1 in to 5 ft  
 DRILLING CONTRACTOR: Cascade  
 DRILLER: Cody

LOGGED: GLZ  
 CHECKED:  
 DATE:



# RECORD OF BOREHOLE GP-1

SHEET 1 of 1

PROJECT: Consolidated Freightways  
 PROJECT NUMBER: 033-1000.000  
 LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
 DRILLING DATE: 12-02-03  
 DRILL RIG:

DATUM:  
 AZIMUTH: N/A  
 COORDINATES: not surveyed

ELEVATION:  
 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE BLOWS / ft				NOTES WATER LEVELS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
					DEPTH (ft)						$w_p$   $w_L$   $w_p$   $w_L$   $w_p$   $w_L$   $w_p$   $w_L$				
0	Direct Push	0.0 - 2.0 Fill material, concrete, asphalt, gravel, brown and light gray, loose, dry													
		2.0 - 5.0 SW-Sandy with some silt, Brown, Loose, Dry	SW		2.0										
5		5.0 - 9.1 Cl-Low Plasticity Clay, Light Brown, Medium Firm, Moist	CL		5.0	GP-1	GRAB								Sample GP-1(6'-8') collected at 0850
		9.1 - 12.0 SC-Clayey Sand, Dark Gray to Brown, Loose, Wet	SC		9.1	GP-1	GRAB								Water sample GP-1 collected at 0910
10		Continued as cored hole. See Drillhole log report.												Sample GP-1(10'-12') collected at 0900	

BOREHOLE RECORD GP1.GPJ\_GLDR\_WA.GDT 1/21/04

Water Level

1 in to 2 ft  
 DRILLING CONTRACTOR: Cascade Drilling  
 DRILLER: Cascade Drilling

LOGGED: JK  
 CHECKED:  
 DATE:



# RECORD OF BOREHOLE GP-2

SHEET 1 of 1  
ELEVATION:  
INCLINATION: -90

PROJECT: Consolidated Freightways  
PROJECT NUMBER: 033-1000.000  
LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
DRILLING DATE: 12-02-03  
DRILL RIG:

DATUM:  
AZIMUTH: N/A  
COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)					
					DEPTH (ft)						W <sub>p</sub>	W <sub>L</sub>	W <sub>U</sub>			
0	Direct Push	0.0 - 1.2 Fill material, concrete, asphalt, gravel, brown and light gray, loose, dry		■												
		1.2 - 8.0 SW-Sandy with some silt, brown, loose, dry	SW	■	1.2											
5		8.0 - 12.0 SC-Clayey sand, dark gray to brown, loose, wet	SC	■	8.0											
						GP-2	GRAB								Sample GP-2(6'-8') collected at 0940	
															Water sample GP-2 collected at 1030	
															Sample GP-1(10'-12') collected at 0950	
		Continued as cored hole. See Drillhole log report.														

BOREHOLE RECORD GP2.GPJ GLDR\_WA.GDT 1/21/04

1 in to 2 ft  
DRILLING CONTRACTOR: Cascade Drilling  
DRILLER: Cascade Drilling

LOGGED: JK  
CHECKED:  
DATE:



# RECORD OF BOREHOLE GP-3

SHEET 1 of 1  
ELEVATION:  
INCLINATION: -90

PROJECT: Consolidated Freightways  
PROJECT NUMBER: 033-1000.000  
LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
DRILLING DATE: 12-02-03  
DRILL RIG:

DATUM:  
AZIMUTH: N/A  
COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)					
											10	20	30		40	
0	Direct Push	0.0 - 1.6 Fill material, concrete, asphalt, gravel, brown and light gray, loose, dry														
		1.6 - 8.0 SW-Sandy with some silt, brown, loose, dry	SW		1.6											
		8.0 - 12.0 SC-Clayey sand, dark gray to brown, loose, (wet at 8.4)	SC		8.0											
		Continued as cored hole. See Drillhole log report.														

BOREHOLE RECORD GP3.GPJ GLDR\_WA.GDT 1/21/04

1 in to 2 ft  
DRILLING CONTRACTOR: Cascade Drilling  
DRILLER: Cascade Drilling

LOGGED: JK  
CHECKED:  
DATE:



# RECORD OF BOREHOLE GP-4

SHEET 1 of 1  
ELEVATION:  
INCLINATION: -90

PROJECT: Consolidated Freightways  
PROJECT NUMBER: 033-1000.000  
LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
DRILLING DATE: 12-02-03  
DRILL RIG:

DATUM:  
AZIMUTH: N/A  
COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
					DEPTH (ft)						w <sub>p</sub>	w <sub>L</sub>	w <sub>U</sub>		
0	Direct Push	0.0 - 1.2 Fill material, concrete, asphalt, loose gravel, light to dark brown, loose, dry													
		1.2 - 4.0 SW-Sandy with some silt, brown, Loose, dry	SW		1.2										
5		4.0 - 8.7 Cl-Low Plasticity clay, light brown, medium firm, moist	CL		4.0										
		8.7 - 12.0 SC-Clayey sand, dark gray to brown, loose, wet	SC		8.7										
						GP-2	GRAB							Sample GP-1(6'-8') collected at 1050	
														Water sample GP-4 collected at 1100	
10														Sample GP-1(10'-12') collected at 1055	

Water Level

BOREHOLE RECORD GP4.GPJ\_GLDR\_WA.GDT 1/21/04

Continued as cored hole. See Drillhole log report.

1 in to 2 ft  
DRILLING CONTRACTOR: Cascade Drilling  
DRILLER: Cascade Drilling

LOGGED: JK  
CHECKED:  
DATE:



# RECORD OF BOREHOLE GP-5

SHEET 1 of 1  
ELEVATION:  
INCLINATION: -90

PROJECT: Consolidated Freightways  
PROJECT NUMBER: 033-1000.000  
LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
DRILLING DATE: 12-02-03  
DRILL RIG:

DATUM:  
AZIMUTH: N/A  
COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in <small>140 lb hammer 30 inch drop</small>	N	REC / ATT	WATER CONTENT (PERCENT)						
					DEPTH (ft)						10	20	30	40		w <sub>p</sub>	w
0	Direct Push	0.0 - 1.6 Fill material, concrete, asphalt, gravel, brown and light gray, loose, dry		[Cross-hatch pattern]													
		1.6 - 8.9 SW-Sandy with some silt, Brown, Loose, Dry		[Dotted pattern]	1.6												
5		8.9 - 12.0 SC-Clayey Sand, Dark Gray to Brown, Loose, Wet	SW	[Dotted pattern]	8.9	GP-2	GRAB									Sample GP-1(6'-8') collected at 1200	
10			SC	[Diagonal lines pattern]											Water sample GP-5 collected at 1230		
		Continued as cored hole. See Drillhole log report.													Sample GP-5(10'-12') collected at 1205		

Water Level

BOREHOLE RECORD: GP5.GPJ\_GLDR\_WA.GDT 1/21/04

1 in to 2 ft  
DRILLING CONTRACTOR: Cascade Drilling  
DRILLER: Cascade Drilling

LOGGED: JK  
CHECKED:  
DATE:



# RECORD OF BOREHOLE GP-6

SHEET 1 of 1  
ELEVATION:  
INCLINATION: -90

PROJECT: Consolidated Freightways  
PROJECT NUMBER: 033-1000.000  
LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
DRILLING DATE: 12-02-03  
DRILL RIG:

DATUM:  
AZIMUTH: N/A  
COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES				PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
					DEPTH (ft)						10	20	30		40
0	Direct Push	0.0 - 2.5 Fill material, concrete, asphalt, gravel, brown and light gray, loose, dry. Concrete hit at the end of boring (2.5')		[Cross-hatched pattern]		GP-2	GRAB								Sample GP-6(0'-2.5") collected at 1310. Refusal at 2.5' below ground surface.
					2.5										
5															
10															

Continued as cored hole. See Drillhole log report.

1 in to 2 ft  
DRILLING CONTRACTOR: Cascade Drilling  
DRILLER: Cascade Drilling

LOGGED: JK  
CHECKED:  
DATE:



BOREHOLE RECORD GP6.GPJ GLDR\_WA.GDT 1/21/04



# RECORD OF BOREHOLE GP-7

SHEET 1 of 1

PROJECT: Consolidated Freightways  
 PROJECT NUMBER: 033-1000.000  
 LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
 DRILLING DATE: 12-02-03  
 DRILL RIG:

DATUM:  
 AZIMUTH: N/A  
 COORDINATES: not surveyed

ELEVATION:  
 INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE			SAMPLES				PENETRATION RESISTANCE BLOWS / ft ■				NOTES WATER LEVELS		
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
											$w_p$ ——— $w$ ——— $w_L$				
0	Direct Push	0.0 - 0.5 Concrete													
		0.5 - 4.0 No recovery, rock blocked discrete sampler			0.5										
5		4.0 - 8.1 SW-Silty Sand , Brown, light to dark brown, loose to medium, Dry	SM	[Dotted Pattern]	4.0										
		8.1 - 12.0 SC- Clayey sand , dark gray, loose to medium, wet	SC	[Diagonal Hatching]	8.1										
					GP-7	GRAB								Sample GP-1(6'-8') collected at 1435	
					GP-7	GRAB								Water sample collected at 1455	
10					GP-7	GRAB								Sample GP-1(10'-12') collected at 1440	
		Continued as cored hole. See Drillhole log report.													

BOREHOLE RECORD: GP7.GPJ\_GLDR\_WA.GDT 1/21/04

Water Level

1 in to 2 ft  
 DRILLING CONTRACTOR: Cascade Drilling  
 DRILLER: Cascade Drilling

LOGGED: JK  
 CHECKED:  
 DATE:



# RECORD OF BOREHOLE GP-8

SHEET 1 of 1  
 ELEVATION:  
 INCLINATION: -90

PROJECT: Consolidated Freightways  
 PROJECT NUMBER: 033-1000.000  
 LOCATION: Seattle, WA

DRILLING METHOD: Direct Push  
 DRILLING DATE: 12-02-03  
 DRILL RIG:

DATUM:  
 AZIMUTH: N/A  
 COORDINATES: not surveyed

DEPTH (ft)	BORING METHOD	SOIL PROFILE				SAMPLES					PENETRATION RESISTANCE BLOWS / ft ■			NOTES WATER LEVELS	
		DESCRIPTION	USCS	GRAPHIC LOG	ELEV.	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC / ATT	WATER CONTENT (PERCENT)				
					DEPTH (ft)						10	20	30		40
0	Direct Push	0.0 - 0.5 Concrete													
0.5		0.5 - 7.8 SM-Silty sand, light to dark brown, medium stiff, dry	SM	0.5											
7.8		7.8 - 12.0 SC-Clayey Sand, Dark Gray to Brown, Loose, Wet	SC	7.8		GP-2	GRAB							▼ Water sample GP-8 collected at 1410	
10														Sample GP-8(10'-12') collected at 1355	

Continued as cored hole. See Drillhole log report.

1 in to 2 ft  
 DRILLING CONTRACTOR: Cascade Drilling  
 DRILLER: Cascade Drilling

LOGGED: JK  
 CHECKED:  
 DATE:



BOREHOLE RECORD: GP8.GPJ\_GLDR\_WA.GDT\_1/21/04

Water Level

**APPENDIX B**  
**LABORATORY ANALYTICAL REPORTS**

REMEDIAL INVESTIGATION, FOCUSED FEASIBILITY STUDY,  
AND CLEANUP ACTION PLAN  
6050 East Marginal Way  
Seattle, Washington

Farallon PN: 1071-010

**Laboratory Analytical Reports  
1988-1989**

# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14 • TACOMA, WASHINGTON 98424 • TELEPHONE (206) 922-2510

Report To: Blymyer Engineers

Date: July 14, 1988

Report On: Analysis of Soil & Water

Lab No.: A 3593

## IDENTIFICATION:

CF/Puget Sound project no. 8818.  
Samples submitted on 6-27 & 6-29-88.

## ANALYSIS:

Soil Samples:

<u>Lab No.</u>	<u>Client Identification</u>	<u>Total Petroleum Fuel Hydrocarbons (mg/kg)</u>
1	MW-1A 4 - 4.5'	12
2	MW-1B 9 - 9.5'	< 10
3	MW-1C 14 - 14.5'	11
4	MW-2A 4 - 4.5'	13
5	MW-2B 9 - 9.5'	< 10
6	MW-2C 13.5 - 14'	< 10
7	MW-3A 4 - 4.5'	< 10
8	MW-3B 9 - 9.5'	160
9	MW-3C 14 - 14.5'	< 10
10	MW-4A 5'	< 10
11	MW-4B 10'	< 10
12	MW-4C 15'	102
13	MW-5A 5'	4,797
14	MW-5B 10'	15
15	MW-5C 15'	< 10

# SOUND ANALYTICAL SERVICES, INC.

Blymyer Engineers  
Lab No: A 3593  
Page 2  
July 14. 1988

## Water Samples:

<u>Lab No.</u>	<u>Client Identification</u>	<u>Total Petroleum Fuel Hydrocarbons (mg/l)</u>
16	MW-1 1:35	Bottle broken. no sample
17	MW-2A 1:40	< 1
18	MW-3 1:45	< 1
19	MW-4 1:50	< 1
20	MW-5 1:55	< 1

<u>Lab No.</u>	<u>Client Identification</u>	<u>Total Petroleum Fuel Hydrocarbons (mg/kg)</u>	<u>Oil &amp; Grease (mg/kg)</u>
21	S-1V Soil	3,389	4,274
22	S-1F Soil	2,939	3,383
23	W-1 Water	2,862*	3,812*
24	S-2F Soil	3,187	4,072
25	S-2V Soil	98	193

\* - Units are mg/l for water samples.

# SOUND ANALYTICAL SERVICES, INC.

Blymyer Engineers  
 Lab No: A 3593  
 Page 3  
 July 14, 1988

Purgeable Halocarbons per Method 601, 40 CFR, Part 136

Contaminant                                      Concentration (mg/kg) (ppm)

Lab Sample No. Client ID	21 S-1V	22 S-1F	23 W-1**
Methylene chloride	< 1	< 1	< 1
1,1-dichloroethylene	< 1	< 1	< 1
1,2-dichloroethane	< 1	< 1	< 1
1,2-transdichloroethylene	< 1	< 1	< 1
Chloroform	< 1	< 1	< 1
1,2-dichloroethane*	< 1	< 1	< 1
Freon	< 1	< 1	< 1
1,1,1-trichloroethane	< 1	< 1	< 1
Bromodichloromethane	< 1	< 1	< 1
Carbon Tetrachloride	< 1	< 1	< 1
1,2-dichloropropane	< 1	< 1	< 1
Trans-1,3-dichloropropene	< 1	< 1	< 1
Trichlorethylene	< 1	< 1	< 1
Cis-1,3-dichloropropene*	< 1	< 1	< 1
1,1,2-trichloroethane	< 1	< 1	< 1
Chlorodibromomethane	< 1	< 1	< 1
Bromoform	< 1	< 1	< 1
Tetrachloroethylene	< 1	< 1	< 1
1,1,2,2-tetrachloroethane	< 1	< 1	< 1
Chlorobenzene	< 1	< 1	< 1

\* - These halocarbons coelute  
 \*\* - Units are mg/l for water samples.

# SOUND ANALYTICAL SERVICES, INC.

Blymyer Engineers  
 Lab No: A 3593  
 Page 4  
 July 14, 1988

Purgeable Halocarbons per Method 601, 40 CFR, Part 136

<u>Contaminant</u>	<u>Concentration (mg/kg) (ppm)</u>	
	24 S-2F	25 S-2V
Lab Sample No. Client ID		
Methylene chloride	< 1	< 1
1,1-dichloroethylene	< 1	< 1
1,2-dichloroethane	< 1	< 1
1,2-transdichloroethylene	< 1	< 1
Chloroform	< 1	< 1
1,2-dichloroethane*	< 1	< 1
Freon	< 1	< 1
1,1,1-trichloroethane	< 1	< 1
Bromodichloromethane	< 1	< 1
Carbon Tetrachloride	< 1	< 1
1,2-dichloropropane	< 1	< 1
Trans-1,3-dichloropropene	< 1	< 1
Trichlorethylene	< 1	< 1
Cis-1,3-dichloropropene*	< 1	< 1
1,1,2-trichloroethane	< 1	< 1
Chlorodibromomethane	< 1	< 1
Bromoform	< 1	< 1
Tetrachloroethylene	< 1	< 1
1,1,2,2-tetrachloroethane	< 1	< 1
Chlorobenzene	< 1	< 1

\* - These halocarbons coelute



# SOUND ANALYTICAL SERVICES, INC.

Blymyer Engineers  
Lab No: A 3593  
Page 5  
July 14, 1988

## Total Metals:

<u>Contaminant</u>	<u>Concentration (mg/kg)</u>				
	21	22	23	24	25
Lab Sample No. Client ID	S-1V	S-1F	W-1*	S-2F	S-2V
Arsenic	<0.1	<0.1	<0.1	<0.1	<0.1
Barium	<2	<2	<2	<2	<2
Cadmium	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	9.1	7.2	0.8	9.9	11.3
Lead	14.2	9.9	1.9	11.0	8.6
Mercury	<0.05	<0.05	<0.05	<0.05	<0.05
Selenium	<0.1	<0.1	<0.1	<0.1	<0.1
Silver	<0.1	<0.1	<0.1	<0.1	<0.1

\* - Units are mg/l for water samples.

SOUND ANALYTICAL SERVICES

Brent A HEPNER  
BRENT HEPNER

# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

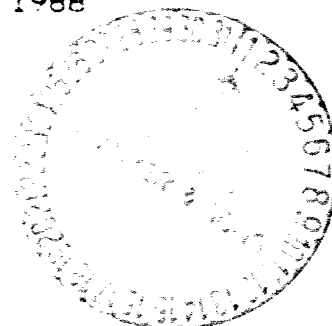
4630 PACIFIC HIGHWAY EAST, SUITE B-14 • TACOMA, WASHINGTON 98424 • TELEPHONE (206) 922 2510

Report To: Blymyer Engineers

Date: July 18, 1988

Report On: Analysis of Water

Lab No: A 3679



## IDENTIFICATION:

Samples submitted on 7-12-88  
Project No. 8818  
CF/Puget Sound, WA  
Sample ID: MW-1

## ANALYSIS:

Total Petroleum  
Hydrocarbons, mg/l < 1.0

Note: Detection limit is 1.0 mg/l.

SOUND ANALYTICAL SERVICES

*Brent Hepner*  
\_\_\_\_\_  
BRENT HEPNER

CHAIN OF CUSTODY RECORD

PROJ NO.		PROJECT NAME				NO. OF CONTAINERS						REMARKS		
8818		CF-Puget Sound, WA					<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH as diesel</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 418.1</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8010 (601)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">EPA 8 Metals</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">on ice</div> </div>							
SAMPLERS: (Signature)														
Michael S. Lee														
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION									
1	6/29/88	11:40		X	S-1V (soil)	1	X	X	X	X	X			
2		11:40		X	S-1F (soil)	1	X	X	X	X	X			
3		11:45		X	W-1 (water)	3	X	X	X	X	X	1 qt., 2-40 ml VOA vials		
4		12:05		X	S-2F (soil)	1	X	X	X	X	X			
5	✓	12:05		X	S-2V (soil)	1	X	X	X	X	X	Invoices + reports to  Consolidated Freightways c/o Blymyer Engineering 1829 Clement Ave Alameda, CA 94501		
Relinquished by: (Signature)						Date / Time		Received by: (Signature)			Relinquished by: (Signature)		Date / Time	Received by: (Signature)
Michael S. Lee						6/29/88 3:00 PM		Brent Depner						
Relinquished by: (Signature)						Date / Time		Received by: (Signature)			Relinquished by: (Signature)		Date / Time	Received by: (Signature)
Relinquished by: (Signature)						Date / Time		Received for Laboratory by: (Signature)			Date / Time		Remarks	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

PROJ. NO. 8818	PROJECT NAME OCF / Puget Sound, WA				NO. OF CONTAINERS	ANALYSIS TYPE REQUESTED								
SAMPLERS: (Signature) Mark B. Winters						REMARKS								
I.D. NO.	DATE	TIME	COMP	GRAB	STATION & LOCATION									
MW-1A	6/2/88	9:35		X	Monitor Well 1 (4-4.5')	X	X							
MW-1B	↓	9:45		X	Monitor Well 1 (9-9.5')									
MW-1C	↓	9:55		X	" " " (14-14.5')									
<del>MW-1D</del>		<del>10:45</del>		<del>X</del>	<del>" " " (4-4.5')</del>									
MW-2A	↓	11:45		X	Monitor Well 2 (4-4.5')									
MW-2B	↓	11:50		X	" " " (9-9.5')									
MW-2C	↓	12:00		X	" " " (13.5-14')									
MW-3A		2:10		X	Monitor Well 3 (4-4.5')									
MW-3B		2:20		X	" " " (9-9.5')									
MW-3C		2:30		X	" " " (14-14.5')		√	√						
						bill to: Consolidated Freightways c/o Plymco Engineers 1829 Clement Avenue Alameda, CA 94501								

Relinquished by: Mark B. Winters	Date 6/2/88	Time 3:25 PM	Received by: Michael [Signature]	Relinquished by:	Date 6/27/88	Time	Received by: Brent [Signature]
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by: Michael [Signature]	Date 4/2/88	Time	Received by laboratory:	Date	Time	Remarks (Shipping Related):	



**Western Region**  
 4080-C Pike Ln., Concord, CA 94520  
 (415) 685-7852  
 In CA: (800) 544-3422  
 Outside CA: (800) 423-7143



4080-C Pike Lane  
Concord, CA 94520  
415-685-7852

800-544-3422 (In CA)  
800-423-7143 (Outside CA)

### CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Mike Lewis Phone #: \_\_\_\_\_

Address: \_\_\_\_\_ FAX #: \_\_\_\_\_

Project Number: 8818 Project Name: CF/Puget Sound, WA

Project Location: 6000 East Marginal Way S., Seattle, WA Sampler Signature: Mark B. Whitner

#### ANALYSIS REQUEST      OTHER      SPECIAL HANDLING

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume/Amount	Matrix					Method Preserved					Sampling		BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080-PCBs Only	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	ORGANIC LEAD	PRIORITY ONE SERVICE (24 hr)	EXPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL REPORTING REQUIREMENTS													
				WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO <sub>3</sub>	ICE	NONE	OTHER	DATE	TIME																																				
MW-4A	15	1		X							X																																								
MW-4B	16	1		X							X																																								
MW-4C	17	1		X							X																																								
MW-5A	18	1		X							X																																								
MW-5B	19	1		X							X																																								
MW-5C	20	1		X							X																																								

Relinquished by: Mark B. Whitner Date: 6/28/00 Time: \_\_\_\_\_ Received by: Richard J. Lee

Relinquished by: Mark B. Whitner Date: 6/28/00 Time: \_\_\_\_\_ Received by: Arant Neamen

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by Laboratory: \_\_\_\_\_

Remarks:  
For use & Reports to  
Consolidated Contractors  
of Western Engineers  
1224 Commercial Ave.  
Albany, CA 94501

CHAIN OF CUSTODY RECORD

PROJ NO.		PROJECT NAME		NO. OF CONTAINERS	REMARKS
8918		CF / Puget Sound, WA			
SAMPLERS: (Signature) Mark B. Winters					
STA. NO.	DATE	TIME	COMP. GRAB	STATION LOCATION	
<del>MW-1</del>	<del>6/21/88</del>	<del>1:35</del>	X	<del>Water</del>	<div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH analyzed</div>
MW-2A		1:40	X	Water	
MW-3		1:45	X	Water	
MW-4		1:50	X	Water	
MW-5	✓	1:55	X	Water	
					Invoices & Reports to:
					Consolidated Freightways
					c/o Blymyer Engineers
					1829 Clement Ave
					Alameda CA 94501
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Relinquished by: (Signature)
Mark B. Winters		6/29/88 2:15 PM	Michael S. Lee		<del>Brant Nepper</del>
Relinquished by: (Signature)		Date / Time	Received by: (Signature)		Relinquished by: (Signature)
Michele S. Lee		6/29/88 3:00 PM	Brant Nepper		
Relinquished by: (Signature)		Date / Time	Received for Laboratory by: (Signature)		Date / Time
					Remarks

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files





4080-C Pike Lane  
Concord, CA 94520  
415-685-7852

800-544-3422 (In CA)  
800-423-7143 (Outside CA)

**CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST**

Project Manager: **Mike Lewis** Phone #: **(415) 521-3773**

Address: **Chymmer Engineers, Inc.** FAX #: **(415) 865-2594**  
**1829 Clement Ave.  
Alameda CA 94501**

Project Number: **8818** Project Name: **CF / Puget Sound, WA**

Project Location: **5060 E. Marginal Way, S** Sampler Signature: **Seattle, WA**

**ANALYSIS REQUEST OTHER SPECIAL HANDLING**

Sample ID	Lab # (Lab use only)	# CONTAINERS Volume/Amount	Matrix					Method Preserved					Sampling		BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080-PCBs Only	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	ORGANIC LEAD						PRIORITY ONE SERVICE (24 hr)	EXPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL REPORTING REQUIREMENTS	
			WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO <sub>3</sub>	ICE	NONE	OTHER	DATE	TIME																													
MW-1		1/1	X							X							X																										
MW-2A		1/1	X							X							X																										
MW-3		1/1	X							X							X																										
MW-4		1/1	X							X							X																										
MW-5		1/1	X							X							X																										

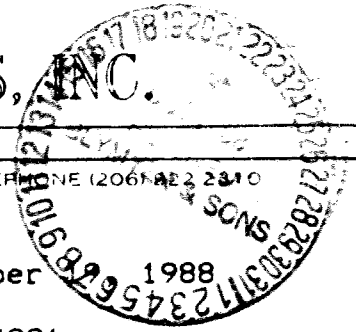
Relinquished by:	Date	Time	Received by:	Remarks:
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	



# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14 • TACOMA, WASHINGTON 98424 • TELEPHONE (206) 422-2810



Report To: Blymyer Engineers  
Report On: Analysis of Liquids

Date: October 1988  
Lab No: A 4221

## IDENTIFICATION:

Project Name: CF/Puget Sound, WA  
Project Number: 8818

Samples submitted on 10-12-88

## ANALYSIS:

<u>Laboratory Sample No.</u>	<u>Client Identification</u>	<u>Total Petroleum Hydrocarbons, mg/l</u>	<u>Chromium, ppm</u>	<u>Lead, ppm</u>
1	MW-1	< 1	< 0.1	< 0.1
2	MW-2A	< 1	< 0.1	0.1
3	MW-3	< 1	< 0.1	< 0.1
4	MW-4	< 1	< 0.1	< 0.1
5	MW-5	< 1	< 0.1	< 0.1

SOUND ANALYTICAL SERVICES

Brent HEPNER  
BRENT HEPNER



12/08/88 jp Page 1 of 2

WORK ORD#: 8811286

CLIENT: Mark Winters  
Groundwater Technology, Inc.  
213 S.W. 41st Street  
Renton, WA 98055

PROJECT#: 201-710-8000-2

LOCATION: Seattle, WA

**Western Region**  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 *from inside California*  
(800) 423-7143 *from outside California*

SAMPLED: 11/22/88 BY: M. Winters  
RECEIVED: 11/23/88 BY: E. Larsen  
ANALYZED: 11/28/88 BY: R. Condit  
MATRIX: Soil  
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB # I.I.D. #	01A IMW-1122-A	02A IMW-1122-B	03A IMW-1122-C	04A IMW-1122-D	05A IMW-1122-E
Benzene	0.025		<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Total BTEX	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Misc. Hydrocarbons (C4-C12)	1		170	88	46	78	11
Total Petroleum Hydrocarbons as Gasoline	1		170*	88*	46*	78*	11*

MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD:

Modified EPA Method 5030/8020/8015

\*Hydrocarbon pattern indicates the presence of diesel fuel.



**Western Region**

4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 *from inside California*  
(800) 423-7143 *from outside California*

WORK ORD#: 8811286  
CLIENT: Mark Winters  
PROJECT#: 201-710-8000-2  
LOCATION: Seattle, WA

TEST RESULTS  
MATRIX: Soil  
UNITS: mg/kg (ppm)

COMPOUNDS	MDL	LAB #	06A
		I.D.#	IMW-1122-FI
Benzene	0.025		<0.025
Toluene	0.5		<0.5
Ethylbenzene	0.5		<0.5
Xylenes	0.5		<0.5
Total BTEX	0.5		<0.5
Misc. Hydrocarbons (C4-C12)	1		58
Total Petroleum Hydrocarbons as Gasoline	1		58*

MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD: Modified EPA Method 5030/8020/8015  
\*Hydrocarbon pattern indicates the presence of diesel fuel.

EMMA P. POPEK, Director



12/05/88 jp Page 1 of 2

WORK ORD#: 8811287  
 CLIENT: Mark Winters  
 Groundwater Technology, Inc.  
 213 S.W. 41st Street  
 Renton, WA 98055  
 PROJECT#: 201-710-8000-3  
 LOCATION: Seattle, WA

**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 *from inside California*  
 (800) 423-7143 *from outside California*

SAMPLED: 11/22/88 BY: M. Winters  
 RECEIVED: 11/23/88 BY: E. Larsen  
 ANALYZED: 11/30/88 BY: R. Condit  
 MATRIX: Soil  
 UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB #	I.D. #	01A	02A	03A	04A	05A
				IMW-1122-A	IMW-1122-B	IMW-1122-C	IMW-1122-D	IMW-1122-E

Total Petroleum Hydrocarbons as Diesel	10	500	350	150	120	<10
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MDL = Method Detection Limit; compound below this level would not be detected. Results rounded to two significant figures.

METHOD:  
 Modified EPA Method 8015



Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

WORK ORD#:8811287  
CLIENT: Mark Winters  
PROJECT#: 201-710-8000-3  
LOCATION: Seattle, WA

TEST RESULTS

MATRIX: Soil  
UNITS: mg/kg (ppm)

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COMPOUNDS	MDL	LAB #	Q6A
		I.I.D.#	IMW-1122-F1

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Total Petroleum Hydrocarbons as Diesel	10	82
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MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD:  
Modified EPA Method 8015

EMMA P. POPEK, Director



4080-C Pike Lane  
Concord, CA 94520  
415-685-7852

800-544-3422 (In CA)  
800-423-7143 (Outside CA)

### CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: **Mike Lewis** Phone #: **(415) 521-3773**

Address: **Blymyer Engineers, Inc.** FAX #: **(415) 945-2594**  
**1929 Clement Ave.**  
**Alameda, CA 94501**

Project Number: **8818** Project Name: **CF / Puget Sound, WA**

Project Location: **5060 E. Marginal Way, S.** Sampler Signature: **Mark Winters**  
**Seattle, WA**

#### ANALYSIS REQUEST

#### OTHER

#### SPECIAL HANDLING

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume/Amount	Matrix					Method Preserved					Sampling		BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 609/8090-PCBs Only	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239 2)	ORGANIC LEAD	PRIORITY ONE SERVICE (24 hr)	EXPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL HANDLING REQUIREMENTS					
				WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO <sub>3</sub>	ICE	NONE	OTHER	DATE	TIME																												
MW-1		2	X																																								
MW-2A		2	X																																								
MW-3		2	X																																								
MW-4		2	X																																								
MW-5		2	X																																								

Relinquished by: <b>Mark Winters</b>	Date Time <b>2/9/89 8:00</b>	Received by:
Relinquished by:	Date Time	Received by:
Relinquished by:	Date Time <b>2/9/89 10:25</b>	Received by Laboratory: <b>[Signature]</b>

Remarks:  
**Modified 8015**  
**CC Method - Discrimination**

# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-4349 - FAX (206)922-5047



Report To: Blymer Engineers

Date: February 17, 1989

Report On: Analysis of Water

Lab No.: A 5204

IDENTIFICATION:

Samples Received on 2-9-89

Project Name: CF/Puget Sound, WA

Project Number: 8818

ANALYSIS:

Contaminant

Concentration, mg/l

Lab Sample No.	1	2	3	4	5
Client ID	MW-1 #4	MW-2A #2	MW-3 #2	MW-4 #2	MW-5 #2
Total Petroleum Hydrocarbons	< 10	< 10	< 10	< 10	< 10

Analysis Procedures: TPH by SW-846 Method 8015.

SOUND ANALYTICAL SERVICES

  
STAN P. PALMQUIST



02/13/89 jp

Page 1 of 2

**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

WORK ORD#: 8902112  
 CLIENT: MARK WINTERS  
 GROUNDWATER TECHNOLOGY, INC.  
 19226-66TH AVE. S. SUITE L-109  
 KENT, WA 98032

PROJECT#: 201-710-8000-4  
 LOCATION: SEATTLE, WA

SAMPLED: 02/03/89 BY: M. WINTERS  
 RECEIVED: 02/06/89  
 ANALYZED: 02/07/89 BY: P. HANNERS

MATRIX: Soil  
 UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE # I.D.	01 MW23A	02 MW23B	03 MW23C	04 MW23D	05 MW23E
Benzene	0.025		<0.025	<0.025	<0.025	<0.025	<0.025
Toluene	0.5		<1.0	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5		<1.0	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5		<1.0	<0.5	<0.5	<0.5	<0.5
Total BTEX	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Misc. Hydrocarbons (C4-C12)	1		52	78	18	18	110
Total Petroleum Hydrocarbons as Gasoline	1		52	78	18	18	110

MDL = Method Detection Limit; compound below this level would not be detected.  
 Results rounded to two significant figures.

METHOD: Modified EPA 5030/8020/8015





Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

Page 2 of 2

WORK ORD#: 8902112

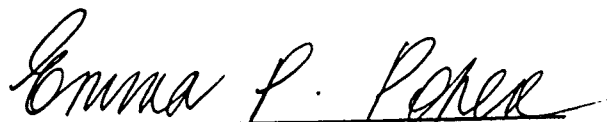
CLIENT: MARK WINTERS  
PROJECT#: 201-710-8000-4  
LOCATION: SEATTLE, WA

MATRIX: Soil  
UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE # I.D.	06 MW23F				
Benzene	0.025		<0.025				
Toluene	0.5		<0.5				
Ethylbenzene	0.5		<0.5				
Xylenes	0.5		<0.5				
Total BTEX	0.5		<0.5				
Misc. Hydrocarbons 1 (C4-C12)			41				
Total Petroleum Hydrocarbons as Gasoline	1		41				

MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD: Modified EPA 5030/8020/8015

  
EMMA P. POPEK, Laboratory Director



02/08/89MT

Page 1 of 2

FEB 16 1989

Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

WORK ORD#: 8902113  
CLIENT: MARK WINTERS  
GROUNDWATER TECHNOLOGY, INC.  
19226-66TH AVE. S. SUITE L-109  
KENT, WA 98032

PROJECT#: 201-710-8000-5  
LOCATION: SEATTLE, WA

SAMPLED: 02/03/89 BY: M. WINTERS  
RECEIVED: 02/06/89  
ANALYZED: 02/06/89 BY: C. MANUEL

MATRIX: Soil  
UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE #	01	02	03	04	05
	I.D.		MW23A	MW23B	MW23C	MW23D	MW23E
Total Petroleum Hydrocarbons as Diesel	10		170	260	79	110	120

MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD: Modified EPA 8015



Western Region  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 *from inside California*  
 (800) 423-7143 *from outside California*

Page 2 of 2

WORK ORD#: 8902113

CLIENT: MARK WINTERS  
 PROJECT#: 201-710-8000-5  
 LOCATION: SEATTLE, WA

MATRIX: Soil  
 UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE #	06				
		I.I.D.	MW23F				

Total Petroleum Hydrocarbons as Diesel 10 330

MDL = Method Detection Limit; compound below this level would not be detected.  
 Results rounded to two significant figures.

METHOD: Modified EPA 8015

*Emma P. Popek*  
 EMMA P. POPEK, Laboratory Director



03/16/89 JP

Page 1 of 2

**Western Region**  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

WORK ORD#: C903113  
 CLIENT: MARK WINTERS  
 GROUNDWATER TECHNOLOGY, INC.  
 19226-66TH AVE. S. SUITE L-109  
 KENT, WA 98032

PROJECT#: 201-710-8000-6  
 LOCATION: 6050 E. MARGINAL WAY, SEATTLE

SAMPLED: 03/06/89 BY: M. WINTERS  
 RECEIVED: 03/07/89  
 ANALYZED: 03/08/89 BY: P. HANNERS

MATRIX: Soil  
 UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE # I.D.	01 MW-36A	02 MW-36B	03 MW-36C	04 MW-36D	05 MW-36E
Benzene	0.5		<0.25	<0.025	<0.025	<0.025	<0.025
Toluene	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Total BTEX	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Misc. Hydrocarbons (C4-C12)	1		<1	<1	<1	<1	<1
Total Petroleum Hydrocarbons as Gasoline	1		<1	<1	<1	<1	<1

MDL = Method Detection Limit; compound below this level would not be detected.  
 Results rounded to two significant figures.

METHOD: Modified EPA 5030/8020/8015



Western Region  
 4080-C Pike Lane, Concord, CA 94520  
 (415) 685-7852  
 (800) 544-3422 from inside California  
 (800) 423-7143 from outside California

Page 2 of 2

WORK ORD#: C903113

CLIENT: MARK WINTERS  
 PROJECT#: 201-710-8000.  
 LOCATION: 6050 E. MARGINAL WAY, SEATTLE

MATRIX: Soil  
 UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE #	06				
		I.I.D.	MW-36F				
Benzene	0.025			<0.025			
Toluene	0.5			<0.5			
Ethylbenzene	0.5			<0.5			
Xylenes	0.5			<0.5			
Total BTEX	0.5			<0.5			
Misc. Hydrocarbons 1 (C4-C12)				<1			
Total Petroleum Hydrocarbons as Gasoline	1			<1			

MDL = Method Detection Limit; compound below this level would not be detected.  
 Results rounded to two significant figures.

METHOD: Modified EPA 5030/8020/8015

*Emma P. Popek*  
 EMMA P. POPEK, Laboratory Director



03/16/89MT

Page 1 of 2

MAR 22 1989

Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

WORK ORD#: C903114  
CLIENT: MARK WINTERS  
GROUNDWATER TECHNOLOGY, INC.  
19226-66TH AVE. S. SUITE L-109  
KENT, WA 98032

PROJECT#: 201-710-8000-7  
LOCATION: 6050 E. MARGINAL WAY, SEATTLE

SAMPLED: 03/06/89 BY: M. WINTERS  
RECEIVED: 03/07/89  
ANALYZED: 03/14/89 BY: C. MANUEL

MATRIX: Soil  
UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE # I.D.	01 MW-36A	02 MW-36B	03 MW-36C	04 MW-36D	05 MW-36E
Total Petroleum Hydrocarbons as Diesel	10		320	280	430	210	190

MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD: Modified EPA 8015



Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

WORK ORD#: C903114

CLIENT: MARK WINTERS  
PROJECT#: 201-710-8000-7  
LOCATION: 6050 E. MARGINAL WAY, SEATTLE

MATRIX: Soil  
UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE #	06				
		I. D.	MW-36F				

Total Petroleum Hydrocarbons as Diesel 10 150

MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD: Modified EPA 8015

*Emma P. Popek*  
EMMA P. POPEK, Laboratory Director



12/06/88mt

CLIENT: Mark Winters  
Groundwater Technology, Inc.  
213 SW 41st Street  
Renton, WA 98055

Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

PROJECT#: 201-710-8000-1  
LOCATION: Seattle, WA

SAMPLED: 11/08/88 BY: J. Deschenes  
RECEIVED: 11/09/88 BY: K. Fillinger  
ANALYZED: 11/22, 28, 29/88 BY: T. Alusi  
MATRIX: Soil

TEST RESULTS

PARAMETER	UNITS	MDL	LAB #	34786	34787		
			I.D.#	SPB-2	SPB-3		
Ammonium	mg/Kg	0.02		6.3	1.4		
Nitrate	mg/Kg	1		4	1		
Nitrite	mg/Kg	1		<1	<1		
Phosphate	mg/Kg	1		<1	<1		
pH				7.5	4.8		

MDL = Method Detection Limit; compound below this level would not be detected.  
Results rounded to two significant figures.

METHOD:

Ammonia by SM417E  
Nitrate by SM429  
Nitrite by SM429  
Phosphate by SM429  
pH by EPA 9045

EMMA P. POPEK, Director





04/10/89 JP

PAGE 1 OF 2

Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

WORK ORD#: C903615  
CLIENT: MARK WINTERS  
GROUNDWATER TECHNOLOGY, INC.  
19226-66TH AVE. S. STE. L-109  
KENT, WA 98032  
PROJECT#: 201-710-8000-8  
LOCATION: 6050 MARGINAL WAY S.  
SEATTLE, WA  
SAMPLED: 03/06/89 BY: M. WINTERS  
RECEIVED: 03/07/89\* BY: E. LARSEN  
ANALYZED: 04/06/89 BY: M. LY  
MATRIX: SOIL

TEST RESULTS

PARAMETER	SAMPLE # I.D.	01A MW 36A	02A MW 36B	03A MW 36C	04A MW 36D	05A MW 36E
pH		7.1	7.4	6.6	6.1	7.5

METHOD: EPA 9045

\* This additional test was requested by the client on 03/27/89.

**Western Region**  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 *from inside California*  
(800) 423-7143 *from outside California*

WORK ORD#: C903615

CLIENT: MARK WINTERS  
PROJECT#: 201-710-8000-8  
LOCATION: 6050 MARGINAL WAY S.

MATRIX: SOIL

TEST RESULTS

PARAMETER	SAMPLE #	06A				
	I. D.	MW 36F				

pH

7.2

METHOD: EPA 9045

\* This additional test was requested by  
the client on 03/27/89.

*Emma P. Popek*  
EMMA P. POPEK, Director



4080-C Pike Lane  
Concord, CA 94520  
415-685-7852  
800-544-3422 (In CA)  
800-423-7143 (Outside CA)

**CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST**

Project Manager: **Mike Lewis** Phone #: **415 521-3773**

Address: **Blymyer Engineering Inc** FAX #: **415 865-7594**  
**1829 Clement Ave**  
**Alameda, CA**

Project Number: **8818** Project Name: **CF/Puget Sound Wa**

Project Location: **5060 EAST MARYLAND** Sampler Signature: **Carol Hubbard**  
**Seattle, WA**

**ANALYSIS REQUEST**

**OTHER**

**SPECIAL HANDLING**

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume/Amount	Matrix				Method Preserved				Sampling		BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080-PCBs Only	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	ORGANIC LEAD	PRIORITY ONE SERVICE (24 hr)	EXPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL REF	ING REQUIREMENTS												
				WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO3	ICE	NONE	OTHER																									DATE	TIME										
MW1		1		X													X																																
MW2A		1		X													X																																
MW3		1		X													X																																
MW4		1		X													X																																
MW5		1		X													X																																

Relinquished by: <b>Carol Hubbard</b>	Date: <b>5/2</b>	Time:	Received by:	Remarks:
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by Laboratory: <b>Guy Boem 5/3/89 10:30 AM</b>	

# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Blymer Engineers, Inc.

Date: May 8, 1989

Report On: Analysis of Water

Lab No.: A 6109

IDENTIFICATION:

Samples Received on 5-3-89

Project: 8818 CF/Puget Sound, WA

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ANALYSIS:

Laboratory Sample No.	1	2	3
Client Identification	MW 1	MW 2A	MW 3
Total Petroleum Hydrocarbons, mg/l	< 10	< 10	< 10

Laboratory Sample No.	4	5	
Client Identification	MW 4	MW 5	
Total Petroleum Hydrocarbons, mg/l	< 10	< 10	

Analysis Procedures: TPH by EPA Modified Method 8015

SOUND ANALYTICAL SERVICES



STAN P. PALMQUIST

MAY 17 1989



# GTEL

ENVIRONMENTAL  
LABORATORIES, INC.

**Western Region**

4080-C Pike Ln., Concord, CA 94520

(415) 685-7852

In CA: (800) 544-3422

Outside CA: (800) 423-7143

05/10/89 JP

PAGE 1 OF 1

WORK ORD#: C905093

CLIENT: MARK WINTERS

GROUNDWATER TECHNOLOGY, INC.

19226-66TH AVE. S. SUITE L-109

KENT, WA 98032

PROJECT#: 201-710-8000-9

LOCATION: 6050 E. MARGINAL WY. SEATTLE

SAMPLED: 05/02/89

BY: D. HRABORSKY

RECEIVED: 05/03/89

ANALYZED: 05/08/89

BY: D. VLAHOGLANI

MATRIX: SOIL

UNITS: mg/Kg (ppm)

PARAMETER	MDL	SAMPLE #	01	02	03
		D.	DH52A	DH52C	DH52E

Total Petroleum Hydrocarbons as Diesel	10	170	630	100
--	----	-----	-----	-----

MDL = Method Detection Limit: compound below this level would not be detected. Results rounded to two significant figures.

METHOD: Modified EPA 8015

*Emma P. Popek*  
EMMA P. POPEK, Laboratory Director



# GTEL

ENVIRONMENTAL  
LABORATORIES, INC.

Northwest Region  
4080 Pike Lane  
Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

06/17/89 JP

Page 1 of 1

WORK ORD#: C906188

CLIENT: MARK WINTERS  
GROUNDWATER TECHNOLOGY, INC.  
19226-66TH AVE. S. SUITE L-109  
KENT, WA 98032

PROJECT#: 201-710-000-10

LOCATION: SEATTLE, WA

SAMPLED: 06/08/89 BY: J. DESCHENES

RECEIVED: 06/09/89

ANALYZED: 06/14/89 BY: D. VLAHOGIANI

MATRIX: Soil

UNITS: mg/Kg (ppm)

JUN 22 1989

PARAMETER	MDL	SAMPLE #	01	02	03
		I.D.	JD681/JD2	JD683/JD4	JD685/JD6

Total Petroleum Hydrocarbons as Diesel	10	21	520	<10
--	----	----	-----	-----

MDL = Method Detection Limit; compound below this level could not be detected.  
Results rounded to two significant figures.

METHOD: Modified EPA 8015

EMMA P. POPEK, Laboratory Director



4080-C Pike Lane  
 Concord, CA 94520  
 415-685-7852  
 800-544-3422 (In CA)  
 800-423-7143 (Outside CA)

**CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST**

Project Manager: Mike Lewis Phone #: 415-521-3773

**ANALYSIS REQUEST**

**OTHER**

**SPECIAL HANDLING**

Address: Blymeyer Engineering Inc FAX #: 415-865-2594  
1829 Clement Ave  
Alameda, CA

Project Number: 8818 Project Name: CF/Paget sound, wa

Project Location: 5060 E. Marginal Way Sampler Signature: [Signature]  
Seattle, wa

Sample ID	Lab # (Lab use only)	CONTAINERS		Matrix				Method Preserved					Sampling		BTEX (602/802c)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080-PCBs Only	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	ORGANIC LEAD										PRIORITY ONE SERVICE (24 hr)	EXPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL REPORTING REQUIREMENTS
		Volume/Amount	WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO <sub>3</sub>	ICE	NONE	OTHER	DATE	TIME																																
MW 1		1	X							X			8/3	12:40			X																													
MW 2A		1	X							X			8/3	12:35			X																													
MW 3		1	X							X			8/3	12:55			X																													
MW 4		1	X							X			8/3	12:45			X																													
MW 5		1	X							X			8/3	12:50			X																													

Relinquished by: <u>[Signature]</u>	Date <u>8/3</u>	Time	Received by:
Relinquished by	Date	Time	Received by:
Relinquished by	Date	Time	Received by Laboratory:

Remarks:

# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Consolidated Freightways      Date: August 8, 1989  
          % Blymer Engineers

Report On: Analysis of Liquid              Lab No.: A 7127

IDENTIFICATION:

Samples Received on 8-4-89

Project: 8818, CF/Puget Sound, WA 5060 E. Marginal Way  
          Seattle, WA

-----  
ANALYSIS:

<u>Lab Sample No.</u>	<u>Client ID</u>	<u>Total Petroleum Hydrocarbons, mg/l</u>	<u>As Gasoline or Diesel</u>
1	MW1	< 10	----
2	MW2A	< 10	----
3	MW3	< 10	----
4	MW4	< 10	----
5	MW5	< 10	----

SOUND ANALYTICAL SERVICES

  
C. LARRY ZURAW







4080-C Pike Lane  
Concord, CA 94520  
415-685-7852

800-544-3422 (In CA)  
800-423-7143 (Outside CA)

### CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: *Mike Lewis* Phone #: *415 521-3770*

Address: *Blymyer Engineering  
1829 Clement Ave,  
Alameda, CA* FAX #: *415 865-2594*

Project Number: *8818* Project Name: *CF/Seattle*

Project Location: *5060 E. MARGINAL WAY  
Seattle WA* Sampler Signature: *David Hrabovky*

#### ANALYSIS REQUEST

#### OTHER

#### SPECIAL HANDLING

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume/Amount	Matrix					Method Preserved					Sampling		BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080-PCBs Only	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	ORGANIC LEAD	PRIORITY ONE SERVICE (24 hr)	EXPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL REPORTING REQUIREMENTS	
				WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO <sub>3</sub>	ICE	NONE	OTHER	DATE	TIME																								
MW 1		1		X								X						X																					
MW 2A		1		X								X						X																					
MW 3		1		X								X						X																					
MW 4		1		X								X						X																					
MW 5		1		X								X						X																					

Relinquished by: <i>David Hrabovky</i>	Date: <i>11/2</i> Time: <i>9:20 AM</i>	Received by: <i>SKGiang</i>
Relinquished by:	Date:	Received by:
Relinquished by:	Date:	Received by Laboratory:

Remarks:

# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Consolidated Freightways  
% Blymer Engineers

Date: November 6, 1989

Report On: Analysis of Water

Lab No.: 8359

## IDENTIFICATION:

Samples Received on 11-02-89

Project: 8818 CF/Seattle, 5060 E. Marginal Way, Seattle, WA

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## ANALYSIS:

<u>Lab Sample No.</u>	<u>Client ID</u>	<u>Total Petroleum Fuel Hydrocarbons, mg/kg</u>
1	MW1	< 10
2	MW2A	< 10
3	MW3	< 10
4	MW4	< 10
5	MW5	< 10

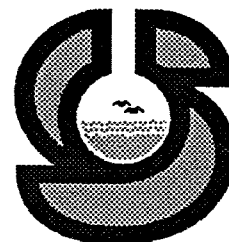
(TPH by EPA SW-846 Modified Method 8015)

SOUND ANALYTICAL SERVICES

  
\_\_\_\_\_  
BRENT HEPNER

**Laboratory Analytical Reports  
1998-2003**

**Sound Analytical Services, Inc.**  
ANALYTICAL & ENVIRONMENTAL CHEMISTS  
4813 Pacific Hwy East • Tacoma, WA 98424  
(253) 922-2310 • FAX (253) 922-5047  
e-mail: SoundL@aol.com



**TRANSMITTAL MEMORANDUM**

DATE: April 23, 1998

TO: Rob Long  
Golder Associates  
4104 - 148th Avenue N.E.  
Redmond, WA 98052

PROJECT: CF/Risk Assessment

REPORT NUMBER: 71921

Enclosed are the test results for twenty-one samples received at Sound Analytical Services on April 9, 1998.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Analytical Narrative: The percent recovery for aromatics (C8-C10) in the VPH blank spike analysis associated with this sample batch exceeded advisory limits. No action was taken based on this outlier. The percent recovery for aliphatics (nC21 - nC34) in the EPH blank spike and matrix spike analyses associated with this sample batch were outside QC limits. The relative percent difference value for aromatics (nC21 - nC34) in the duplicate analysis for sample 71784-1 (batch QC) exceeded QC limits. These outliers may have caused by a baseline anomaly which is inherent to the method. The percent recovery for diesel range organics in the WTPH-D Ext. blank spike analysis was slightly above QC limits. No action was taken based on the acceptable matrix spike and matrix spike duplicate recoveries for this sample set.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Watson', written in a cursive style.

Tom Watson  
Project Manager

**SOUND ANALYTICAL EPH/VPH**  
**VOLATILE PETROLEUM HYDROCARBONS**  
**ALIPHATIC AND AROMATIC FRACTIONS**  
**TARGET INDICATOR COMPOUNDS**

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	CF-T1
Lab ID:	71921-01
Date Received:	4/9/98
Date Prepared:	4/20/98
Date Analyzed:	4/20/98
% Solids	89.02

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
a.a.a.-Trifluorotoluene	95		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
EC 5-6 Aliphatics	ND	1.3	
EC >6-8 Aliphatics	ND	1.7	
EC >8-10 Aliphatics	3.2	2.6	
EC >8-10 Aromatics	7.4	2.1	
MTBE	ND	0.43	
Benzene	ND	0.43	
Toluene	ND	0.43	
Ethylbenzene	ND	0.43	
m- & p-Xylene	ND	0.86	
o-Xylene	ND	0.43	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW2-2.0
Lab ID:	71921-06
Date Received:	4/9/98
Date Prepared:	4/20/98
Date Analyzed:	4/21/98
% Solids	81.3

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
a.a.a.-Trifluorotoluene	68		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
EC 5-6 Aliphatics	ND	1.4	
EC >6-8 Aliphatics	ND	1.9	
EC >8-10 Aliphatics	ND	2.9	
EC >8-10 Aromatics	ND	2.4	
MTBE	ND	0.48	
Benzene	ND	0.48	
Toluene	ND	0.48	
Ethylbenzene	ND	0.48	
m- & p-Xylene	ND	0.95	
o-Xylene	ND	0.48	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW1-7.0
Lab ID:	71921-08
Date Received:	4/9/98
Date Prepared:	4/20/98
Date Analyzed:	4/21/98
% Solids	73.03

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
a.a.a.-Trifluorotoluene	68		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
EC 5-6 Aliphatics	ND	1.6	
EC >6-8 Aliphatics	ND	2.2	
EC >8-10 Aliphatics	20	3.2	
EC >8-10 Aromatics	16	2.7	
MTBE	ND	0.54	
Benzene	ND	0.54	
Toluene	ND	0.54	
Ethylbenzene	ND	0.54	
m- & p-Xylene	ND	1.1	
o-Xylene	ND	0.54	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW2-4.0
Lab ID:	71921-13
Date Received:	4/9/98
Date Prepared:	4/20/98
Date Analyzed:	4/21/98
% Solids	93.5

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
a.a.a.-Trifluorotoluene	118		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
EC 5-6 Aliphatics	ND	1.2	
EC >6-8 Aliphatics	34	1.6	
EC >8-10 Aliphatics	ND	48	D
EC >8-10 Aromatics	630	40	D
MTBE	ND	0.4	
Benzene	ND	0.4	
Toluene	4.4	0.4	
Ethylbenzene	7.4	0.4	
m- & p-Xylene	30	16	D
o-Xylene	18	8	D

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW2-7.0
Lab ID:	71921-14
Date Received:	4/9/98
Date Prepared:	4/20/98
Date Analyzed:	4/21/98
% Solids	72.43

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
a.a.a.-Trifluorotoluene	126		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
EC 5-6 Aliphatics	ND	1.6	
EC >6-8 Aliphatics	61	2.1	
EC >8-10 Aliphatics	ND	64	D
EC >8-10 Aromatics	490	53	D
MTBE	ND	0.53	
Benzene	ND	0.53	
Toluene	ND	0.53	
Ethylbenzene	4.4	0.53	
m- & p-Xylene	29	21	D
o-Xylene	26	11	D

# SOUND ANALYTICAL SERVICES, INC.

Lab ID: Method Blank - GB1412  
Date Received: -  
Date Prepared: 4/20/98  
Date Analyzed: 4/20/98  
% Solids

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
a.a.a.-Trifluorotoluene	78		60	140

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
EC 5-6 Aliphatics	ND	1.2	
EC >6-8 Aliphatics	ND	1.6	
EC >8-10 Aliphatics	ND	2.4	
EC >8-10 Aromatics	ND	2	
MTBE	ND	0.4	
Benzene	ND	0.4	
Toluene	ND	0.4	
Ethylbenzene	ND	0.4	
m- & p-Xylene	ND	0.8	
o-Xylene	ND	0.4	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: MW2-2.0  
Lab ID: 71921-06  
Date Prepared: 4/20/98  
Date Analyzed: 4/21/98  
QC Batch ID: GB1412

WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
EC 5-6 Aliphatics	0	0	NC	
EC >6-8 Aliphatics	0	0	NC	
EC >8-10 Aliphatics	0	0	NC	
EC >8-10 Aromatics	0	0	NC	
MTBE	0	0	NC	
Benzene	0	0	NC	
Toluene	0	0	NC	
Ethylbenzene	0	0	NC	
m- & p-Xylene	0	0	NC	
o-Xylene	0	0	NC	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID: MW2-2.0  
Lab ID: 71921-06  
Date Prepared: 4/20/98  
Date Analyzed: 4/20/98  
QC Batch ID: GB1412

WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
EC 5-6 Aliphatics	0	9.4	7.5	79	
EC >6-8 Aliphatics	0	4.7	3.9	84	
EC >8-10 Aromatics	0	4.7	6	128	
MTBE	0	4.7	4.7	100	
Benzene	0	4.7	4.7	100	
Toluene	0	4.7	5.2	111	
Ethylbenzene	0	4.7	5.2	110	
m- & p-Xylene	0	9.4	10	109	
o-Xylene	0	4.7	4.6	97	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike Report

Lab ID: GB1412  
Date Prepared: 4/20/98  
Date Analyzed: 4/20/98  
QC Batch ID: GB1412

### WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
EC 5-6 Aliphatics	0	8	8.1	102	
EC >6-8 Aliphatics	0	4	5.2	130	
EC >8-10 Aromatics	0	4	5.5	137	N
MTBE	0	4	3.9	97	
Benzene	0	4	4.3	107	
Toluene	0	4	4.4	109	
Ethylbenzene	0	4	4.5	113	
m- & p-Xylene	0	8	8.9	111	
o-Xylene	0	4	3.9	98	

**SOUND ANALYTICAL EPH / VPH**  
**EXTRACTABLE PETROLEUM HYDROCARBONS**  
**ALIPHATIC AND AROMATIC FRACTIONS**

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	CF-T1
Lab ID:	71921-01
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	89.02

## Extractable Petroleum Hydrocarbons (EPH)

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Chloro-octadecane	66		60	140
Ortho-terphenyl	77		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
C8-C10 Aliphatics	10	1.9	
C10-C12 Aliphatics	130	1.9	
C12-C16 Aliphatics	1000	1.9	
C16-C21 Aliphatics	1100	1.9	
C21-C34 Aliphatics	110	3.7	
C10-C12 Aromatics	25	1.9	
C12-C16 Aromatics	270	1.9	
C16-C21 Aromatics	630	3.7	
C21-C34 Aromatics	48	3.7	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW2-2.0
Lab ID:	71921-06
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	81.3

## Extractable Petroleum Hydrocarbons (EPH)

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Chloro-octadecane	67		60	140
Ortho-terphenyl	83		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
C8-C10 Aliphatics	6.3	2	
C10-C12 Aliphatics	32	2	
C12-C16 Aliphatics	270	2	
C16-C21 Aliphatics	310	2	
C21-C34 Aliphatics	410	3.9	
C10-C12 Aromatics	2.7	2	
C12-C16 Aromatics	22	2	
C16-C21 Aromatics	120	3.9	
C21-C34 Aromatics	120	3.9	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW1-7.0
Lab ID:	71921-08
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	73.03

## Extractable Petroleum Hydrocarbons (EPH)

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Chloro-octadecane	65		60	140
Ortho-terphenyl	75		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
C8-C10 Aliphatics	180	2.3	
C10-C12 Aliphatics	1200	2.3	
C12-C16 Aliphatics	5600	2.3	
C16-C21 Aliphatics	4200	2.3	
C21-C34 Aliphatics	750	4.5	
C10-C12 Aromatics	110	2.3	
C12-C16 Aromatics	980	2.3	
C16-C21 Aromatics	2200	4.5	
C21-C34 Aromatics	350	4.5	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW2-4.0
Lab ID:	71921-13
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	93.5

## Extractable Petroleum Hydrocarbons (EPH)

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Chloro-octadecane	61		60	140
Ortho-terphenyl	62		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
C8-C10 Aliphatics	330	1.8	
C10-C12 Aliphatics	840	1.8	
C12-C16 Aliphatics	2400	1.8	
C16-C21 Aliphatics	2100	1.8	
C21-C34 Aliphatics	250	3.7	
C10-C12 Aromatics	250	1.8	
C12-C16 Aromatics	920	1.8	
C16-C21 Aromatics	1200	3.7	
C21-C34 Aromatics	100	3.7	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW2-7.0
Lab ID:	71921-14
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	72.43

## Extractable Petroleum Hydrocarbons (EPH)

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Chloro-octadecane	67		60	140
Ortho-terphenyl	69		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
C8-C10 Aliphatics	280	2.3	
C10-C12 Aliphatics	670	2.3	
C12-C16 Aliphatics	1900	2.3	
C16-C21 Aliphatics	1700	2.3	
C21-C34 Aliphatics	240	4.5	
C10-C12 Aromatics	180	2.3	
C12-C16 Aromatics	680	2.3	
C16-C21 Aromatics	1000	4.5	
C21-C34 Aromatics	88	4.5	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - EP044
Date Received:	-
Date Prepared:	4/14/98
Date Analyzed:	4/21/98
% Solids	

## Extractable Petroleum Hydrocarbons (EPH)

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Chloro-octadecane	79		60	140
Ortho-terphenyl	101		60	140

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
C8-C10 Aliphatics	ND	2.5	
C10-C12 Aliphatics	ND	2.5	
C12-C16 Aliphatics	ND	2.5	
C16-C21 Aliphatics	ND	2.5	
C21-C34 Aliphatics	ND	5	
C10-C12 Aromatics	ND	2.5	
C12-C16 Aromatics	ND	2.5	
C16-C21 Aromatics	ND	5	
C21-C34 Aromatics	ND	5	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike Report

Lab ID: EP044  
Date Prepared: 4/14/98  
Date Analyzed: 4/21/98  
QC Batch ID: EP044

### Extractable Petroleum Hydrocarbons (EPH)

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
C8-C10 Aliphatics	0	20	22	111	
C10-C12 Aliphatics	0	20	21	105	
C12-C16 Aliphatics	0	20	22	112	
C16-C21 Aliphatics	0	20	26	130	
C21-C34 Aliphatics	0	20	42	209	N
C10-C12 Aromatics	0	20	21	104	
C12-C16 Aromatics	0	20	21	106	
C16-C21 Aromatics	0	20	21	105	
C21-C34 Aromatics	0	20	17	87	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: C7-1  
Lab ID: 71784-01  
Date Prepared: 4/14/98  
Date Analyzed: 4/20/98  
QC Batch ID: EP044

### Extractable Petroleum Hydrocarbons (EPH)

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
C8-C10 Aliphatics	16	15	6.5	
C10-C12 Aliphatics	41	50	20.0	
C12-C16 Aliphatics	170	210	21.0	
C16-C21 Aliphatics	190	240	23.0	
C21-C34 Aliphatics	42	54	25.0	
C10-C12 Aromatics	7	7.5	6.9	
C12-C16 Aromatics	51	56	9.3	
C16-C21 Aromatics	150	190	24.0	
C21-C34 Aromatics	17	32	61.0	N

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID: C7-1  
Lab ID: 71784-01  
Date Prepared: 4/14/98  
Date Analyzed: 4/20/98  
QC Batch ID: EP044M

### Extractable Petroleum Hydrocarbons (EPH)

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
C8-C10 Aliphatics	16	20	32	79	
C10-C12 Aliphatics	41	20	58	83	
C12-C16 Aliphatics	170	20	190	90	
C16-C21 Aliphatics	190	20	220	142	X7a
C21-C34 Aliphatics	42	20	85	212	N
C10-C12 Aromatics	7	20	24	85	
C12-C16 Aromatics	51	20	67	76	
C16-C21 Aromatics	150	20	180	150	X7a
C21-C34 Aromatics	17	20	68	251	X7



**SOUND ANALYTICAL EPA 8270 MOD.**  
**EXTRACTABLE PETROLEUM HYDROCARBONS**  
**TARGET PAH COMPOUNDS**

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	CF-T1
Lab ID:	71921-01
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
% Solids	89.02
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	118		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	ND	0.021	0.015	
2-Methylnaphthalene	ND	0.02	0.013	
Acenaphthylene	ND	0.018	0.014	
Acenaphthene	0.21	0.015	0.013	
Fluorene	0.21	0.012	0.011	
Phenanthrene	ND	0.011	0.01	
Anthracene	ND	0.013	0.012	
Fluoranthene	0.21	0.01	0.0086	
Pyrene	0.68	0.0095	0.0082	
Benzo(a)anthracene	0.052	0.0073	0.0065	
Chrysene	0.097	0.0095	0.008	
Benzo(b)fluoranthene	ND	0.0092	0.0077	
Benzo(k)fluoranthene	ND	0.013	0.012	
Benzo(a)pyrene	ND	0.007	0.0061	
Indeno(1,2,3-cd)pyrene	ND	0.012	0.012	
Dibenz(a,h)anthracene	ND	0.0098	0.0083	
Benzo(g,h,i)perylene	ND	0.011	0.0092	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW2-2.0
Lab ID:	71921-06
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
% Solids	81.3
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	71		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	0.049	0.022	0.016	
2-Methylnaphthalene	0.14	0.021	0.014	
Acenaphthylene	ND	0.019	0.015	
Acenaphthene	0.071	0.016	0.014	
Fluorene	0.15	0.013	0.012	
Phenanthrene	0.22	0.012	0.011	
Anthracene	0.12	0.014	0.013	
Fluoranthene	0.18	0.011	0.0092	
Pyrene	0.19	0.01	0.0087	
Benzo(a)anthracene	0.06	0.0077	0.0069	
Chrysene	0.17	0.01	0.0085	
Benzo(b)fluoranthene	0.063	0.0098	0.0082	
Benzo(k)fluoranthene	0.047	0.014	0.013	
Benzo(a)pyrene	0.049	0.0074	0.0065	
Indeno(1,2,3-cd)pyrene	ND	0.013	0.012	
Dibenz(a,h)anthracene	ND	0.01	0.0088	
Benzo(g,h,i)perylene	0.033	0.011	0.0098	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW1-7.0
Lab ID:	71921-08
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
% Solids	73.03
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	113		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	6.2	0.025	0.018	
2-Methylnaphthalene	34	0.12	0.016	D
Acenaphthylene	ND	0.022	0.017	
Acenaphthene	1.8	0.019	0.016	
Fluorene	2.5	0.015	0.013	
Phenanthrene	7	0.013	0.012	
Anthracene	2.2	0.016	0.015	
Fluoranthene	ND	0.012	0.011	
Pyrene	0.62	0.012	0.01	
Benzo(a)anthracene	0.094	0.0089	0.008	
Chrysene	ND	0.012	0.0098	
Benzo(b)fluoranthene	ND	0.011	0.0094	
Benzo(k)fluoranthene	ND	0.016	0.015	
Benzo(a)pyrene	ND	0.0085	0.0074	
Indeno(1,2,3-cd)pyrene	ND	0.015	0.014	
Dibenz(a,h)anthracene	ND	0.012	0.01	
Benzo(g,h,i)perylene	ND	0.013	0.011	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW2-4.0
Lab ID:	71921-13
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
% Solids	93.5
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	102		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	8.1	0.021	0.015	
2-Methylnaphthalene	16	0.098	0.013	
Acenaphthylene	ND	0.018	0.014	
Acenaphthene	1.1	0.015	0.013	
Fluorene	1.9	0.012	0.011	
Phenanthrene	4.9	0.011	0.01	
Anthracene	ND	0.013	0.012	
Fluoranthene	ND	0.0098	0.0085	
Pyrene	0.7	0.0094	0.0081	
Benzo(a)anthracene	ND	0.0072	0.0065	
Chrysene	ND	0.0094	0.0079	
Benzo(b)fluoranthene	ND	0.0091	0.0076	
Benzo(k)fluoranthene	ND	0.013	0.012	
Benzo(a)pyrene	ND	0.0069	0.006	
Indeno(1,2,3-cd)pyrene	ND	0.012	0.012	
Dibenz(a,h)anthracene	ND	0.0097	0.0082	
Benzo(g,h,i)perylene	ND	0.011	0.0091	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW2-7.0
Lab ID:	71921-14
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
% Solids	72.43
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	89		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	6.5	0.025	0.018	
2-Methylnaphthalene	11	0.12	0.016	
Acenaphthylene	ND	0.022	0.017	
Acenaphthene	0.93	0.019	0.016	
Fluorene	2	0.015	0.013	
Phenanthrene	3.6	0.013	0.012	
Anthracene	ND	0.016	0.015	
Fluoranthene	ND	0.012	0.011	
Pyrene	0.63	0.012	0.01	
Benzo(a)anthracene	ND	0.0089	0.008	
Chrysene	ND	0.012	0.0098	
Benzo(b)fluoranthene	ND	0.011	0.0094	
Benzo(k)fluoranthene	ND	0.016	0.015	
Benzo(a)pyrene	ND	0.0085	0.0074	
Indeno(1,2,3-cd)pyrene	ND	0.015	0.014	
Dibenz(a,h)anthracene	ND	0.012	0.01	
Benzo(g,h,i)perylene	ND	0.013	0.011	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - EP044
Date Received:	-
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
% Solids	
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	68		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	ND	0.028	0.02	
2-Methylnaphthalene	ND	0.027	0.018	
Acenaphthylene	ND	0.024	0.019	
Acenaphthene	ND	0.021	0.017	
Fluorene	ND	0.016	0.015	
Phenanthrene	ND	0.015	0.014	
Anthracene	ND	0.018	0.016	
Fluoranthene	ND	0.013	0.012	
Pyrene	ND	0.013	0.011	
Benzo(a)anthracene	ND	0.0098	0.0088	
Chrysene	ND	0.013	0.011	
Benzo(b)fluoranthene	ND	0.012	0.01	
Benzo(k)fluoranthene	ND	0.018	0.016	
Benzo(a)pyrene	ND	0.0094	0.0082	
Indeno(1,2,3-cd)pyrene	ND	0.016	0.016	
Dibenz(a,h)anthracene	ND	0.013	0.011	
Benzo(g,h,i)perylene	ND	0.014	0.012	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike Report

Lab ID: EP044  
Date Prepared: 4/14/98  
Date Analyzed: 4/15/98  
QC Batch ID: EP044

### Targeted PAH Analytes by Method 8270 Modified.

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
Naphthalene	0	20	15	76	
Acenaphthene	0	20	21	103	
Pyrene	0	20	19	97	
Benzo(g,h,i)perylene	0	20	21	103	



# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID:	BATCH QC
Lab ID:	71784-01
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
QC Batch ID:	EP044

### Targeted PAH Analytes by Method 8270 Modified.

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Naphthalene	0	0	NC	
2-Methylnaphthalene	1	1.3	26.0	
Acenaphthylene	0	0	NC	
Acenaphthene	0	0	NC	
Fluorene	0.3	0.35	15.0	
Phenanthrene	0.67	1	40.0	
Anthracene	0	0	NC	
Fluoranthene	0	0	NC	
Pyrene	0.053	0.074	33.0	
Benzo(a)anthracene	0	0	NC	
Chrysene	0	0	NC	
Benzo(b)fluoranthene	0	0	NC	
Benzo(k)fluoranthene	0	0	NC	
Benzo(a)pyrene	0	0	NC	
Indeno(1,2,3-cd)pyrene	0	0	NC	
Dibenz(a,h)anthracene	0	0	NC	
Benzo(g,h,i)perylene	0	0	NC	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID:	BATCH QC
Lab ID:	71784-01
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
QC Batch ID:	EP044

### Targeted PAH Analytes by Method 8270 Modified.

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Naphthalene	0	20	14	69	
Acenaphthene	0	20	17	85	
Pyrene	0.053	20	19	92	
Benzo(g,h,i)perylene	0	20	20	97	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	CF-T2
Lab ID:	71921-02
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/19/98
% Solids	94.17

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	122		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	13	
Heavy Oil (>nC24-nC32)	ND	26	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	CF-T3
Lab ID:	71921-03
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/19/98
% Solids	90.39

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	127		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	20	13	
Heavy Oil (>nC24-nC32)	53	27	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW3-5.0
Lab ID:	71921-04
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/19/98
% Solids	72.51

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	99		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	17	
Heavy Oil (>nC24-nC32)	32	34	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW3-6.5
Lab ID:	71921-05
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/19/98
% Solids	64.55

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	78		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	19	
Heavy Oil (>nC24-nC32)	48	37	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW2-5.5
Lab ID:	71921-07
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/19/98
% Solids	71.88

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	93		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	18	17	
Heavy Oil (>nC24-nC32)	ND	34	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW1-7.0
Lab ID:	71921-08
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/20/98
% Solids	73.03

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	-	X8	50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	13000	170	
Heavy Oil (>nC24-nC32)	520	340	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW1-7.0D
Lab ID:	71921-09
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/20/98
% Solids	59.86

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	-	X8	50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	8800	200	
Heavy Oil (>nC24-nC32)	ND	400	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW1-13
Lab ID:	71921-10
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/20/98
% Solids	77.5

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	105		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	18	15	
Heavy Oil (>nC24-nC32)	ND	31	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW1-5.5
Lab ID:	71921-11
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/20/98
% Solids	70.11

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	92	.	50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	18	
Heavy Oil (>nC24-nC32)	ND	35	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW1-7.0
Lab ID:	71921-12
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/20/98
% Solids	71.17

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	88		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	17	
Heavy Oil (>nC24-nC32)	ND	35	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW2-4.0
Lab ID:	71921-13
Date Received:	4/9/98
Date Prepared:	4/16/98
Date Analyzed:	4/21/98
% Solids	93.5

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	-	X8	50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	12000	270	
Heavy Oil (>nC24-nC32)	ND	530	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	71921-15
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	-

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	96		50	150

Analyte	Result (mg/L)	PQL	Flags
Diesel (>nC12-nC24)	1	0.25	X2
Heavy Oil (>nC24-nC32)	1.1	0.5	X2

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	71921-16
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	-

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	90		50	150

Analyte	Result (mg/L)	PQL	Flags
Diesel (>nC12-nC24)	2.2	0.26	X2
Heavy Oil (>nC24-nC32)	0.66	0.52	X2

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1
Lab ID:	71921-17
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	-

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	85		50	150

Analyte	Result (mg/L)	PQL	Flags
Diesel (>nC12-nC24)	ND	0.24	
Heavy Oil (>nC24-nC32)	ND	0.47	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-1
Lab ID:	71921-18
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	-

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	99		50	150

Analyte	Result (mg/L)	PQL	Flags
Diesel (>nC12-nC24)	1.4	0.23	X2
Heavy Oil (>nC24-nC32)	ND	0.47	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-2
Lab ID:	71921-19
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/20/98
% Solids	-

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	91		50	150

Analyte	Result (mg/L)	PQL	Flags
Diesel (>nC12-nC24)	5.4	0.25	X2
Heavy Oil (>nC24-nC32)	0.68	0.5	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	71921-15
Date Received:	4/9/98
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	101		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	71921-16
Date Received:	4/9/98
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	90		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1
Lab ID:	71921-17
Date Received:	4/9/98
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	103		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-1
Lab ID:	71921-18
Date Received:	4/9/98
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	106		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-2
Lab ID:	71921-19
Date Received:	4/9/98
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	109		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	0.21	0.01	D
Toluene	0.013	0.001	
Ethylbenzene	0.1	0.001	
m,p-Xylenes	0.22	0.02	D
o-Xylene	0.088	0.01	D

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1D
Lab ID:	71921-20
Date Received:	4/9/98
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	104		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	TRIP BLANK
Lab ID:	71921-21
Date Received:	4/9/98
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	88		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	71921-15
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/14/98
% Solids	-

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	82		35	114
2 - Fluorobiphenyl	88		43	116
p - Terphenyl - d14	115		33	141

Analyte	Result (ug/L)	PQL	Flags
Naphthalene	ND	0.096	
2-Methylnaphthalene	ND	0.096	
2-Chloronaphthalene	ND	0.096	
Acenaphthylene	ND	0.096	
Acenaphthene	ND	0.096	
Fluorene	ND	0.096	
Phenanthrene	ND	0.096	
Anthracene	ND	0.096	
Fluoranthene	ND	0.096	
Pyrene	ND	0.096	
Benzo(a)anthracene	ND	0.096	
Chrysene	ND	0.096	
Benzo(b)fluoranthene	ND	0.096	
Benzo(k)fluoranthene	ND	0.096	
Benzo(a)pyrene	ND	0.096	
Indeno(1,2,3-cd)pyrene	ND	0.096	
Dibenz(a,h)anthracene	ND	0.096	
Benzo(g,h,i)perylene	ND	0.096	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	71921-16
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/14/98
% Solids	-

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	110		35	114
2 - Fluorobiphenyl	97		43	116
p - Terphenyl - d14	115		33	141

Analyte	Result (ug/L)	PQL	Flags
Naphthalene	ND	0.1	
2-Methylnaphthalene	0.18	0.1	
2-Chloronaphthalene	ND	0.1	
Acenaphthylene	ND	0.1	
Acenaphthene	0.84	0.1	
Fluorene	0.8	0.1	
Phenanthrene	0.72	0.1	
Anthracene	ND	0.1	
Fluoranthene	ND	0.1	
Pyrene	ND	0.1	
Benzo(a)anthracene	ND	0.1	
Chrysene	ND	0.1	
Benzo(b)fluoranthene	ND	0.1	
Benzo(k)fluoranthene	ND	0.1	
Benzo(a)pyrene	ND	0.1	
Indeno(1,2,3-cd)pyrene	ND	0.1	
Dibenz(a,h)anthracene	ND	0.1	
Benzo(g,h,i)perylene	ND	0.1	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1
Lab ID:	71921-17
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/14/98
% Solids	-

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	100		35	114
2 - Fluorobiphenyl	94		43	116
p - Terphenyl - d14	102		33	141

Analyte	Result (ug/L)	PQL	Flags
Naphthalene	ND	0.094	
2-Methylnaphthalene	ND	0.094	
2-Chloronaphthalene	ND	0.094	
Acenaphthylene	ND	0.094	
Acenaphthene	ND	0.094	
Fluorene	ND	0.094	
Phenanthrene	ND	0.094	
Anthracene	ND	0.094	
Fluoranthene	ND	0.094	
Pyrene	ND	0.094	
Benzo(a)anthracene	ND	0.094	
Chrysene	ND	0.094	
Benzo(b)fluoranthene	ND	0.094	
Benzo(k)fluoranthene	ND	0.094	
Benzo(a)pyrene	ND	0.094	
Indeno(1,2,3-cd)pyrene	ND	0.094	
Dibenz(a,h)anthracene	ND	0.094	
Benzo(g,h,i)perylene	ND	0.094	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-1
Lab ID:	71921-18
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/14/98
% Solids	-

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	129	X9	35	114
2 - Fluorobiphenyl	115		43	116
p - Terphenyl - d14	120		33	141

Analyte	Result (ug/L)	PQL	Flags
Naphthalene	11	0.093	
2-Methylnaphthalene	26	0.47	D
2-Chloronaphthalene	ND	0.093	
Acenaphthylene	ND	0.093	
Acenaphthene	1.1	0.093	
Fluorene	2.9	0.093	
Phenanthrene	2.5	0.093	
Anthracene	0.15	0.093	
Fluoranthene	ND	0.093	
Pyrene	ND	0.093	
Benzo(a)anthracene	ND	0.093	
Chrysene	ND	0.093	
Benzo(b)fluoranthene	ND	0.093	
Benzo(k)fluoranthene	ND	0.093	
Benzo(a)pyrene	ND	0.093	
Indeno(1,2,3-cd)pyrene	ND	0.093	
Dibenz(a,h)anthracene	ND	0.093	
Benzo(g,h,i)perylene	ND	0.093	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-2
Lab ID:	71921-19
Date Received:	4/9/98
Date Prepared:	4/14/98
Date Analyzed:	4/14/98
% Solids	-

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	96		35	114
2 - Fluorobiphenyl	39	X9	43	116
p - Terphenyl - d14	110		33	141

Analyte	Result (ug/L)	PQL	Flags
Naphthalene	43	0.49	D
2-Methylnaphthalene	39	0.49	D
2-Chloronaphthalene	ND	0.098	
Acenaphthylene	ND	0.098	
Acenaphthene	1.3	0.098	
Fluorene	2.1	0.098	
Phenanthrene	2.3	0.098	
Anthracene	ND	0.098	
Fluoranthene	ND	0.098	
Pyrene	0.27	0.098	
Benzo(a)anthracene	ND	0.098	
Chrysene	ND	0.098	
Benzo(b)fluoranthene	ND	0.098	
Benzo(k)fluoranthene	ND	0.098	
Benzo(a)pyrene	ND	0.098	
Indeno(1,2,3-cd)pyrene	ND	0.098	
Dibenz(a,h)anthracene	ND	0.098	
Benzo(g,h,i)perylene	ND	0.098	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1521
Date Received:	-
Date Prepared:	4/16/98
Date Analyzed:	4/19/98
% Solids	

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	110		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	13	
Heavy Oil (>nC24-nC32)	ND	25	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1518
Date Received:	-
Date Prepared:	4/14/98
Date Analyzed:	4/15/98
% Solids	-

## Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	84		50	150

Analyte	Result (mg/L)	PQL	Flags
Diesel (>nC12-nC24)	ND	0.25	
Heavy Oil (>nC24-nC32)	ND	0.5	



# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike Report

Lab ID: DI1521  
Date Prepared: 4/16/98  
Date Analyzed: 4/19/98  
QC Batch ID: DI1521

### Extended Diesel Range by WTPH-D Modified

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
Diesel (>nC12-nC24)	0	250	320	129	N
Heavy Oil (>nC24-nC32)	0	250	280	111	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: DI1518  
Date Prepared: 4/14/98  
Date Analyzed: 4/15/98  
QC Batch ID: DI1518

### Extended Diesel Range by WTPH-D Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	0	5.01	4.97	99.3	4.43	88.5	12	
Heavy Oil (>nC24-nC32)	0	5.01	4.7	93.9	4.21	84.1	11	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: RW1-13  
Lab ID: 71921-10  
Date Prepared: 4/16/98  
Date Analyzed: 4/20/98  
QC Batch ID: DI1521

### Extended Diesel Range by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	18	13	32.0	
Heavy Oil (>nC24-nC32)	0	0	NC	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	RW1-13
Lab ID:	71921-10
Date Prepared:	4/16/98
Date Analyzed:	4/20/98
QC Batch ID:	D11521

## Extended Diesel Range by WTPH-D Modified

Compound Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	MSD Result (mg/kg)	MSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	18	319	292	85.8	367	109	24	
Heavy Oil (>nC24-nC32)	0	319	256	80.3	301	94.3	16	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB1408
Date Received:	-
Date Prepared:	4/15/98
Date Analyzed:	4/15/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	92		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB1413
Date Received:	-
Date Prepared:	4/20/98
Date Analyzed:	4/20/98
% Solids	-

## Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	104		57	153

Analyte	Result (mg/L)	PQL	Flags
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethylbenzene	ND	0.001	
m,p-Xylenes	ND	0.002	
o-Xylene	ND	0.001	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: GB1408  
Date Prepared: 4/15/98  
Date Analyzed: 4/15/98  
QC Batch ID: GB1408

### Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Benzene	0	0.025	0.0202	80.9	0.0206	82.3	1.7	
Toluene	0	0.025	0.0234	93.4	0.0271	109	15	
Ethylbenzene	0	0.025	0.026	104	0.0258	103	0.97	
m,p-Xylenes	0	0.05	0.0542	108	0.059	118	8.8	
o-Xylene	0	0.025	0.026	104	0.0274	110	5.6	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: GB1413  
Date Prepared: 4/20/98  
Date Analyzed: 4/20/98  
QC Batch ID: GB1413

### Volatile Aromatic Hydrocarbons by USEPA Method 8021 Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Benzene	0	0.025	0.0229	91.6	0.0224	89.6	2.2	
Toluene	0	0.025	0.0228	91.2	0.0222	88.8	2.7	
Ethylbenzene	0	0.025	0.0228	91.2	0.0222	88.8	2.7	
m,p-Xylenes	0	0.05	0.0432	86.4	0.0422	84.4	2.3	
o-Xylene	0	0.025	0.0224	89.6	0.0218	87.2	2.7	



# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - SV1905
Date Received:	-
Date Prepared:	4/14/98
Date Analyzed:	4/14/98
% Solids	-

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	94		35	114
2 - Fluorobiphenyl	89		43	116
p - Terphenyl - d14	97		33	141

Analyte	Result (ug/L)	PQL	Flags
Naphthalene	ND	0.1	
2-Methylnaphthalene	ND	0.1	
2-Chloronaphthalene	ND	0.1	
Acenaphthylene	ND	0.1	
Acenaphthene	ND	0.1	
Fluorene	ND	0.1	
Phenanthrene	ND	0.1	
Anthracene	ND	0.1	
Fluoranthene	ND	0.1	
Pyrene	ND	0.1	
Benzo(a)anthracene	ND	0.1	
Chrysene	ND	0.1	
Benzo(b)fluoranthene	ND	0.1	
Benzo(k)fluoranthene	ND	0.1	
Benzo(a)pyrene	ND	0.1	
Indeno(1,2,3-cd)pyrene	ND	0.1	
Dibenz(a,h)anthracene	ND	0.1	
Benzo(g,h,i)perylene	ND	0.1	

# SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

## DATA QUALIFIERS AND ABBREVIATIONS

This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).

This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).

Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be  $\leq 40\%$ .

Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be  $> 40\%$ . The higher result was reported unless anomalies were noted.

GC/MS confirmation was performed. The result derived from the original analysis was reported.

The reported result for this analyte was calculated based on a secondary dilution factor.

The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.

The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

: Maximum Contaminant Level

: Method Detection Limit

See analytical narrative.

Not Detected

: Practical Quantitation Limit

Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_.

Contaminant does not appear to be "typical" product.

Identification and quantitation of the analyte or surrogate was complicated by matrix interference.

RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.

i: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.

Matrix spike recovery was not determined due to the required dilution.

Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.

Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.

a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.

: Surrogate recovery was not determined due to the required dilution.

: Surrogate recovery outside advisory QC limits due to matrix interference.



to 71921

CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

CLIENT: <b>Goldor Associates</b>				ANALYSIS REQUESTED:																	
PROJECT NAME: <b>CF Risk Assessment</b>																					
CONTACT: <b>Rob Long</b>																					
PHONE NO: <b>425 883-0777</b>																					
LAB #	SAMPLE I.D.	DATE	TIME MATRIX	# of Containers	EPA 601/8010 Halogenated Volatiles	EPA 602/8020 Aromatic Volatiles	Chlorinated Pest., PCB's EPA 608/8080	PAH's	EPA 624/8240 (GC/MS) Volatile Organics	Semi-volatiles EPA625/8270 (GC/MS)	TPH 418.1	Oil & Grease	Total Metals (Specify below)	8 Metals	Volatiles	Semi-volatiles	Pesticides & Herbicides	WTPH-Dx	TFPH	VPH	
1	CF-T1	4-7-98	0718	Soil	1														✓	✓	
2	CF-T2		0725		1														✓		
3	CF-T3		0740		1														✓		
4	MW3-5.0		0903		1														✓		
5	MW3-6.5		0906		1														✓		
6	MW2-2.0		1015		2														✓		
7	MW2-5.5		1027		1														✓		
8	RW1-7.0		1207		2														✓		
9	RW1-7.0D		1207		1														✓		
10	RW1-13		1216		1														✓		
11	MW1-5.5		1518		1														✓		
12	MW1-7.0		1520		1														✓		
13	RW2-4.0		4-8-98	0737	2														✓		
14	RW2-7.0		4-8-98	0750	2														✓		

SPECIAL INSTRUCTIONS/COMMENTS:		
These samples will be disposed of 45 days after receipt. Check this box to have samples returned <input type="checkbox"/> .		
Relinquished By	Printed Name	Time / Date
<i>[Signature]</i>	Gary Zimmerman	1200 4-9-98
Received By	Sam Hansen	1200 4/9/98
Relinquished By	Sam Hansen	1:00 4/9/98
Received By	Siang	1:00 4/9/98
Relinquished By		
Received By		



11/10/50  
11/6, vol

### CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

CLIENT: <b>Golden Associates</b>					# of Containers	ANALYSIS REQUESTED:													
PROJECT NAME: <b>CF/Risk Assessment</b>						Halogenated Volatiles EPA 601/8010	Aromatic Volatiles EPA 602/8020	Chlorinated Pest., PCB's EPA 608/8080	PAH's	Volatile Organics EPA 624/8240 (GC/MS)	Semi-volatiles EPA 625/8270 (GC/MS)	TPH 418.1	Oil & Grease	Total Metals (Specify below)	TCLP Extraction				B state
CONTACT: <b>Rob Long</b>						8 Metals	Volatiles	Semi-volatiles	Pesticides & Herbicides										
PHONE NO: <b>425 883-0777</b>																			
LAB #	SAMPLE I.D.	DATE	TIME	MATRIX															
15	MW-3	4-8-98	1305	Water	5			✓											
16	MW-2		1355		5			✓											
17	MW-1		1440		5			✓											
18	RW-1		1535		5			✓											
19	RW-2		1625		5			✓											
20	MW-1D		1440		3			✓											
21	Trig Blank				1														

	Signature	Printed Name	Firm	Time / Date	SPECIAL INSTRUCTIONS/COMMENTS:  These samples will be disposed of 45 days after receipt. Check this box to have samples returned <input type="checkbox"/>
Relinquished By		GARY ZIMMERMAN	Golden	1200 / 4-9-98	
Received By		Sam Hansen	SAS	1200 4/9/98	
Relinquished By		Sam Hansen	SAS	1:00 4/9/98	
Received By		Siang	SAS	110 4-9-98	
Relinquished By					
Received By					



# NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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 SPOKANE ▪ (509) 924-9200 ▪ FAX 924-9290  
 PORTLAND ▪ (503) 906-9200 ▪ FAX 906-9210

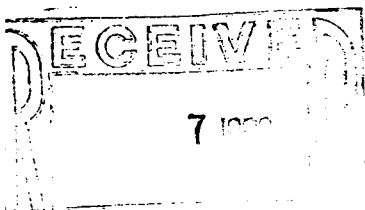
for Daniel - GTI, Inc. - Renton  
 5 South Renton Village Place, Ste 700  
 Renton, WA 98055

Project: Consolidated Freightways  
 Project Number: 101386  
 Project Manager: Stan Haskins

Sampled: 7/27/98 to 7/29/98  
 Received: 7/29/98  
 Reported: 8/5/98 15:01

## ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
-1	B807557-01	Soil	7/27/98
-2	B807557-02	Soil	7/27/98
-3	B807557-03	Soil	7/27/98
'B-1	B807557-04	Soil	7/27/98
'B-3	B807557-06	Soil	7/27/98
V-1	B807557-08	Soil	7/27/98
V-2	B807557-09	Soil	7/27/98
V-3	B807557-10	Soil	7/27/98
V-4	B807557-11	Soil	7/27/98
W-1	B807557-12	Water	7/27/98
-1	B807557-13	Soil	7/29/98
-2	B807557-14	Soil	7/29/98
-3	B807557-15	Soil	7/29/98



North Creek Analytical, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document.  
 This analytical report must be reproduced in its entirety.*

by B Chang, Project Manager

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 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776



# NORTH CREEK ANALYTICAL

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 SPOKANE ■ (509) 924-9200 ■ FAX 924-9290  
 PORTLAND ■ (503) 906-9200 ■ FAX 906-9210

or Daniel - GTI, Inc. - Renton  
 10000 South Renton Village Place, Ste 700  
 Renton, WA 98055

Project: Consolidated Freightways  
 Project Number: 101386  
 Project Manager: Stan Haskins

Sampled: 7/27/98 to 7/29/98  
 Received: 7/29/98  
 Reported: 8/5/98 15:01

## Diesel Hydrocarbons (C12-C24) by WTPH-D North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>1</b>				<b>B807557-01</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/31/98		410	7970	mg/kg dry	
rogate: Octacosane	"	"	"	50.0-150		89.8	%	1
<b>2</b>				<b>B807557-02</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/31/98		210	3890	mg/kg dry	
rogate: Octacosane	"	"	"	50.0-150		79.1	%	1
<b>3</b>				<b>B807557-03</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/31/98		110	2000	mg/kg dry	
rogate: 2-FBP	"	"	"	50.0-150		139	%	
<b>B-1</b>				<b>B807557-04</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/30/98		10.0	72.1	mg/kg dry	
rogate: 2-FBP	"	"	"	50.0-150		72.3	%	
<b>B-3</b>				<b>B807557-06</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/30/98		10.0	ND	mg/kg dry	
rogate: 2-FBP	"	"	"	50.0-150		90.3	%	
<b>1-1</b>				<b>B807557-08</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/31/98		1010	28700	mg/kg dry	
rogate: Octacosane	"	"	"	50.0-150		77.6	%	1
<b>1-2</b>				<b>B807557-09</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	8/4/98		10.0	ND	mg/kg dry	
rogate: 2-FBP	"	"	"	50.0-150		86.9	%	
<b>1-3</b>				<b>B807557-10</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/30/98		10.0	ND	mg/kg dry	
rogate: 2-FBP	"	"	"	50.0-150		67.8	%	
<b>1-4</b>				<b>B807557-11</b>			<b>Soil</b>	
iesel Range Hydrocarbons	0780938	7/30/98	7/31/98		110	2700	mg/kg dry	
rogate: 2-FBP	"	"	"	50.0-150		143	%	
<b>-1</b>				<b>B807557-12</b>			<b>Water</b>	
iesel Range Hydrocarbons	0780990	7/31/98	8/4/98		10.3	138	mg/l	
rogate: Octacosane	"	"	"	50.0-150		75.5	%	1

North Creek Analytical, Inc.

\*Refer to end of report for text of notes and definitions.

B Chang, Project Manager

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# NORTH CREEK ANALYTICAL

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 SPOKANE ■ (509) 924-9200 ■ FAX 924-9290  
 PORTLAND ■ (503) 906-9200 ■ FAX 906-9210

Client: Daniel - GTI, Inc. - Renton  
 South Renton Village Place, Ste 700  
 Renton, WA 98055

Project: Consolidated Freightways  
 Project Number: 101386  
 Project Manager: Stan Haskins

Sampled: 7/27/98 to 7/29/98  
 Received: 7/29/98  
 Reported: 8/5/98 15:01

## Diesel Hydrocarbons (C12-C24) by WTPH-D North Creek Analytical - Bothell

Hydrocarbon Type	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>B807557-13</b>								
1 Diesel Range Hydrocarbons	0780938	7/30/98	7/30/98		10.0	20.5	Soil mg/kg dry	
Surrogate: 2-FBP	"	"	"	50.0-150		73.9	%	
<b>B807557-14</b>								
2 Diesel Range Hydrocarbons	0780938	7/30/98	7/31/98		210	4780	Soil mg/kg dry	
Surrogate: Octacosane	"	"	"	50.0-150		81.3	%	1
<b>B807557-15</b>								
3 Diesel Range Hydrocarbons	0780938	7/30/98	7/30/98		10.0	ND	Soil mg/kg dry	
Surrogate: 2-FBP	"	"	"	50.0-150		81.3	%	



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for Daniel - GTI, Inc. - Renton  
 5 South Renton Village Place, Ste 700  
 Renton, WA 98055

Project: Consolidated Freightways  
 Project Number: 101386  
 Project Manager: Stan Haskins

Sampled: 7/27/98 to 7/29/98  
 Received: 7/29/98  
 Reported: 8/5/98 15:01

## Diesel Hydrocarbons (C12-C24) by WTPH-D/Quality Control North Creek Analytical - Bothell

Sample	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0780938</b>									
<b>Blank</b>									
<b>0780938-BLK1</b>									
Diesel Range Hydrocarbons	7/30/98			ND	mg/kg dry		10.0		
surrogate: 2-FBP	"	11.0		9.93	"	50.0-150	90.3		
<b>BS</b>									
<b>0780938-BS1</b>									
Diesel Range Hydrocarbons	7/30/98	66.7		62.2	mg/kg dry	60.0-140	93.3		
surrogate: 2-FBP	"	11.0		8.43	"	50.0-150	76.6		
<b>Duplicate</b>									
<b>0780938-DUP1 B807563-04</b>									
Diesel Range Hydrocarbons	7/30/98		ND	ND	mg/kg dry			50.0	
surrogate: 2-FBP	7/1/98	12.2		10.4	"	50.0-150	85.2		
<b>Duplicate</b>									
<b>0780938-DUP2 B807563-01</b>									
Diesel Range Hydrocarbons	7/30/98		ND	ND	mg/kg dry			50.0	
surrogate: 2-FBP	"	11.7		8.69	"	50.0-150	74.3		
<b>Batch: 0780990</b>									
<b>Blank</b>									
<b>0780990-BLK1</b>									
Diesel Range Hydrocarbons	8/3/98			ND	mg/l		0.250		
surrogate: 2-FBP	"	0.330		0.233	"	50.0-150	70.6		
<b>BS</b>									
<b>0780990-BS1</b>									
Diesel Range Hydrocarbons	8/3/98	2.00		1.88	mg/l	60.0-140	94.0		
surrogate: 2-FBP	"	0.330		0.229	"	50.0-150	69.4		
<b>Duplicate</b>									
<b>0780990-DUP1 B807583-07</b>									
Diesel Range Hydrocarbons	8/3/98		ND	ND	mg/l			44.0	
surrogate: 2-FBP	"	0.628		0.370	"	50.0-150	58.9		





# NORTH CREEK ANALYTICAL

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PORTLAND ■ (503) 906-9200 ■ FAX 906-9210

for Daniel - GTI, Inc. - Renton South Renton Village Place, Ste 700 Renton, WA 98055	Project: Consolidated Freightways Project Number: 101386 Project Manager: Stan Haskins	Sampled: 7/27/98 to 7/29/98 Received: 7/29/98 Reported: 8/5/98 15:01
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## Notes and Definitions

### Note

Due to interference from coeluting organic compounds with the primary surrogate, results of the secondary surrogate have been used to control the analysis.

Analyte DETECTED

Analyte NOT DETECTED at or above the reporting limit

Not Reported

Sample results reported on a dry weight basis

Recovery

Relative Percent Difference

North Creek Analytical, Inc.

B Chang, Project Manager

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508  
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132

## CHAIN OF CUSTODY REPORT

Work Order # **8807557**

REPORT TO: Floor Daniel GTI			INVOICE TO: Connie Hoffman			<b>TURNAROUND REQUEST in Business Days *</b> Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> Same Day <small>Standard</small> Fuels & Hydrocarbon Analyses <input checked="" type="checkbox"/> 3-4 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> Same Day <small>Standard</small> <input type="checkbox"/> OTHER Specify: _____ <small>* Turnaround Requests less than standard may incur Rush Charges.</small>			
ATTENTION: STAN HASKINS			ATTENTION: " "						
ADDRESS: 555 S Renton Village Place Renton WA 98055			ADDRESS: " "						
PHONE: 425-228-9645 FAX:			P.O. NUMBER: NCA QUOTE #:						
PROJECT NAME: Consolidated Freightways			Analysis Request: <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;">           W/TPH-D         </div>						
PROJECT NUMBER: 101386									
SAMPLED BY: CNS									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)					MATRIX (W. S. A. O)	# OF CONTAINERS	COMMENTS
1. SP-1	7/27/98 11:34	8807557-01					Soil	1	
2. SP-2	12:05	-02							
3. SP-3	3:50	-03							
4. TPA-1	12:57	-04							
5. TPA-2	1:00	-05							Hold
6. TPA-3	3:22	-06							
7. TPA-4	3:24	-07							Hold
8. SW-1	12:56	-08							
9. SW-2	3:21	-09							
10. SW-3	3:27	-10							
RELINQUISHED BY (Signature): <i>Chris N. Storey</i>			DATE: 7/29/98	RECEIVED BY (Signature): <i>Ken Wolf</i>			DATE: 7/29/98		
PRINT NAME: Chris N. Storey			FIRM: FDOTI	TIME: 1:10	PRINT NAME: Ken Wolf			FIRM: CDEL	TIME: 13:30
RELINQUISHED BY (Signature): <i>Ken Wolf</i>			DATE: 7/29/98	RECEIVED BY (Signature): <i>S. Wideen</i>			DATE: 7/29/98		
PRINT NAME: Ken Wolf			FIRM: CDEL	TIME: 1500	PRINT NAME: S. Wideen			FIRM: NCA	TIME: 3:00
ADDITIONAL REMARKS:								w/o 10.2	
								PAGE OF	

**CHAIN OF CUSTODY REPORT**

Work Order # **B 807557**

REPORT TO: Floor Daniel GTI  
 ATTENTION: STAN Harkins  
 ADDRESS: 555 S. Renton Village Place  
 Renton, WA 98055  
 PHONE: 425-228-9645 FAX:  
 PROJECT NAME: Considered Freight  
 PROJECT NUMBER: 101386  
 SAMPLED BY: CNS

INVOICE TO: Connie Hoffman  
 ATTENTION:  
 ADDRESS:  
 P.O. NUMBER: NCA QUOTE #:  
 Analysis Request:

TURNAROUND REQUEST in Business Days \*

Organic & Inorganic Analyses  
 Standard 7 5 4 3 2 1 Same Day

Fuels & Hydrocarbon Analyses  
 Standard 3-4 2 1 Same Day

OTHER Specify: \_\_\_\_\_

\* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Analysis Request														
1. JW-4	7/27/98 3:46	-11	X														
2. TP-1	3:40	-12	X														
3. PL-1	7/29/98 10:37	-13	X														
4. PL-2	10:42	-14	X														
5. PL-3	12:12	-15	X														

MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
Soil	1	
Water	3	
	1	
	1	

RELINQUISHED BY (Signature): *Chris N. Storey* DATE: 7/29/98  
 PRINT NAME: Chris N. Storey FIRM: FPGTI TIME: 1:10

RECEIVED BY (Signature): *Ken Wolf* DATE: 7/29/98  
 PRINT NAME: Ken Wolf FIRM: CD&L TIME: 1330

RELINQUISHED BY (Signature): *Ken Wolf* DATE: 7/29/98  
 PRINT NAME: KEN WOLF FIRM: CD&L TIME: 1500

RECEIVED BY (Signature): *S. Wideen* DATE: 7/29/98  
 PRINT NAME: S. Wideen FIRM: TIME: 5:00

ADDITIONAL REMARKS: w/o 10.2

PAGE OF

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1
Lab ID:	83533-01
Date Received:	8/19/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	-
Dilution Factor	1

## Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	101		63	138
Bromofluorobenzene	105		41	157

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	ND	0.001	0.00064	
Toluene	ND	0.001	0.00051	
Ethylbenzene	ND	0.001	0.00037	
m&p-Xylene	ND	0.002	0.00063	
o-Xylene	ND	0.001	0.00063	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	83533-02
Date Received:	8/19/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	-
Dilution Factor	1

## Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	101		63	138
Bromofluorobenzene	103		41	157

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	ND	0.001	0.00064	
Toluene	ND	0.001	0.00051	
Ethylbenzene	ND	0.001	0.00037	
m&p-Xylene	ND	0.002	0.00063	
o-Xylene	ND	0.001	0.00063	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	83533-03
Date Received:	8/19/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	-
Dilution Factor	1

## Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	101		63	138
Bromofluorobenzene	104		41	157

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	0.00086	0.001	0.00064	J
Toluene	ND	0.001	0.00051	
Ethylbenzene	ND	0.001	0.00037	
m&p-Xylene	ND	0.002	0.00063	
o-Xylene	ND	0.001	0.00063	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-2
Lab ID:	83533-04
Date Received:	8/19/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	-
Dilution Factor	1

## Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	112		63	138
Bromofluorobenzene	106		41	157

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	0.083	0.001	0.00064	
Toluene	ND	0.001	0.00051	
Ethylbenzene	0.02	0.001	0.00037	
m&p-Xylene	0.043	0.002	0.00063	
o-Xylene	0.0024	0.001	0.00063	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	TRIP BLANK
Lab ID:	83533-05
Date Received:	8/19/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	-
Dilution Factor	1

## Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	101		63	138
Bromofluorobenzene	104		41	157

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	ND	0.001	0.00064	
Toluene	ND	0.001	0.00051	
Ethylbenzene	ND	0.001	0.00037	
m&p-Xylene	ND	0.002	0.00063	
o-Xylene	ND	0.001	0.00063	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1
Lab ID:	83533-01
Date Received:	8/19/99
Date Prepared:	8/23/99
Date Analyzed:	8/25/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	92		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.16	0.24	0.12	J
Motor Oil	0.25	0.48	0.24	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	83533-02
Date Received:	8/19/99
Date Prepared:	8/23/99
Date Analyzed:	8/25/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	94.8		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.9	0.24	0.12	X1
Motor Oil	0.58	0.48	0.24	

X1 - Chromatogram suggests this might be aged or degraded diesel

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	83533-03
Date Received:	8/19/99
Date Prepared:	8/23/99
Date Analyzed:	8/25/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	96.8		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.5	0.24	0.12	X2
Motor Oil	1.8	0.48	0.24	X2

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	RW-2
Lab ID:	83533-04
Date Received:	8/19/99
Date Prepared:	8/23/99
Date Analyzed:	8/25/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	94.1		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.5	0.24	0.12	X2
Motor Oil	0.45	0.48	0.24	J

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB1924
Date Received:	-
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	-
Dilution Factor	1

## Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	98.3		63	138
Bromofluorobenzene	102		41	157

Analyte	Result (mg/L)	PQL	MDL	Flags
Benzene	ND	0.001	0.00064	
Toluene	ND	0.001	0.00051	
Ethylbenzene	ND	0.001	0.00037	
m&p-Xylene	ND	0.002	0.00063	
o-Xylene	ND	0.001	0.00063	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: GB1924  
Date Prepared: 8/20/99  
Date Analyzed: 8/21/99  
QC Batch ID: GB1924

### Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
Benzene	0	0.025	0.0247	98.7	0.0242	96.9	-1.8	
Toluene	0	0.025	0.0247	98.6	0.0236	94.5	-4.2	
Ethylbenzene	0	0.025	0.0275	110	0.0264	105	-4.7	
m&p-Xylene	0	0.05	0.0533	107	0.0509	102	-4.8	
o-Xylene	0	0.025	0.0224	89.7	0.0212	84.9	-5.5	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID:	MW-1
Lab ID:	83533-01
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
QC Batch ID:	GB1924

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Parameter Name	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD %	Flag
Benzene	0	0	NC	
Toluene	0	0	NC	
Ethylbenzene	0	0	NC	
m&p-Xylene	0	0	NC	
o-Xylene	0	0	NC	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID: RW-2  
Lab ID: 83533-04  
Date Prepared: 8/20/99  
Date Analyzed: 8/21/99  
QC Batch ID: GB1924

### Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Compound Name	Sample Result (mg/L)	Spike Amount (mg/L)	MS Result (mg/L)	MS % Rec.	MSD Result (mg/L)	MSD % Rec.	RPD	Flag
Benzene	0.083	0.025	0.114	126	0.114	122	-3.2	
Toluene	0.00049	0.025	0.0247	96.9	0.0246	96.5	-0.41	
Ethylbenzene	0.02	0.025	0.0502	120	0.0542	136	13	
m&p-Xylene	0.043	0.05	0.102	119	0.103	121	1.7	
o-Xylene	0.0024	0.025	0.0243	87.7	0.0246	88.7	1.1	



# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI2252
Date Received:	-
Date Prepared:	8/23/99
Date Analyzed:	8/25/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	94		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	ND	0.25	0.13	
Motor Oil	ND	0.5	0.25	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: DI2252  
Date Prepared: 8/23/99  
Date Analyzed: 8/25/99  
QC Batch ID: DI2252

### Diesel and Motor Oil by NWTPH-Dx Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
#2 Diesel	0	5.01	5.12	102	5.37	107	4.8	
Motor Oil	0	4.93	4.61	93.5	4.96	100	6.7	

# SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

---

## DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be  $\leq 40\%$ .
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be  $> 40\%$ . The higher result was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.



# Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East • Tacoma, WA 98424

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e-mail: saincl@uswest.net

20

SAS Lab No. 83533

TURNAROUND REQUEST (business days)

Standard (10 days) \_\_\_\_\_

RUSH: 24 hrs \_\_\_\_\_ 48 hrs \_\_\_\_\_ 5 day \_\_\_\_\_

## CHAIN OF CUSTODY/REQUEST FOR LABORATORY ANALYSIS

Client: <u>Goldier Associates</u>					Analyses Requested															
Project Name: <u>CF/Investigation/WA</u> <u>983-1065.650</u>					# of Containers	BTEX	NUTPA-DX													
Contact: <u>Gary Zimmerman</u>																				
Phone No.: <u>425 883-0777</u>																				
Fax No.: <u>425 882-5498</u>																				
Email:																				
Lab Use Only	Sample ID	Date	Time	Matrix																
	<u>MW-2 MW-1</u>	<u>8-17-99</u>	<u>1010</u>	<u>W</u>	<u>4</u>	<u>✓</u>	<u>✓</u>													
	<u>MW-3 MW-2</u>		<u>1108</u>	<u>W</u>	<u>4</u>	<u>✓</u>	<u>✓</u>													
	<u>MW-1 MW-3</u>		<u>1224</u>	<u>W</u>	<u>4</u>	<u>✓</u>	<u>✓</u>													
	<u>* RW-2</u>	<u>✓</u>	<u>1242</u>	<u>1316W</u>	<u>7</u>	<u>✓</u>	<u>✓</u>													
	<u>TRIP BLANK</u>	<u>Lab</u>	<u>883</u>		<u>2</u>	<u>✓</u>														

	Signature	Printed Name	Firm	Time/Date	Special Instructions
Relinquished By:		Gary Zimmerman	Goldier	10:50 8-19-99	* Extra VOA's collected from RW-2 for MS/M.S.O
Received By:		Joe PALMQUIST	SAS	10:50 8-19	
Relinquished By:		Joe PALMQUIST	SAS	11:45 8-19	
Received By:		F. Jespersen	SAS	8/19/99 328	
Relinquished By:					
Received By:					

**APPENDIX B**  
**LABORATORY ANALYTICAL RESULTS**

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-1
Lab ID:	83534-01
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	84.6		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.2	0.24	0.12	X1
Motor Oil	0.69	0.48	0.24	

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-2
Lab ID:	83534-02
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	81.9		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.4	0.24	0.12	X1
Motor Oil	0.28	0.48	0.24	J

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-3
Lab ID:	83534-03
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	75.6		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.26	0.24	0.12	X1
Motor Oil	0.59	0.48	0.24	

X1 - Chromatogram suggests this might be single component contamination



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-4
Lab ID:	83534-04
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	78.5		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.8	0.25	0.13	X1
Motor Oil	0.49	0.51	0.25	J

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-5
Lab ID:	83534-05
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	82.7		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.98	0.24	0.12	X1
Motor Oil	ND	0.47	0.24	

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-6
Lab ID:	83534-06
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	84.3		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.4	0.24	0.12	X1
Motor Oil	1.8	0.49	0.24	

X1 - Chromatogram suggests this might be aged or degraded diesel

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-7
Lab ID:	83534-07
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	82.1		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.72	0.24	0.12	X1
Motor Oil	0.36	0.48	0.24	J

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-8
Lab ID:	83534-08
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	92.9		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.26	0.24	0.12	X1
Motor Oil	0.3	0.48	0.24	J

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-9
Lab ID:	83534-09
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	81		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.2	0.24	0.12	X1
Motor Oil	0.28	0.48	0.24	J

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-10
Lab ID:	83534-10
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/28/99
% Solids	-
Dilution Factor	25

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	84.9		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	29	1.2	0.6	X1
Motor Oil	2.1	2.4	1.2	J

X1 - Chromatogram suggests this might be aged or degraded diesel

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-11
Lab ID:	83534-11
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	81		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	2.5	0.24	0.12	X1
Motor Oil	0.86	0.48	0.24	

X1 - Chromatogram suggests this might be aged or degraded diesel



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-11EB
Lab ID:	83534-12
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	89.4		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	3.3	0.24	0.12	X1
Motor Oil	0.76	0.48	0.24	

X1 - Chromatogram suggests this might be aged or degraded diesel

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-12
Lab ID:	83534-13
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	87		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.16	0.24	0.12	J
Motor Oil	0.39	0.48	0.24	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-13
Lab ID:	83534-14
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	83.3		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.58	0.24	0.12	X1
Motor Oil	0.33	0.48	0.24	J

X1 - Chromatogram suggests this might be single component contamination

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	GP-14
Lab ID:	83534-15
Date Received:	8/19/99
Date Prepared:	8/25/99
Date Analyzed:	8/28/99
% Solids	-
Dilution Factor	25

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	88.2		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	34	1.2	0.6	
Motor Oil	2.5	2.4	1.2	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI2257
Date Received:	-
Date Prepared:	8/25/99
Date Analyzed:	8/27/99
% Solids	-
Dilution Factor	5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	84.1		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	ND	0.25	0.13	
Motor Oil	ND	0.5	0.25	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: DI2257  
Date Prepared: 8/25/99  
Date Analyzed: 8/27/99  
QC Batch ID: DI2257

### Diesel and Motor Oil by NWTPH-Dx Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
#2 Diesel	0	5.01	4.34	86.8	4.57	91.3	5.1	
Motor Oil	0	4.93	4.09	83	4.11	83.3	0.36	

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---

## DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be  $\leq 40\%$ .
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be  $> 40\%$ . The higher result was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.



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 e-mail: saincl@uswest.net

SAS Lab No. 83534

TURNAROUND REQUEST (business days)  
 Standard (10 days) \_\_\_\_\_  
 RUSH: 24 hrs \_\_\_\_\_ 48 hrs \_\_\_\_\_ 5 day \_\_\_\_\_

**CHAIN OF CUSTODY/REQUEST FOR LABORATORY ANALYSIS**

Client: <u>Goldier Associates</u>						Analyses Requested																	
Project Name: <u>CF Investigation/WA</u> <u>983-1065.600</u>						# of Containers	NUTPH-Dy																
Contact: <u>Gary Zimmerman</u>																							
Phone No.: <u>425 883-0777</u>																							
Fax No.:																							
Email:																							
Lab Use Only	Sample ID	Date	Time	Matrix																			
1	GP-1	8-18-99	0815	W	1	✓																	
2	GP-2		0900		1	✓																	
3	GP-3		0930		1	✓																	
4	GP-4		1020		1	✓																	
5	GP-5		1047		1	✓																	
6	GP-6		1115		1	✓																	
7	GP-7		1148		1	✓																	
8	GP-8		1222		1	✓																	
9	GP-9		1305		1	✓																	
10	GP-10		1335		1	✓																	
11	GP-11		1425		1	✓																	
12	GP-11EB		1430		1	✓																	
13	GP-12		1458		1	✓																	
14	GP-13		1527		1	✓																	
15	GP-14																						

	Signature	Printed Name	Firm	Time/Date	Special Instructions
Relinquished By:		Gary Zimmerman	Goldier	10:50 8-19-99	
Received By:		Joe Palmquist	SAS	10:50 8-19-99	
Relinquished By:		Joe Palmquist	SAS	11:45 8-19-99	
Received By:		F. J. Jorgensen	SAS	8/19/99 328	
Relinquished By:					
Received By:					



**Sound Analytical Services, Inc.**  
ANALYTICAL & ENVIRONMENTAL CHEMISTS  
4813 Pacific Hwy East o Tacoma, WA 98424  
(253) 922-2310 o FAX (253) 922-5047  
e-mail: info@saslab.com



**TRANSMITTAL MEMORANDUM**

DATE: February 1, 2001

TO: Gary Zimmerman  
Golder Associates  
18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333

PROJECT: CF/GW Inv. 1WA 983-1065

REPORT NUMBER: 95495

Enclosed are the test results for seven samples received at Sound Analytical Services on January 18, 2001.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Watson', written in a cursive style.

Tom Watson  
Project Manager

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1
Lab ID:	95495-01
Date Received:	1/18/01
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		82.5	114
Fluorobenzene	101		83.7	114
Toluene-D8	94.8		91.1	107
Ethylbenzene-d10	90.2		86.6	108
Bromofluorobenzene	99		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	ND	0.4	0.031	
Vinyl chloride	ND	0.4	0.019	
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	0.065	0.4	0.049	J
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	0.062	0.4	0.036	J
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	ND	0.4	0.055	
Bromochloromethane	ND	0.4	0.044	
Chloroform	ND	0.4	0.052	
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	ND	0.4	0.032	
1,2-Dichloroethane	ND	0.4	0.032	
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	

# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for 95495-01 continued...

Analyte	Result (ug/L)	PQL	MDL
1,1,2-Trichloroethane	ND	0.4	0.048
Tetrachloroethene	ND	0.4	0.055
1,3-Dichloropropane	ND	0.4	0.028
Dibromochloromethane	ND	0.4	0.048
1,2-Dibromoethane	ND	0.4	0.074
Chlorobenzene	ND	0.4	0.047
Ethylbenzene	ND	0.4	0.032
1,1,1,2-Tetrachloroethane	ND	0.4	0.04
m,p-Xylene	ND	0.8	0.087
o-Xylene	ND	0.4	0.043
Styrene	ND	0.4	0.037
Bromoform	ND	0.4	0.046
Isopropylbenzene	ND	0.4	0.047
Bromobenzene	ND	0.4	0.045
n-Propylbenzene	ND	0.4	0.067
1,1,1,2-Tetrachloroethane	ND	0.4	0.07
1,2,3-Trichloropropane	ND	0.4	0.079
2-Chlorotoluene	ND	0.4	0.054
1,3,5-Trimethylbenzene	ND	0.4	0.047
4-Chlorotoluene	ND	0.4	0.064
t-Butylbenzene	ND	0.4	0.077
1,2,4-Trimethylbenzene	ND	0.4	0.052
sec-Butylbenzene	ND	0.4	0.063
1,3-Dichlorobenzene	ND	0.4	0.057
4-Isopropyltoluene	ND	0.4	0.048
1,4-Dichlorobenzene	ND	0.4	0.055
n-Butylbenzene	ND	0.4	0.053
1,2-Dichlorobenzene	ND	0.4	0.044
1,2-Dibromo-3-chloropropane	ND	0.4	0.13
1,2,4-Trichlorobenzene	ND	0.4	0.085
Hexachlorobutadiene	ND	0.4	0.11
Naphthalene	ND	0.4	0.091
1,2,3-Trichlorobenzene	ND	0.4	0.096

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-6
Lab ID:	95495-02
Date Received:	1/18/01
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		82.5	114
Fluorobenzene	101		83.7	114
Toluene-D8	96.8		91.1	107
Ethylbenzene-d10	90.7		86.6	108
Bromofluorobenzene	99.2		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	0.055	0.4	0.031	J
Vinyl chloride	0.38	0.4	0.019	J
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	0.1	0.4	0.049	J
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	0.097	0.4	0.036	J
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	ND	0.4	0.055	
Bromochloromethane	ND	0.4	0.044	
Chloroform	ND	0.4	0.052	
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	0.3	0.4	0.032	J
1,2-Dichloroethane	ND	0.4	0.032	
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	

# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for 95495-02 continued...

Analyte	Result (ug/L)	PQL	MDL
1,1,2-Trichloroethane	ND	0.4	0.048
Tetrachloroethene	ND	0.4	0.055
1,3-Dichloropropane	ND	0.4	0.028
Dibromochloromethane	ND	0.4	0.048
1,2-Dibromoethane	ND	0.4	0.074
Chlorobenzene	ND	0.4	0.047
Ethylbenzene	ND	0.4	0.032
1,1,1,2-Tetrachloroethane	ND	0.4	0.04
m,p-Xylene	ND	0.8	0.087
o-Xylene	ND	0.4	0.043
Styrene	ND	0.4	0.037
Bromoform	ND	0.4	0.046
Isopropylbenzene	ND	0.4	0.047
Bromobenzene	ND	0.4	0.045
n-Propylbenzene	ND	0.4	0.067
1,1,2,2-Tetrachloroethane	ND	0.4	0.07
1,2,3-Trichloropropane	ND	0.4	0.079
2-Chlorotoluene	ND	0.4	0.054
1,3,5-Trimethylbenzene	ND	0.4	0.047
4-Chlorotoluene	ND	0.4	0.064
t-Butylbenzene	ND	0.4	0.077
1,2,4-Trimethylbenzene	ND	0.4	0.052
sec-Butylbenzene	ND	0.4	0.063
1,3-Dichlorobenzene	ND	0.4	0.057
4-Isopropyltoluene	ND	0.4	0.048
1,4-Dichlorobenzene	ND	0.4	0.055
n-Butylbenzene	ND	0.4	0.053
1,2-Dichlorobenzene	ND	0.4	0.044
1,2-Dibromo-3-chloropropane	ND	0.4	0.13
1,2,4-Trichlorobenzene	ND	0.4	0.085
Hexachlorobutadiene	ND	0.4	0.11
Naphthalene	ND	0.4	0.091
1,2,3-Trichlorobenzene	ND	0.4	0.096

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-5
Lab ID:	95495-03
Date Received:	1/18/01
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	99.2		82.5	114
Fluorobenzene	99.9		83.7	114
Toluene-D8	96.8		91.1	107
Ethylbenzene-d10	91.9		86.6	108
Bromofluorobenzene	99.6		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	0.096	0.4	0.031	J
Vinyl chloride	ND	0.4	0.019	
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	0.08	0.4	0.049	J
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	0.23	0.4	0.036	J
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	ND	0.4	0.055	
Bromochloromethane	ND	0.4	0.044	
Chloroform	0.088	0.4	0.052	J
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	ND	0.4	0.032	
1,2-Dichloroethane	ND	0.4	0.032	
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	

# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for 95495-03 continued...

Analyte	Result (ug/L)	PQL	MDL
1,1,2-Trichloroethane	ND	0.4	0.048
Tetrachloroethene	ND	0.4	0.055
1,3-Dichloropropane	ND	0.4	0.028
Dibromochloromethane	ND	0.4	0.048
1,2-Dibromoethane	ND	0.4	0.074
Chlorobenzene	ND	0.4	0.047
Ethylbenzene	ND	0.4	0.032
1,1,1,2-Tetrachloroethane	ND	0.4	0.04
m,p-Xylene	ND	0.8	0.087
o-Xylene	ND	0.4	0.043
Styrene	ND	0.4	0.037
Bromoform	ND	0.4	0.046
Isopropylbenzene	ND	0.4	0.047
Bromobenzene	ND	0.4	0.045
n-Propylbenzene	ND	0.4	0.067
1,1,2,2-Tetrachloroethane	ND	0.4	0.07
1,2,3-Trichloropropane	ND	0.4	0.079
2-Chlorotoluene	ND	0.4	0.054
1,3,5-Trimethylbenzene	ND	0.4	0.047
4-Chlorotoluene	ND	0.4	0.064
t-Butylbenzene	ND	0.4	0.077
1,2,4-Trimethylbenzene	ND	0.4	0.052
sec-Butylbenzene	ND	0.4	0.063
1,3-Dichlorobenzene	ND	0.4	0.057
4-Isopropyltoluene	ND	0.4	0.048
1,4-Dichlorobenzene	ND	0.4	0.055
n-Butylbenzene	ND	0.4	0.053
1,2-Dichlorobenzene	ND	0.4	0.044
1,2-Dibromo-3-chloropropane	ND	0.4	0.13
1,2,4-Trichlorobenzene	ND	0.4	0.085
Hexachlorobutadiene	ND	0.4	0.11
Naphthalene	ND	0.4	0.091
1,2,3-Trichlorobenzene	ND	0.4	0.096

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-4
Lab ID:	95495-04
Date Received:	1/18/01
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	100		82.5	114
Fluorobenzene	101		83.7	114
Toluene-D8	95.2		91.1	107
Ethylbenzene-d10	91.6		86.6	108
Bromofluorobenzene	102		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	ND	0.4	0.031	
Vinyl chloride	0.48	0.4	0.019	
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	0.087	0.4	0.049	J
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	0.12	0.4	0.036	J
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	0.13	0.4	0.055	J
Bromochloromethane	ND	0.4	0.044	
Chloroform	ND	0.4	0.052	
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	ND	0.4	0.032	
1,2-Dichloroethane	ND	0.4	0.032	
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	



# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for 95495-04 continued...

Analyte	Result (ug/L)	PQL	MDL
1,1,2-Trichloroethane	ND	0.4	0.048
Tetrachloroethene	ND	0.4	0.055
1,3-Dichloropropane	ND	0.4	0.028
Dibromochloromethane	ND	0.4	0.048
1,2-Dibromoethane	ND	0.4	0.074
Chlorobenzene	ND	0.4	0.047
Ethylbenzene	ND	0.4	0.032
1,1,1,2-Tetrachloroethane	ND	0.4	0.04
m,p-Xylene	ND	0.8	0.087
o-Xylene	ND	0.4	0.043
Styrene	ND	0.4	0.037
Bromoform	ND	0.4	0.046
Isopropylbenzene	ND	0.4	0.047
Bromobenzene	ND	0.4	0.045
n-Propylbenzene	ND	0.4	0.067
1,1,2,2-Tetrachloroethane	ND	0.4	0.07
1,2,3-Trichloropropane	ND	0.4	0.079
2-Chlorotoluene	ND	0.4	0.054
1,3,5-Trimethylbenzene	ND	0.4	0.047
4-Chlorotoluene	ND	0.4	0.064
t-Butylbenzene	ND	0.4	0.077
1,2,4-Trimethylbenzene	ND	0.4	0.052
sec-Butylbenzene	ND	0.4	0.063
1,3-Dichlorobenzene	ND	0.4	0.057
4-Isopropyltoluene	ND	0.4	0.048
1,4-Dichlorobenzene	ND	0.4	0.055
n-Butylbenzene	ND	0.4	0.053
1,2-Dichlorobenzene	ND	0.4	0.044
1,2-Dibromo-3-chloropropane	ND	0.4	0.13
1,2,4-Trichlorobenzene	ND	0.4	0.085
Hexachlorobutadiene	ND	0.4	0.11
Naphthalene	ND	0.4	0.091
1,2,3-Trichlorobenzene	ND	0.4	0.096

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-13
Lab ID:	95495-05
Date Received:	1/18/01
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		82.5	114
Fluorobenzene	100		83.7	114
Toluene-D8	97.3		91.1	107
Ethylbenzene-d10	93.2		86.6	108
Bromofluorobenzene	99.7		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	ND	0.4	0.031	
Vinyl chloride	0.069	0.4	0.019	J
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	ND	0.4	0.049	
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	ND	0.4	0.036	
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	0.084	0.4	0.055	J
Bromochloromethane	ND	0.4	0.044	
Chloroform	ND	0.4	0.052	
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	0.23	0.4	0.032	J
1,2-Dichloroethane	ND	0.4	0.032	
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	

# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for 95495-05 continued...

Analyte	Result (ug/L)	PQL	MDL	
1,1,2-Trichloroethane	ND	0.4	0.048	
Tetrachloroethene	ND	0.4	0.055	
1,3-Dichloropropane	ND	0.4	0.028	
Dibromochloromethane	ND	0.4	0.048	
1,2-Dibromoethane	ND	0.4	0.074	
Chlorobenzene	ND	0.4	0.047	
Ethylbenzene	ND	0.4	0.032	
1,1,1,2-Tetrachloroethane	ND	0.4	0.04	
m,p-Xylene	ND	0.8	0.087	
o-Xylene	0.053	0.4	0.043	J
Styrene	ND	0.4	0.037	
Bromoform	ND	0.4	0.046	
Isopropylbenzene	0.058	0.4	0.047	J
Bromobenzene	ND	0.4	0.045	
n-Propylbenzene	ND	0.4	0.067	
1,1,2,2-Tetrachloroethane	ND	0.4	0.07	
1,2,3-Trichloropropane	ND	0.4	0.079	
2-Chlorotoluene	ND	0.4	0.054	
1,3,5-Trimethylbenzene	0.058	0.4	0.047	J
4-Chlorotoluene	ND	0.4	0.064	
t-Butylbenzene	ND	0.4	0.077	
1,2,4-Trimethylbenzene	ND	0.4	0.052	
sec-Butylbenzene	ND	0.4	0.063	
1,3-Dichlorobenzene	ND	0.4	0.057	
4-Isopropyltoluene	ND	0.4	0.048	
1,4-Dichlorobenzene	ND	0.4	0.055	
n-Butylbenzene	ND	0.4	0.053	
1,2-Dichlorobenzene	ND	0.4	0.044	
1,2-Dibromo-3-chloropropane	ND	0.4	0.13	
1,2,4-Trichlorobenzene	ND	0.4	0.085	
Hexachlorobutadiene	ND	0.4	0.11	
Naphthalene	ND	0.4	0.091	
1,2,3-Trichlorobenzene	ND	0.4	0.096	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	95495-06
Date Received:	1/18/01
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	98.9		82.5	114
Fluorobenzene	99.2		83.7	114
Toluene-D8	97.2		91.1	107
Ethylbenzene-d10	94.8		86.6	108
Bromofluorobenzene	101		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	ND	0.4	0.031	
Vinyl chloride	0.084	0.4	0.019	J
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	0.064	0.4	0.049	J
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	ND	0.4	0.036	
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	0.085	0.4	0.055	J
Bromochloromethane	ND	0.4	0.044	
Chloroform	ND	0.4	0.052	
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	0.24	0.4	0.032	J
1,2-Dichloroethane	0.053	0.4	0.032	J
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	

# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for 95495-06 continued...

Analyte	Result (ug/L)	PQL	MDL	
1,1,2-Trichloroethane	ND	0.4	0.048	
Tetrachloroethene	ND	0.4	0.055	
1,3-Dichloropropane	ND	0.4	0.028	
Dibromochloromethane	ND	0.4	0.048	
1,2-Dibromoethane	ND	0.4	0.074	
Chlorobenzene	ND	0.4	0.047	
Ethylbenzene	ND	0.4	0.032	
1,1,1,2-Tetrachloroethane	ND	0.4	0.04	
m,p-Xylene	ND	0.8	0.087	
o-Xylene	0.048	0.4	0.043	J
Styrene	ND	0.4	0.037	
Bromoform	ND	0.4	0.046	
Isopropylbenzene	0.064	0.4	0.047	J
Bromobenzene	ND	0.4	0.045	
n-Propylbenzene	ND	0.4	0.067	
1,1,2,2-Tetrachloroethane	ND	0.4	0.07	
1,2,3-Trichloropropane	ND	0.4	0.079	
2-Chlorotoluene	ND	0.4	0.054	
1,3,5-Trimethylbenzene	0.064	0.4	0.047	J
4-Chlorotoluene	ND	0.4	0.064	
t-Butylbenzene	ND	0.4	0.077	
1,2,4-Trimethylbenzene	ND	0.4	0.052	
sec-Butylbenzene	ND	0.4	0.063	
1,3-Dichlorobenzene	ND	0.4	0.057	
4-Isopropyltoluene	ND	0.4	0.048	
1,4-Dichlorobenzene	ND	0.4	0.055	
n-Butylbenzene	ND	0.4	0.053	
1,2-Dichlorobenzene	ND	0.4	0.044	
1,2-Dibromo-3-chloropropane	ND	0.4	0.13	
1,2,4-Trichlorobenzene	ND	0.4	0.085	
Hexachlorobutadiene	ND	0.4	0.11	
Naphthalene	ND	0.4	0.091	
1,2,3-Trichlorobenzene	ND	0.4	0.096	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	95495-07
Date Received:	1/18/01
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	102		82.5	114
Fluorobenzene	101		83.7	114
Toluene-D8	96.3		91.1	107
Ethylbenzene-d10	92.2		86.6	108
Bromofluorobenzene	102		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	ND	0.4	0.031	
Vinyl chloride	0.056	0.4	0.019	J
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	0.089	0.4	0.049	J
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	0.11	0.4	0.036	J
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	ND	0.4	0.055	
Bromochloromethane	ND	0.4	0.044	
Chloroform	ND	0.4	0.052	
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	ND	0.4	0.032	
1,2-Dichloroethane	ND	0.4	0.032	
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	

# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for 95495-07 continued...

Analyte	Result (ug/L)	PQL	MDL
1,1,2-Trichloroethane	ND	0.4	0.048
Tetrachloroethene	ND	0.4	0.055
1,3-Dichloropropane	ND	0.4	0.028
Dibromochloromethane	ND	0.4	0.048
1,2-Dibromoethane	ND	0.4	0.074
Chlorobenzene	ND	0.4	0.047
Ethylbenzene	ND	0.4	0.032
1,1,1,2-Tetrachloroethane	ND	0.4	0.04
m,p-Xylene	ND	0.8	0.087
o-Xylene	0.069	0.4	0.043
Styrene	ND	0.4	0.037
Bromoform	ND	0.4	0.046
Isopropylbenzene	ND	0.4	0.047
Bromobenzene	ND	0.4	0.045
n-Propylbenzene	ND	0.4	0.067
1,1,2,2-Tetrachloroethane	ND	0.4	0.07
1,2,3-Trichloropropane	ND	0.4	0.079
2-Chlorotoluene	ND	0.4	0.054
1,3,5-Trimethylbenzene	ND	0.4	0.047
4-Chlorotoluene	ND	0.4	0.064
t-Butylbenzene	ND	0.4	0.077
1,2,4-Trimethylbenzene	ND	0.4	0.052
sec-Butylbenzene	ND	0.4	0.063
1,3-Dichlorobenzene	ND	0.4	0.057
4-Isopropyltoluene	ND	0.4	0.048
1,4-Dichlorobenzene	ND	0.4	0.055
n-Butylbenzene	ND	0.4	0.053
1,2-Dichlorobenzene	ND	0.4	0.044
1,2-Dibromo-3-chloropropane	ND	0.4	0.13
1,2,4-Trichlorobenzene	ND	0.4	0.085
Hexachlorobutadiene	ND	0.4	0.11
Naphthalene	ND	0.4	0.091
1,2,3-Trichlorobenzene	ND	0.4	0.096

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# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-1
Lab ID:	95495-01
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	93.5		52	149
2 - Fluorobiphenyl	107		56	127
p - Terphenyl - d14	88		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	ND	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	ND	0.08	0.018	
Fluorene	ND	0.08	0.03	
Phenanthrene	ND	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-6
Lab ID:	95495-02
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	100		52	149
2 - Fluorobiphenyl	96.2		56	127
p - Terphenyl - d14	108		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	ND	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	ND	0.08	0.018	
Fluorene	ND	0.08	0.03	
Phenanthrene	ND	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-5
Lab ID:	95495-03
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	107		52	149
2 - Fluorobiphenyl	102		56	127
p - Terphenyl - d14	118		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	ND	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	ND	0.08	0.018	
Fluorene	ND	0.08	0.03	
Phenanthrene	ND	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-4
Lab ID:	95495-04
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	102		52	149
2 - Fluorobiphenyl	110		56	127
p - Terphenyl - d14	66.1		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	ND	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	ND	0.08	0.018	
Fluorene	ND	0.08	0.03	
Phenanthrene	ND	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-13
Lab ID:	95495-05
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	106		52	149
2 - Fluorobiphenyl	96.4		56	127
p - Terphenyl - d14	83.1		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	ND	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	ND	0.08	0.018	
Fluorene	ND	0.08	0.03	
Phenanthrene	ND	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	95495-06
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	91.8		52	149
2 - Fluorobiphenyl	84.5		56	127
p - Terphenyl - d14	68.9		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	ND	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	ND	0.08	0.018	
Fluorene	ND	0.08	0.03	
Phenanthrene	ND	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	95495-07
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	88.5		52	149
2 - Fluorobiphenyl	89.5		56	127
p - Terphenyl - d14	90		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	0.22	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	0.32	0.08	0.018	
Fluorene	0.32	0.08	0.03	
Phenanthrene	0.47	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-6
Lab ID:	95495-02
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/25/01
% Solids	-
Dilution Factor	0.5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	98.8		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.23	0.2	0.1	
Motor Oil	0.38	0.4	0.2	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-5
Lab ID:	95495-03
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/25/01
% Solids	-
Dilution Factor	0.5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	90.1		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.33	0.2	0.1	
Motor Oil	0.36	0.4	0.2	J



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-4
Lab ID:	95495-04
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/25/01
% Solids	-
Dilution Factor	0.5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	97		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	0.16	0.2	0.1	J
Motor Oil	0.33	0.4	0.2	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-13
Lab ID:	95495-05
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/25/01
% Solids	-
Dilution Factor	0.5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate o-terphenyl	% Recovery 105	Flags	Recovery Limits	
			Low 50	High 150
Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.6	0.2	0.1	X2
Motor Oil	1.6	0.4	0.2	X2

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-3
Lab ID:	95495-06
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/25/01
% Solids	-
Dilution Factor	0.5

## Diesel and Motor Oil by NWTPH-Dx Modified

			<b>Recovery Limits</b>	
<b>Surrogate</b>	<b>% Recovery</b>	<b>Flags</b>	<b>Low</b>	<b>High</b>
o-terphenyl	122		50	150

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>MDL</b>	<b>Flags</b>
#2 Diesel	1.8	0.2	0.1	X2
Motor Oil	1.8	0.4	0.2	X2

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	MW-2
Lab ID:	95495-07
Date Received:	1/18/01
Date Prepared:	1/24/01
Date Analyzed:	1/25/01
% Solids	-
Dilution Factor	0.5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	91.1		50	150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	1.5	0.2	0.1	X1
Motor Oil	0.64	0.4	0.2	

X1 - Chromatogram suggests this might be aged or degraded diesel

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - HP0050
Date Received:	-
Date Prepared:	1/30/01
Date Analyzed:	1/30/01
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030\8260B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	100		82.5	114
Fluorobenzene	101		83.7	114
Toluene-D8	98.3		91.1	107
Ethylbenzene-d10	96.4		86.6	108
Bromofluorobenzene	102		86.1	110

Analyte	Result (ug/L)	PQL	MDL	Flags
Dichlorodifluoromethane	ND	0.4	0.023	
Chloromethane	ND	0.4	0.031	
Vinyl chloride	ND	0.4	0.019	
Bromomethane	ND	0.4	0.05	
Chloroethane	ND	0.4	0.12	
Trichlorofluoromethane	ND	0.4	0.022	
1,1-Dichloroethene	ND	0.4	0.082	
Methylene chloride	ND	0.4	0.049	
trans-1,2-Dichloroethene	ND	0.4	0.052	
1,1-Dichloroethane	ND	0.4	0.036	
2,2-Dichloropropane	ND	0.4	0.075	
cis-1,2-Dichloroethene	ND	0.4	0.055	
Bromochloromethane	ND	0.4	0.044	
Chloroform	ND	0.4	0.052	
1,1,1-Trichloroethane	ND	0.4	0.076	
Carbon Tetrachloride	ND	0.4	0.053	
1,1-Dichloropropene	ND	0.4	0.05	
Benzene	ND	0.4	0.032	
1,2-Dichloroethane	ND	0.4	0.032	
Trichloroethene	ND	0.4	0.06	
1,2-Dichloropropane	ND	0.4	0.05	
Dibromomethane	ND	0.4	0.024	
Bromodichloromethane	ND	0.4	0.032	
cis-1,3-Dichloropropene	ND	0.4	0.037	
Toluene	ND	0.4	0.036	
trans-1,3-Dichloropropene	ND	0.4	0.031	

# SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 5030\8260B Modified data for HP0050 continued...

Analyte	Result (ug/L)	PQL	MDL
1,1,2-Trichloroethane	ND	0.4	0.048
Tetrachloroethene	ND	0.4	0.055
1,3-Dichloropropane	ND	0.4	0.028
Dibromochloromethane	ND	0.4	0.048
1,2-Dibromoethane	ND	0.4	0.074
Chlorobenzene	ND	0.4	0.047
Ethylbenzene	ND	0.4	0.032
1,1,1,2-Tetrachloroethane	ND	0.4	0.04
m,p-Xylene	ND	0.8	0.087
o-Xylene	ND	0.4	0.043
Styrene	ND	0.4	0.037
Bromoform	ND	0.4	0.046
Isopropylbenzene	ND	0.4	0.047
Bromobenzene	ND	0.4	0.045
n-Propylbenzene	ND	0.4	0.067
1,1,2,2-Tetrachloroethane	ND	0.4	0.07
1,2,3-Trichloropropane	ND	0.4	0.079
2-Chlorotoluene	ND	0.4	0.054
1,3,5-Trimethylbenzene	ND	0.4	0.047
4-Chlorotoluene	ND	0.4	0.064
t-Butylbenzene	ND	0.4	0.077
1,2,4-Trimethylbenzene	ND	0.4	0.052
sec-Butylbenzene	ND	0.4	0.063
1,3-Dichlorobenzene	ND	0.4	0.057
4-Isopropyltoluene	ND	0.4	0.048
1,4-Dichlorobenzene	ND	0.4	0.055
n-Butylbenzene	ND	0.4	0.053
1,2-Dichlorobenzene	ND	0.4	0.044
1,2-Dibromo-3-chloropropane	ND	0.4	0.13
1,2,4-Trichlorobenzene	ND	0.4	0.085
Hexachlorobutadiene	ND	0.4	0.11
Naphthalene	ND	0.4	0.091
1,2,3-Trichlorobenzene	ND	0.4	0.096

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: HP0050  
Date Prepared: 1/30/01  
Date Analyzed: 1/30/01  
QC Batch ID: HP0050

### Volatile Organics by USEPA Method 5030\8260B Modified

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	2	1.71	85.6	1.62	80.9	-5.6	
Benzene	0	2	1.94	97.2	1.9	95.1	-2.2	
Trichloroethene	0	2	1.94	97.1	1.92	96.1	-1	
Toluene	0	2	1.91	95.4	1.92	96.2	0.84	
Chlorobenzene	0	2	1.94	97.2	1.94	97.1	-0.1	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - SV3296
Date Received:	-
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	1

## Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Nitrobenzene - d5	96.7		52	149
2 - Fluorobiphenyl	89.2		56	127
p - Terphenyl - d14	73.6		43	145

Analyte	Result (ug/L)	PQL	MDL	Flags
Naphthalene	ND	0.08	0.062	
2-Methylnaphthalene	ND	0.08	0.039	
2-Chloronaphthalene	ND	0.08	0.012	
Acenaphthylene	ND	0.08	0.018	
Acenaphthene	ND	0.08	0.018	
Fluorene	ND	0.08	0.03	
Phenanthrene	ND	0.08	0.037	
Anthracene	ND	0.08	0.011	
Fluoranthene	ND	0.08	0.026	
Pyrene	ND	0.08	0.028	
Benzo(a)anthracene	ND	0.08	0.061	
Chrysene	ND	0.08	0.037	
Benzo(b)fluoranthene	ND	0.08	0.023	
Benzo(k)fluoranthene	ND	0.08	0.033	
Benzo(a)pyrene	ND	0.08	0.026	
Indeno(1,2,3-cd)pyrene	ND	0.08	0.013	
Dibenz(a,h)anthracene	ND	0.08	0.03	
Benzo(g,h,i)perylene	ND	0.08	0.013	



# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: SV3296  
Date Prepared: 1/24/01  
Date Analyzed: 1/24/01  
QC Batch ID: SV3296

### Semivolatile Organics by USEPA Method 8270

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Acenaphthene	0	8	6.83	85.4	8.15	102	18	
Pyrene	0	8	5.93	74.1	7.2	90	19	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI2818
Date Received:	-
Date Prepared:	1/24/01
Date Analyzed:	1/24/01
% Solids	-
Dilution Factor	0.5

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate o-terphenyl	% Recovery 97.9	Flags	Recovery Limits	
			Low 50	High 150

Analyte	Result (mg/L)	PQL	MDL	Flags
#2 Diesel	ND	0.2	0.1	
Motor Oil	ND	0.4	0.2	

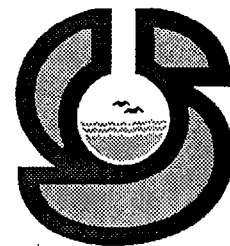
# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: DI2818  
Date Prepared: 1/24/01  
Date Analyzed: 1/24/01  
QC Batch ID: DI2818

### Diesel and Motor Oil by NWTPH-Dx Modified

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	BSD Result (mg/L)	BSD % Rec.	RPD	Flag
#2 Diesel	0	4	3.98	99.5	4.48	112	12	
Motor Oil	0	4.01	3.41	85.2	3.56	88.9	4.3	



## DATA QUALIFIERS AND ABBREVIATIONS

- B1:** This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2:** This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1:** Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be  $\leq 40\%$ .
- C2:** Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be  $> 40\%$ . The higher result was reported unless anomalies were noted.
- M:** GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D:** The reported result for this analyte was calculated based on a secondary dilution factor.
- E:** The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J:** The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL:** Maximum Contaminant Level
- MDL:** Method Detection Limit
- N:** See analytical narrative.
- ND:** Not Detected
- PQL:** Practical Quantitation Limit
- X1:** Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_.
- X2:** Contaminant does not appear to be "typical" product.
- X3:** Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4:** RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a:** RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5:** Matrix spike recovery was not determined due to the required dilution.
- X6:** Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7:** Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a:** Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8:** Surrogate recovery was not determined due to the required dilution.
- X9:** Surrogate recovery outside advisory QC limits due to matrix interference.



**Sound Analytical Services, Inc.**  
 ANALYTICAL & ENVIRONMENTAL CHEMISTS  
 4813 Pacific Hwy East • Tacoma, WA 98424  
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 email: info@saslab.com

SAS Lab No. 95495

TURNAROUND REQUEST (business days)  
 Standard (10 days) X  
 RUSH: 24 hrs \_\_\_ 48 hrs \_\_\_ 5 day \_\_\_

6/2 \$ vol

**CHAIN OF CUSTODY/REQUEST FOR LABORATORY ANALYSIS**

Client: <u>Goldor Associates Inc</u>					Analyses Requested																	
Project Name: <u>CF/GW Inv. IWA</u> <u>983-1065</u>					# of Containers	NUTPH DX	VOA 8260	PAHs 8270														
Contact: <u>Gary Zimmerman</u>																						
Phone No.: <u>425 883-0777</u>																						
Fax No.: <u>425 882-5498</u>																						
Email:																						
Lab Use Only	Sample ID	Date	Time	Matrix																		
1	MW-1	1-17	1008	W	7	✓	✓	✓														
2	MW-6		1215		7	✓	✓	✓														
3	MW-5		1310		7	✓	✓	✓														
4	MW-4		1407		7	✓	✓	✓														
5	MW-13		150930		7	✓	✓	✓														
6	MW-3		1510		7	✓	✓	✓														
7	MW-2	✓	1610	✓	7	✓	✓	✓														

	Signature	Printed Name	Firm	Time/Date	Special Instructions
Relinquished By:		Gary Zimmerman	Goldor	1030/1/15/01	
Received By:		J. Murphy	SAS	11:05 1/18/01	
Relinquished By:		A. Strom	SAS	12:30 1/18/01	
Received By:	A. Strom	A. Strom	SAS	1/18/01 12:50	
Relinquished By:					
Received By:					

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**SOUND ANALYTICAL EPH/VPH  
VOLATILE PETROLEUM HYDROCARBONS  
ALIPHATIC AND AROMATIC FRACTIONS  
TARGET INDICATOR COMPOUNDS**

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP1-(8-11)
Lab ID:	95381-02
Date Received:	1/12/01
Date Prepared:	1/17/01
Date Analyzed:	1/25/01
% Solids	80.7
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	105		60	140
Bromofluorobenzene	127		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.23	
Benzene	ND	0.023	
Toluene	0.094	0.047	
Ethylbenzene	0.22	0.047	
m- & p-Xylene	0.39	0.094	
o-Xylene	0.43	0.047	
Total EC >8-10 Aromatics	15	1.2	
Total EC 5-6 Aliphatics	ND	0.7	
Total EC >6-8 Aliphatics	1.6	0.47	
Total EC >8-10 Aliphatics	17	1.4	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP5-(5-8)
Lab ID:	95381-06
Date Received:	1/12/01
Date Prepared:	1/17/01
Date Analyzed:	1/19/01
% Solids	94.88
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	112		60	140
Bromofluorobenzene	119		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.19	
Benzene	ND	0.019	
Toluene	0.25	0.039	
Ethylbenzene	2.9	0.039	
m- & p-Xylene	3.8	0.078	
o-Xylene	2.3	0.039	
Total EC >8-10 Aromatics	98	0.97	D10
Total EC 5-6 Aliphatics	ND	0.58	
Total EC >6-8 Aliphatics	5.2	0.39	
Total EC >8-10 Aliphatics	98	1.2	D10



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP6-(5-8)
Lab ID:	95381-08
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/24/01
% Solids	67.48
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	83.6		60	140
Bromofluorobenzene	87.9		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.27	
Benzene	ND	0.027	
Toluene	0.09	0.055	
Ethylbenzene	0.76	0.055	
m- & p-Xylene	1.1	0.11	
o-Xylene	0.88	0.055	
Total EC >8-10 Aromatics	19	1.4	
Total EC 5-6 Aliphatics	ND	0.82	
Total EC >6-8 Aliphatics	3.9	0.55	
Total EC >8-10 Aliphatics	18	1.6	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP8-(5-8)
Lab ID:	95381-10
Date Received:	1/12/01
Date Prepared:	1/17/01
Date Analyzed:	1/19/01
% Solids	89.11
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	240	X9	60	140
Bromofluorobenzene	105		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.21	
Benzene	0.16	0.021	
Toluene	1.5	0.042	
Ethylbenzene	18	0.042	D10
m- & p-Xylene	24	0.083	D10
o-Xylene	19	0.042	D10
Total EC >8-10 Aromatics	350	1	D10
Total EC 5-6 Aliphatics	0.86	0.62	
Total EC >6-8 Aliphatics	44	0.42	D10
Total EC >8-10 Aliphatics	310	1.2	D10

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP9-(5-8)
Lab ID:	95381-12
Date Received:	1/12/01
Date Prepared:	1/17/01
Date Analyzed:	1/19/01
% Solids	83.55
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	143	X9	60	140
Bromofluorobenzene	114		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.22	
Benzene	0.073	0.022	
Toluene	0.44	0.044	
Ethylbenzene	5.8	0.044	
m- & p-Xylene	8.1	0.087	
o-Xylene	1.6	0.044	
Total EC >8-10 Aromatics	190	1.1	D10
Total EC 5-6 Aliphatics	0.83	0.65	
Total EC >6-8 Aliphatics	12	0.44	
Total EC >8-10 Aliphatics	190	1.3	D10

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP11-(5-8)
Lab ID:	95381-15
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/24/01
% Solids	71.4
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	81.3		60	140
Bromofluorobenzene	89.9		60	140

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.25	
Benzene	ND	0.025	
Toluene	ND	0.05	
Ethylbenzene	ND	0.05	
m- & p-Xylene	0.17	0.1	
o-Xylene	0.11	0.05	
Total EC >8-10 Aromatics	4.4	1.3	
Total EC 5-6 Aliphatics	ND	0.75	
Total EC >6-8 Aliphatics	ND	0.5	
Total EC >8-10 Aliphatics	3.8	1.5	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB2569
Date Received:	-
Date Prepared:	1/17/01
Date Analyzed:	1/18/01
% Solids	
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	120		60	140
Bromofluorobenzene	112		60	140

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.2	
Benzene	ND	0.02	
Toluene	ND	0.04	
Ethylbenzene	ND	0.04	
m- & p-Xylene	ND	0.08	
o-Xylene	ND	0.04	
Total EC >8-10 Aromatics	ND	1	
Total EC 5-6 Aliphatics	ND	0.6	
Total EC >6-8 Aliphatics	ND	0.4	
Total EC >8-10 Aliphatics	ND	1.2	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB2572
Date Received:	-
Date Prepared:	1/22/01
Date Analyzed:	1/24/01
% Solids	
Dilution Factor	1

## WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	90.7		60	140
Bromofluorobenzene	93.9		60	140

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
MTBE	ND	0.2	
Benzene	ND	0.02	
Toluene	ND	0.04	
Ethylbenzene	ND	0.04	
m- & p-Xylene	ND	0.08	
o-Xylene	ND	0.04	
Total EC >8-10 Aromatics	ND	1	
Total EC 5-6 Aliphatics	ND	0.6	
Total EC >6-8 Aliphatics	ND	0.4	
Total EC >8-10 Aliphatics	ND	1.2	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: GB2569  
Date Prepared: 1/18/01  
Date Analyzed: 1/18/01  
QC Batch ID: GB2569

### WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
MTBE	0	2	2.66	133	2.51	126	-5.4	
Benzene	0	2	2.11	106	2.1	105	-0.95	
Toluene	0	2	2.1	105	2.08	104	-0.96	
Ethylbenzene	0	2	2.07	103	2.03	102	-0.98	
m- & p-Xylene	0	4	4.31	108	4.4	110	1.8	
o-Xylene	0	2	2.03	101	2.04	102	0.99	
Total EC >8-10 Aromatics	0	10	10.4	104	10.5	105	0.96	
Total EC 5-6 Aliphatics	0	6	6.69	112	6.74	112	0	
Total EC >6-8 Aliphatics	0	4	4.46	111	4.49	112	0.9	
Total EC >8-10 Aliphatics	0	12	13	108	12.7	106	-1.9	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: GB2572  
Date Prepared: 1/22/01  
Date Analyzed: 1/24/01  
QC Batch ID: GB2572

### WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
MTBE	0	1	1.07	107	0.992	99.2	-7.6	
Benzene	0	1	0.944	94.4	0.905	90.5	-4.2	
Toluene	0	1	0.915	91.5	0.883	88.3	-3.6	
Ethylbenzene	0	1	0.846	84.6	0.82	82	-3.1	
m- & p-Xylene	0	2	1.82	90.8	1.76	88.2	-2.9	
o-Xylene	0	1	0.962	96.2	0.934	93.4	-3	
Total EC >8-10 Aromatics	0	5	4.19	83.7	4.14	82.8	-1.1	
Total EC 5-6 Aliphatics	0	3	3.03	101	2.91	97	-4	
Total EC >6-8 Aliphatics	0	2	2.11	106	2.11	106	0	
Total EC >8-10 Aliphatics	0	6	5.3	88.3	5.21	86.8	-1.7	



# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID:	MW-8 (3.5')
Lab ID:	95216-09
Date Prepared:	1/18/01
Date Analyzed:	1/18/01
QC Batch ID:	GB2569

### WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
MTBE	0	2.2	2.74	124	
Benzene	0	2.2	1.95	88	
Toluene	0	2.2	2.1	95	
Ethylbenzene	0.233	2.2	2.11	85	
m- & p-Xylene	0	4.4	4.23	96	
o-Xylene	0.285	2.21	2.58	104	
Total EC >8-10 Aromatics	9.77	11	17.9	74	
Total EC 5-6 Aliphatics	0	6.6	4.91	74	
Total EC >6-8 Aliphatics	0.913	4.4	4.03	71	
Total EC >8-10 Aliphatics	9.12	13	18.5	71	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID: SP11-(5-8)  
Lab ID: 95381-15  
Date Prepared: 1/22/01  
Date Analyzed: 1/24/01  
QC Batch ID: GB2572

### WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
MTBE	0	2.5	2.33	93	
Benzene	0	2.5	1.77	71	
Toluene	0	2.5	1.87	75	
Ethylbenzene	0	2.5	1.94	77	
m- & p-Xylene	0.166	5	3.74	71	
o-Xylene	0.108	2.51	2.5	96	
Total EC >8-10 Aromatics	4.38	13	13.1	70	
Total EC 5-6 Aliphatics	0	7.5	3.65	49	N
Total EC >6-8 Aliphatics	0	5	3.6	72	
Total EC >8-10 Aliphatics	3.75	15	13.7	66	N

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID:	MW-8 (3.5')
Lab ID:	95216-09
Date Prepared:	1/18/01
Date Analyzed:	1/18/01
QC Batch ID:	GB2569

### WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
MTBE	0	0	NC	
Benzene	0	0	NC	
Toluene	0	0	NC	
Ethylbenzene	0.233	0.245	-5.0	
m- & p-Xylene	0	0	NC	
o-Xylene	0.285	0.283	0.7	
Total EC >8-10 Aromatics	9.77	11.4	-15.0	
Total EC 5-6 Aliphatics	0	0.741	-200.0	X4a
Total EC >6-8 Aliphatics	0.913	0.839	8.4	
Total EC >8-10 Aliphatics	9.12	10.3	-12.0	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: SP6-(5-8)  
Lab ID: 95381-08  
Date Prepared: 1/22/01  
Date Analyzed: 1/24/01  
QC Batch ID: GB2572

### WSDOE Method for Determination of Volatile Petroleum Hydrocarbon Fractions Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
MTBE	0	0	NC	
Benzene	0	0	NC	
Toluene	0.0897	0.137	-42.0	N
Ethylbenzene	0.759	1.18	-43.0	N
m- & p-Xylene	1.09	1.94	-56.0	N
o-Xylene	0.884	1.42	-47.0	N
Total EC >8-10 Aromatics	18.8	26.8	-35.0	N
Total EC 5-6 Aliphatics	0	0	NC	
Total EC >6-8 Aliphatics	3.91	5.26	-29.0	N
Total EC >8-10 Aliphatics	17.6	21.7	-21.0	

*SOUND ANALYTICAL EPH / VPH*  
*EXTRACTABLE PETROLEUM HYDROCARBONS*  
*ALIPHATIC AND AROMATIC FRACTIONS*

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP1-(8-11)
Lab ID:	95381-02
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/22/01
% Solids	80.7
Dilution Factor	10

## Extractable Petroleum Hydrocarbons (EPH) Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1-chlorooctadecane	100		50	150
o-terphenyl	85.1		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
>nC8-nC10 Aliphatic	76	5.4	
>nC10-nC12 Aliphatic	380	5.4	
>nC12-nC16 Aliphatic	940	5.4	
>nC16-nC21 Aliphatic	320	5.4	
>nC21-nC34 Aliphatic	37	5.4	
>nC10-nC12 Aromatic	46	5.4	
>nC12-nC16 Aromatic	250	5.4	
>nC16-nC21 Aromatic	200	5.4	
>nC21-nC34 Aromatic	22	5.4	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP5-(5-8)
Lab ID:	95381-06
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/22/01
% Solids	94.88
Dilution Factor	10

## Extractable Petroleum Hydrocarbons (EPH) Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1-chlorooctadecane	95.7		50	150
o-terphenyl	67.2		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
>nC8-nC10 Aliphatic	200	4.5	
>nC10-nC12 Aliphatic	660	4.5	
>nC12-nC16 Aliphatic	2000	4.5	
>nC16-nC21 Aliphatic	1700	4.5	
>nC21-nC34 Aliphatic	300	4.5	
>nC10-nC12 Aromatic	180	4.5	
>nC12-nC16 Aromatic	710	4.5	
>nC16-nC21 Aromatic	750	4.5	
>nC21-nC34 Aromatic	120	4.5	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP6-(5-8)
Lab ID:	95381-08
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/22/01
% Solids	67.48
Dilution Factor	10

## Extractable Petroleum Hydrocarbons (EPH) Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1-chlorooctadecane	97.2		50	150
o-terphenyl	88.2		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
>nC8-nC10 Aliphatic	ND	6.6	
>nC10-nC12 Aliphatic	30	6.6	
>nC12-nC16 Aliphatic	98	6.6	
>nC16-nC21 Aliphatic	87	6.6	
>nC21-nC34 Aliphatic	27	6.6	
>nC10-nC12 Aromatic	10	6.6	
>nC12-nC16 Aromatic	38	6.6	
>nC16-nC21 Aromatic	48	6.6	
>nC21-nC34 Aromatic	20	6.6	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP8-(5-8)
Lab ID:	95381-10
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/22/01
% Solids	89.11
Dilution Factor	10

## Extractable Petroleum Hydrocarbons (EPH) Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1-chlorooctadecane	93.2		50	150
o-terphenyl	69.3		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
>nC8-nC10 Aliphatic	830	5	
>nC10-nC12 Aliphatic	2400	5	
>nC12-nC16 Aliphatic	8700	50	D 10
>nC16-nC21 Aliphatic	6500	50	D 10
>nC21-nC34 Aliphatic	730	5	
>nC10-nC12 Aromatic	110	5	
>nC12-nC16 Aromatic	530	5	
>nC16-nC21 Aromatic	870	5	
>nC21-nC34 Aromatic	100	5	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP9-(5-8)
Lab ID:	95381-12
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/22/01
% Solids	83.55
Dilution Factor	10

## Extractable Petroleum Hydrocarbons (EPH) Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1-chlorooctadecane	71.2		50	150
o-terphenyl	66.8		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
>nC8-nC10 Aliphatic	220	5	
>nC10-nC12 Aliphatic	670	5	
>nC12-nC16 Aliphatic	3200	50	D 10
>nC16-nC21 Aliphatic	2700	50	D 10
>nC21-nC34 Aliphatic	210	5	
>nC10-nC12 Aromatic	260	5	
>nC12-nC16 Aromatic	970	5	
>nC16-nC21 Aromatic	1100	5	
>nC21-nC34 Aromatic	96	5	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP11-(5-8)
Lab ID:	95381-15
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/22/01
% Solids	71.4
Dilution Factor	10

## Extractable Petroleum Hydrocarbons (EPH) Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1-chlorooctadecane	91.2		50	150
o-terphenyl	86.7		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
>nC8-nC10 Aliphatic	ND	5.9	
>nC10-nC12 Aliphatic	30	5.9	
>nC12-nC16 Aliphatic	170	5.9	
>nC16-nC21 Aliphatic	130	5.9	
>nC21-nC34 Aliphatic	40	5.9	
>nC10-nC12 Aromatic	ND	5.9	
>nC12-nC16 Aromatic	18	5.9	
>nC16-nC21 Aromatic	35	5.9	
>nC21-nC34 Aromatic	10	5.9	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - EP229
Date Received:	-
Date Prepared:	1/22/01
Date Analyzed:	1/22/01
% Solids	
Dilution Factor	10

## Extractable Petroleum Hydrocarbons (EPH) Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1-chlorooctadecane	81		60	140
o-terphenyl	72.7		60	140

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
>nC8-nC10 Aliphatic	ND	4.5	
>nC10-nC12 Aliphatic	ND	4.5	
>nC12-nC16 Aliphatic	ND	4.5	
>nC16-nC21 Aliphatic	ND	4.5	
>nC21-nC34 Aliphatic	ND	4.5	
>nC10-nC12 Aromatic	ND	4.5	
>nC12-nC16 Aromatic	ND	4.5	
>nC16-nC21 Aromatic	ND	4.5	
>nC21-nC34 Aromatic	ND	4.5	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike Report

Lab ID: EP229  
Date Prepared: 1/22/01  
Date Analyzed: 1/22/01  
QC Batch ID: EP229

### Extractable Petroleum Hydrocarbons (EPH) Modified

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
>nC8-nC10 Aliphatic	0	18	15.3	84	
>nC10-nC12 Aliphatic	0	18	16.3	90	
>nC12-nC16 Aliphatic	0	18	16.3	90	
>nC16-nC21 Aliphatic	0	18	16.7	92	
>nC21-nC34 Aliphatic	0	18	17.8	98	
>nC10-nC12 Aromatic	0	18.2	15.9	88	
>nC12-nC16 Aromatic	0	18	16.7	92	
>nC16-nC21 Aromatic	0	18	15.3	84	
>nC21-nC34 Aromatic	0	18	17.9	98	

# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID: SP1-(8-11)  
Lab ID: 95381-02  
Date Prepared: 1/22/01  
Date Analyzed: 1/22/01  
QC Batch ID: EP229

### Extractable Petroleum Hydrocarbons (EPH) Modified

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
>nC8-nC10 Aliphatic	76.3	21	95.6	92	
>nC10-nC12 Aliphatic	380	21	381	4	X7
>nC12-nC16 Aliphatic	939	21	809	-618	X7
>nC16-nC21 Aliphatic	324	21	278	-222	X7
>nC21-nC34 Aliphatic	37.3	21	47.5	49	X7
>nC10-nC12 Aromatic	45.6	21	54.5	42	X7
>nC12-nC16 Aromatic	251	21	218	-157	X7
>nC16-nC21 Aromatic	201	21	169	-152	X7
>nC21-nC34 Aromatic	21.8	21	34.3	59	X7

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: SP1-(8-11)  
Lab ID: 95381-02  
Date Prepared: 1/22/01  
Date Analyzed: 1/22/01  
QC Batch ID: EP229

### Extractable Petroleum Hydrocarbons (EPH) Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
>nC8-nC10 Aliphatic	76.3	96	-23.0	
>nC10-nC12 Aliphatic	380	440	-15.0	
>nC12-nC16 Aliphatic	939	951	-1.3	
>nC16-nC21 Aliphatic	324	309	4.7	
>nC21-nC34 Aliphatic	37.3	37.5	-0.5	
>nC10-nC12 Aromatic	45.6	48.3	-5.8	
>nC12-nC16 Aromatic	251	259	-3.1	
>nC16-nC21 Aromatic	201	205	-2.0	
>nC21-nC34 Aromatic	21.8	22.1	-1.4	

**SOUND ANALYTICAL EPA 8270 MOD.**  
**EXTRACTABLE PETROLEUM HYDROCARBONS**  
**TARGET PAH COMPOUNDS**



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP1-(8-11)
Lab ID:	95381-02
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/23/01
% Solids	80.7
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	78.9		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	0.23	0.022	0.022	
2-Methylnaphthalene	6.5	0.022	0.019	
Acenaphthylene	0.51	0.022	0.021	
Acenaphthene	0.41	0.022	0.019	
Fluorene	0.87	0.022	0.016	
Phenanthrene	1.3	0.022	0.015	
Anthracene	ND	0.022	0.018	
Fluoranthene	ND	0.022	0.013	
Pyrene	0.07	0.022	0.012	
Benzo(a)anthracene	ND	0.022	0.0095	
Chrysene	0.037	0.022	0.012	
Benzo(b)fluoranthene	ND	0.022	0.011	
Benzo(k)fluoranthene	ND	0.022	0.017	
Benzo(a)pyrene	ND	0.022	0.0088	
Indeno(1,2,3-cd)pyrene	ND	0.022	0.017	
Dibenz(a,h)anthracene	ND	0.022	0.012	
Benzo(g,h,i)perylene	ND	0.022	0.013	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP5-(5-8)
Lab ID:	95381-06
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/23/01
% Solids	94.88
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	69.5		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	3.7	0.09	0.09	
2-Methylnaphthalene	12	0.09	0.081	
Acenaphthylene	0.48	0.018	0.017	
Acenaphthene	0.69	0.018	0.015	
Fluorene	1.3	0.018	0.013	
Phenanthrene	2.6	0.018	0.012	
Anthracene	ND	0.018	0.015	
Fluoranthene	ND	0.018	0.01	
Pyrene	0.78	0.018	0.0099	
Benzo(a)anthracene	0.11	0.018	0.0079	
Chrysene	0.097	0.018	0.0097	
Benzo(b)fluoranthene	ND	0.018	0.0094	
Benzo(k)fluoranthene	ND	0.018	0.015	
Benzo(a)pyrene	ND	0.018	0.0074	
Indeno(1,2,3-cd)pyrene	ND	0.018	0.014	
Dibenz(a,h)anthracene	ND	0.018	0.01	
Benzo(g,h,i)perylene	ND	0.018	0.011	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP6-(5-8)
Lab ID:	95381-08
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/23/01
% Solids	67.48
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	88.9		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	1.7	0.027	0.027	
2-Methylnaphthalene	4.1	0.027	0.024	
Acenaphthylene	ND	0.027	0.026	
Acenaphthene	0.26	0.027	0.023	
Fluorene	0.55	0.027	0.019	
Phenanthrene	0.92	0.027	0.018	
Anthracene	ND	0.027	0.022	
Fluoranthene	ND	0.027	0.015	
Pyrene	0.16	0.027	0.015	
Benzo(a)anthracene	ND	0.027	0.012	
Chrysene	ND	0.027	0.014	
Benzo(b)fluoranthene	ND	0.027	0.014	
Benzo(k)fluoranthene	ND	0.027	0.022	
Benzo(a)pyrene	ND	0.027	0.011	
Indeno(1,2,3-cd)pyrene	ND	0.027	0.021	
Dibenz(a,h)anthracene	ND	0.027	0.015	
Benzo(g,h,i)perylene	ND	0.027	0.016	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP8-(5-8)
Lab ID:	95381-10
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/23/01
% Solids	89.11
Dilution Factor	100

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	96.3		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	19	0.1	0.1	
2-Methylnaphthalene	50	0.1	0.09	
Acenaphthylene	1.3	0.1	0.096	
Acenaphthene	5.7	0.1	0.086	
Fluorene	6	0.1	0.073	
Phenanthrene	10	0.1	0.068	
Anthracene	ND	0.1	0.082	
Fluoranthene	ND	0.1	0.058	
Pyrene	2.3	0.1	0.055	
Benzo(a)anthracene	ND	0.1	0.044	
Chrysene	0.22	0.1	0.054	
Benzo(b)fluoranthene	ND	0.1	0.052	
Benzo(k)fluoranthene	ND	0.1	0.081	
Benzo(a)pyrene	ND	0.1	0.041	
Indeno(1,2,3-cd)pyrene	ND	0.1	0.079	
Dibenz(a,h)anthracene	ND	0.1	0.056	
Benzo(g,h,i)perylene	ND	0.1	0.062	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP9-(5-8)
Lab ID:	95381-12
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/23/01
% Solids	83.55
Dilution Factor	100

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	83.2		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	7.4	0.1	0.1	
2-Methylnaphthalene	23	0.1	0.09	
Acenaphthylene	ND	0.1	0.096	
Acenaphthene	3.8	0.1	0.086	
Fluorene	4.1	0.1	0.073	
Phenanthrene	4.7	0.1	0.068	
Anthracene	ND	0.1	0.082	
Fluoranthene	ND	0.1	0.058	
Pyrene	0.94	0.1	0.055	
Benzo(a)anthracene	ND	0.1	0.044	
Chrysene	ND	0.1	0.054	
Benzo(b)fluoranthene	ND	0.1	0.052	
Benzo(k)fluoranthene	ND	0.1	0.081	
Benzo(a)pyrene	ND	0.1	0.041	
Indeno(1,2,3-cd)pyrene	ND	0.1	0.079	
Dibenz(a,h)anthracene	ND	0.1	0.056	
Benzo(g,h,i)perylene	ND	0.1	0.062	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP11-(5-8)
Lab ID:	95381-15
Date Received:	1/12/01
Date Prepared:	1/22/01
Date Analyzed:	1/23/01
% Solids	71.4
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	89.1		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	0.97	0.023	0.023	
2-Methylnaphthalene	3	0.023	0.021	
Acenaphthylene	0.29	0.023	0.023	
Acenaphthene	ND	0.023	0.02	
Fluorene	0.39	0.023	0.017	
Phenanthrene	0.67	0.023	0.016	
Anthracene	ND	0.023	0.019	
Fluoranthene	0.054	0.023	0.014	
Pyrene	0.035	0.023	0.013	
Benzo(a)anthracene	ND	0.023	0.01	
Chrysene	ND	0.023	0.013	
Benzo(b)fluoranthene	ND	0.023	0.012	
Benzo(k)fluoranthene	ND	0.023	0.019	
Benzo(a)pyrene	ND	0.023	0.0096	
Indeno(1,2,3-cd)pyrene	ND	0.023	0.019	
Dibenz(a,h)anthracene	ND	0.023	0.013	
Benzo(g,h,i)perylene	ND	0.023	0.015	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - EP229
Date Received:	-
Date Prepared:	1/22/01
Date Analyzed:	1/23/01
% Solids	
Dilution Factor	20

## Targeted PAH Analytes by Method 8270 Modified.

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-Terphenyl	90.8		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Naphthalene	ND	0.018	0.018	
2-Methylnaphthalene	ND	0.018	0.016	
Acenaphthylene	ND	0.018	0.017	
Acenaphthene	ND	0.018	0.016	
Fluorene	ND	0.018	0.013	
Phenanthrene	ND	0.018	0.012	
Anthracene	ND	0.018	0.015	
Fluoranthene	ND	0.018	0.011	
Pyrene	ND	0.018	0.01	
Benzo(a)anthracene	ND	0.018	0.008	
Chrysene	ND	0.018	0.0098	
Benzo(b)fluoranthene	ND	0.018	0.0095	
Benzo(k)fluoranthene	ND	0.018	0.015	
Benzo(a)pyrene	ND	0.018	0.0075	
Indeno(1,2,3-cd)pyrene	ND	0.018	0.014	
Dibenz(a,h)anthracene	ND	0.018	0.01	
Benzo(g,h,i)perylene	ND	0.018	0.011	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike Report

Lab ID: EP229  
Date Prepared: 1/22/01  
Date Analyzed: 1/23/01  
QC Batch ID: EP229

### Targeted PAH Analytes by Method 8270 Modified.

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
Naphthalene	0	18	18	99	
Acenaphthene	0	18	18.2	100	
Pyrene	0	18	15.6	86	
Benzo(g,h,i)perylene	0	18	19.7	108	



# SOUND ANALYTICAL SERVICES, INC.

## Matrix Spike Report

Client Sample ID: SP1-(8-11)  
Lab ID: 95381-02  
Date Prepared: 1/22/01  
Date Analyzed: 1/23/01  
QC Batch ID: EP229

### Targeted PAH Analytes by Method 8270 Modified.

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Naphthalene	0.23	21	17.5	82	
Acenaphthene	0.415	21	17.5	81	
Pyrene	0.0698	21	19.9	94	
Benzo(g,h,i)perylene	0	21	20.6	98	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: SP1-(8-11)  
Lab ID: 95381-02  
Date Prepared: 1/22/01  
Date Analyzed: 1/23/01  
QC Batch ID: EP229

### Targeted PAH Analytes by Method 8270 Modified.

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Naphthalene	0.23	0.251	-8.7	
2-Methylnaphthalene	6.48	7.06	-8.6	
Acenaphthylene	0.514	0.411	22.0	
Acenaphthene	0.415	0.303	31.0	N
Fluorene	0.873	0.628	33.0	N
Phenanthrene	1.3	1.39	-6.7	
Anthracene	0	0	NC	
Fluoranthene	0	0	NC	
Pyrene	0.0698	0.0783	-11.0	
Benzo(a)anthracene	0	0	NC	
Chrysene	0.0371	0.041	-10.0	
Benzo(b)fluoranthene	0	0	NC	
Benzo(k)fluoranthene	0	0	NC	
Benzo(a)pyrene	0	0	NC	
Indeno(1,2,3-cd)pyrene	0	0	NC	
Dibenz(a,h)anthracene	0	0	NC	
Benzo(g,h,i)perylene	0	0	NC	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP1-(5-8)
Lab ID:	95381-01
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/17/01
% Solids	79.89
Dilution Factor	50

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	114		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	2300	160	75	
Motor Oil	350	310	160	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP1-(8-11)
Lab ID:	95381-02
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	80.7
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	101		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	2700	30	14	
Motor Oil	82	60	30	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP2-(5-8)
Lab ID:	95381-03
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	90.08
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	98.9		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	45	26	12	
Motor Oil	45	52	26	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP3-(5-8)
Lab ID:	95381-04
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	90.83
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	115		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	1800	25	12	
Motor Oil	190	51	25	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP4-(5-8)
Lab ID:	95381-05
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/17/01
% Solids	70.47
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	98.7		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	ND	35	17	
Motor Oil	ND	70	35	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP5-(5-8)
Lab ID:	95381-06
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/17/01
% Solids	94.88
Dilution Factor	50

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	84.7		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	7300	130	62	
Motor Oil	500	260	130	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP5-(8-11)
Lab ID:	95381-07
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	68.21
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	101		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	1000	35	17	X1
Motor Oil	240	69	35	X2

X1 - Chromatogram suggests this might be aged or degraded diesel

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP6-(5-8)
Lab ID:	95381-08
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	67.48
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	126		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	1500	34	16	
Motor Oil	85	68	34	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP7-(8-11)
Lab ID:	95381-09
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	73.58
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	103		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	820	32	15	
Motor Oil	220	63	32	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP8-(5-8)
Lab ID:	95381-10
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/17/01
% Solids	89.11
Dilution Factor	50

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	98.1		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	23000	130	62	
Motor Oil	460	260	130	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP8-(8-11)
Lab ID:	95381-11
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	78.24
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	89.8		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	5300	30	14	
Motor Oil	160	60	30	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP9-(5-8)
Lab ID:	95381-12
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	83.55
Dilution Factor	20

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	92.6		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	8200	59	28	
Motor Oil	210	120	59	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP9-(8-11)
Lab ID:	95381-13
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	77.99
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	101		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	1600	30	14	
Motor Oil	49	59	30	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP10-(5-8)
Lab ID:	95381-14
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	68.04
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	97.2		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	19	34	16	J
Motor Oil	120	68	34	



# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP11-(5-8)
Lab ID:	95381-15
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	71.4
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	110		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	1100	32	15	
Motor Oil	66	64	32	

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP12-(10-12)
Lab ID:	95381-16
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	81.38
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	98.8		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	560	30	14	
Motor Oil	45	59	30	J

# SOUND ANALYTICAL SERVICES, INC.

Client Name	Golder Associates
Client ID:	SP13-(5-8)
Lab ID:	95381-17
Date Received:	1/12/01
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
% Solids	73.58
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	93.8		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	ND	33	16	
Motor Oil	ND	65	33	

# SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DS0187
Date Received:	-
Date Prepared:	1/16/01
Date Analyzed:	1/17/01
% Solids	
Dilution Factor	10

## Diesel and Motor Oil by NWTPH-Dx Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	100		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
#2 Diesel	ND	25	12	
Motor Oil	ND	50	25	

# SOUND ANALYTICAL SERVICES, INC.

## Blank Spike/Blank Spike Duplicate Report

Lab ID: DS0187  
Date Prepared: 1/16/01  
Date Analyzed: 1/17/01  
QC Batch ID: DS0187

### Diesel and Motor Oil by NWTPH-Dx Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
#2 Diesel	0	500	583	117	599	120	2.5	
Motor Oil	0	501	456	91.1	463	92.5	1.5	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID: 1-B  
Lab ID: 95410-03  
Date Prepared: 1/16/01  
Date Analyzed: 1/17/01  
QC Batch ID: DS0187

### Diesel and Motor Oil by NWTPH-Dx Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
#2 Diesel	0	0	NC	
Motor Oil	0	0	NC	

# SOUND ANALYTICAL SERVICES, INC.

## Duplicate Report

Client Sample ID:	SP9-(8-11)
Lab ID:	95381-13
Date Prepared:	1/16/01
Date Analyzed:	1/18/01
QC Batch ID:	DS0187

### Diesel and Motor Oil by NWTPH-Dx Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
#2 Diesel	1560	1620	-3.8	
Motor Oil	48.9	49.4	-1.0	

# Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East • Tacoma, WA 98424

(253) 922-2310 • FAX (253) 922-5047

e-mail: info@saslab.com



## DATA QUALIFIERS AND ABBREVIATIONS

- B1:** This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2:** This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1:** Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be  $\leq 40\%$ .
- C2:** Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be  $> 40\%$ . The higher result was reported unless anomalies were noted.
- M:** GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D:** The reported result for this analyte was calculated based on a secondary dilution factor.
- E:** The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J:** The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL:** Maximum Contaminant Level
- MDL:** Method Detection Limit
- N:** See analytical narrative.
- ND:** Not Detected
- PQL:** Practical Quantitation Limit
- X1:** Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_.
- X2:** Contaminant does not appear to be "typical" product.
- X3:** Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4:** RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a:** RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5:** Matrix spike recovery was not determined due to the required dilution.
- X6:** Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7:** Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a:** Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8:** Surrogate recovery was not determined due to the required dilution.
- X9:** Surrogate recovery outside advisory QC limits due to matrix interference.





# Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East • Tacoma, WA 98424

(253) 922-2310 • FAX (253) 922-5047

e-mail: saincl@uswest.net

SAS Lab No. 95381

TURNAROUND REQUEST (business days)

Standard (10 days) \_\_\_\_\_

RUSH: 24 hrs \_\_\_\_\_ 48 hrs \_\_\_\_\_ 5 day \_\_\_\_\_

11/3 1/2 vol

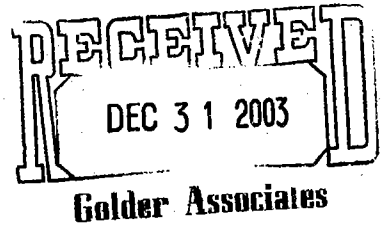
## CHAIN OF CUSTODY/REQUEST FOR LABORATORY ANALYSIS

Client: <u>Golden Associates</u>					Analyses Requested																
Project Name: <u>Consolidated Freightways</u> <u>983-1065.820</u>					# of Containers	NUTPA-DX	EPA/VPH														
Contact: <u>Gary Zimmerman</u>																					
Phone No.: <u>425 883-0777</u>																					
Fax No.: <u>425 882-5498</u>																					
Email:																					
Lab Use Only	Sample ID	Date	Time	Matrix	# of Containers	NUTPA-DX	EPA/VPH														
1	SP1-(5-8)	11-01	0850	Soil	1	✓															
2	SP1-(8-11)		0900		2	✓	✓														
3	SP2-(5-8)		0955		1	✓															
4	SP3-(5-8)		1040		1	✓															
5	SP4-(5-8)		1125		1	✓															
6	SP5-(5-8)		1157		2	✓	✓														
7	SP5-(8-11)		1205		1	✓															
8	SP6-(5-8)		1247		1	✓															
9	SP7-(8-11)		1330		2	✓															
10	SP8-(5-8)		1355		2	✓	✓														
11	SP8-(8-11)		1400		1	✓	✓														
12	SP9-(5-8)		1433		2	✓	✓														
13	SP9-(8-11)*		1437		2	✓															
14	SP10-(5-8)		1515		1	✓															
15	SP11-(5-8)		1547		1	✓															
16	SP12-(10-12)	✓	1632	✓	1	✓															
17	SP13-(5-8)	✓	1706	✓	1	✓															

	Signature	Printed Name	Firm	Time/Date	Special Instructions
Relinquished By:	<i>[Signature]</i>	Gary Zimmerman	Golden	11:00 11:30 AM	In addition to the 4 EPA/VPH analyses requested, also do EPA/VPH on any other samples with TPH-D > 1,000 ppm but no more than 2 additional (i.e. Do the 4 requested and do 2 more if other samples > 1,000)
Received By:	<i>[Signature]</i>	PALMQUIST	SAB	1-12-01 12:30 P	
Relinquished By:	<i>[Signature]</i>	PALMQUIST	SAB	1-12-01 12:30 P	
Received By:	<i>[Signature]</i>	A Strom	SAB	11/2/01 12:20	
Relinquished By:					
Received By:					

COC No. \_\_\_\_\_

\*Do Duplicate on SP9-(8-11)



**OnSite  
Environmental Inc.**  
Analytical Testing and Mobile Laboratory Services

December 29, 2003

Neil Gilham  
Golder Associates Inc.  
18300 NE Union Hill Road  
Suite 200  
Redmond, WA 98052-3333

Re: Analytical Data for Project 033-1000.000  
Laboratory Reference No. 0312-046

Dear Neil:

Enclosed are the analytical results and associated quality control data for samples submitted on December 3, 2003.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "David Baumeister". The signature is stylized and includes a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-046  
Project: 033-1000.000

### Case Narrative

Samples were collected on December 3, 2003, and received by the laboratory on December 3, 2003. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Gx/BTEX**

Date Extracted: 12-9-03  
 Date Analyzed: 12-9-03

Matrix: Water  
 Units: ug/L (ppb)

Client ID: **MW-4** **MW-44**  
 Lab ID: 12-046-01 12-046-02

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
Benzene	<b>ND</b>		1.0	<b>ND</b>		1.0
Toluene	<b>ND</b>		1.0	<b>ND</b>		1.0
Ethyl Benzene	<b>ND</b>		1.0	<b>ND</b>		1.0
m,p-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
o-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
TPH-Gas	<b>ND</b>		100	<b>ND</b>		100
Surrogate Recovery:						
Fluorobenzene	89%			92%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Gx/BTEX**

Date Extracted: 12-9-03  
 Date Analyzed: 12-9-03

Matrix: Water  
 Units: ug/L (ppb)

Client ID:	<b>MW-2</b>	<b>MW-3</b>
Lab ID:	12-046-03	12-046-04

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
Benzene	<b>ND</b>		1.0	<b>ND</b>		1.0
Toluene	<b>ND</b>		1.0	<b>ND</b>		1.0
Ethyl Benzene	<b>ND</b>		1.0	<b>ND</b>		1.0
m,p-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
o-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
TPH-Gas	<b>ND</b>		100	<b>ND</b>		100
Surrogate Recovery:						
Fluorobenzene	92%			93%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Gx/BTEX**

Date Extracted: 12-9-03  
 Date Analyzed: 12-9-03

Matrix: Water  
 Units: ug/L (ppb)

Client ID: **RW-2** **MW-1**  
 Lab ID: 12-046-05 12-046-06

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
Benzene	<b>5.4</b>		1.0	<b>ND</b>		1.0
Toluene	<b>ND</b>		1.0	<b>ND</b>		1.0
Ethyl Benzene	<b>ND</b>		1.0	<b>ND</b>		1.0
m,p-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
o-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
TPH-Gas	<b>450</b>		100	<b>ND</b>		100
Surrogate Recovery:						
Fluorobenzene	93%			91%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Gx/BTEX**

Date Extracted: 12-9-03  
 Date Analyzed: 12-9-03

Matrix: Water  
 Units: ug/L (ppb)

Client ID: **MW-5** **MW-6**  
 Lab ID: 12-046-07 12-046-08

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
Benzene	<b>ND</b>		1.0	<b>ND</b>		1.0
Toluene	<b>ND</b>		1.0	<b>ND</b>		1.0
Ethyl Benzene	<b>ND</b>		1.0	<b>ND</b>		1.0
m,p-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
o-Xylene	<b>ND</b>		1.0	<b>ND</b>		1.0
TPH-Gas	<b>ND</b>		100	<b>ND</b>		100
Surrogate Recovery:						
Fluorobenzene	91%			89%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-046  
Project: 033-1000.000

**NWTPH-Gx/BTEX  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-9-03  
Date Analyzed: 12-9-03

Matrix: Water  
Units: ug/L (ppb)

Lab ID: MB1209W1

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
Benzene	<b>ND</b>		1.0
Toluene	<b>ND</b>		1.0
Ethyl Benzene	<b>ND</b>		1.0
m,p-Xylene	<b>ND</b>		1.0
o-Xylene	<b>ND</b>		1.0
TPH-Gas	<b>ND</b>		100
Surrogate Recovery: Fluorobenzene	<b>93%</b>		



Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-046  
Project: 033-1000.000

**NWTPH-Gx/BTEX  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-9-03  
Date Analyzed: 12-9-03

Matrix: Water  
Units: ug/L (ppb)

Lab ID: MB1209W2

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		1.0
o-Xylene	ND		1.0
TPH-Gas	ND		100
Surrogate Recovery:			
Fluorobenzene	92%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Gx/BTEX  
 DUPLICATE QUALITY CONTROL**

Date Extracted: 12-9-03  
 Date Analyzed: 12-9-03

Matrix: Water  
 Units: ug/L (ppb)

Lab ID:	12-046-06 Original	12-046-06 Duplicate	RPD	Flags
Benzene	ND	ND	NA	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	91%	91%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Gx/BTEX  
 MS/MSD QUALITY CONTROL**

Date Extracted: 12-9-03  
 Date Analyzed: 12-9-03

Matrix: Water  
 Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	12-046-06 MS	Percent Recovery	12-046-06 MSD	Percent Recovery	RPD	Flags
Benzene	52.2	104	52.2	104	0	
Toluene	49.0	98	49.0	98	0	
Ethyl Benzene	50.1	100	50.1	100	0	
m,p-Xylene	49.5	99	49.5	99	0	
o-Xylene	49.8	100	49.6	99	0	

Surrogate Recovery:

Fluorobenzene 97% 97%

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Water  
 Units: mg/L (ppm)

Client ID:	MW-4	MW-44	MW-2
Lab ID:	12-046-01	12-046-02	12-046-03
Diesel Range:	ND	ND	ND
PQL:	0.25	0.25	0.25
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	0.40	0.40	0.40
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	105%	110%	114%
Flags:	Y	Y	Y

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Water  
 Units: mg/L (ppm)

Client ID:	MW-3	RW-2	MW-1
Lab ID:	12-046-04	12-046-05	12-046-06
Diesel Range:	ND	ND	ND
PQL:	0.25	0.25	0.25
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	0.40	0.40	0.40
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	106%	104%	109%
Flags:	Y	Y	Y

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-046  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14&15-03

Matrix: Water  
 Units: mg/L (ppm)

<b>Client ID:</b>	<b>MW-5</b>	<b>MW-6</b>
Lab ID:	12-046-07	12-046-08

Diesel Range:	<b>ND</b>	<b>ND</b>
PQL:	0.25	0.26
Identification:	---	---

Lube Oil Range:	<b>ND</b>	<b>ND</b>
PQL:	0.41	0.41
Identification:	---	---

Surrogate Recovery		
o-Terphenyl:	115%	94%

Flags:	Y	Y
--------	---	---

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-046  
Project: 033-1000.000

**NWTPH-Dx**  
**METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Water  
Units: mg/L (ppm)

Lab ID: MB1212W1

Diesel Range: **ND**  
PQL: 0.25  
Identification: ---

Lube Oil Range: **ND**  
PQL: 0.40  
Identification: ---

Surrogate Recovery  
o-Terphenyl: 115%

Flags: Y

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-046  
Project: 033-1000.000

**NWTPH-Dx  
DUPLICATE QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Water  
Units: mg/L (ppm)

Lab ID: 12-046-01 12-046-01 DUP

Diesel Range: ND ND  
PQL: 0.25 0.26

RPD: N/A

Surrogate Recovery  
o-Terphenyl: 105% 95%

Flags: Y Y





#### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - G - Insufficient sample quantity for duplicate analysis.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - O - Hydrocarbons outside the defined gasoline range are present in the sample.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a silica gel cleanup procedure.
  - Y - Sample extract treated with an acid cleanup procedure.
  - Z -
- ND - Not Detected at PQL  
PQL - Practical Quantitation Limit  
RPD - Relative Percent Difference



# STL

**STL Seattle**  
5755 8<sup>th</sup> Street East  
Tacoma, WA 98424

Tel: 253 922 2310  
Fax: 253 922 5047  
[www.stl-inc.com](http://www.stl-inc.com)

## TRANSMITTAL MEMORANDUM

DATE: December 19, 2003

TO: David Baumeister  
OnSite Environmental, Inc.  
14648 N. E. 95th St.  
Redmond, WA 98052

PROJECT: 12-046

REPORT NUMBER: 118328

TOTAL NUMBER OF PAGES: 21

Enclosed are the test results for eight samples received at STL Seattle on December 12, 2003.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

A handwritten signature in black ink, appearing to read "Stan Palmquist".

Stan Palmquist  
Project Manager

---

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# STL Seattle

## Sample Identification:

<u>Lab. No.</u>	<u>Client ID</u>	<u>Date/Time Sampled</u>	<u>Matrix</u>
118328-1	MW-4	12-03-03 *	Liquid
118328-2	MW-44	12-03-03 *	Liquid
118328-3	MW-2	12-03-03 *	Liquid
118328-4	MW-3	12-03-03 *	Liquid
118328-5	RW-2	12-03-03 *	Liquid
118328-6	MW-1	12-03-03 *	Liquid
118328-7	MW-5	12-03-03 *	Liquid
118328-8	MW-6	12-03-03 *	Liquid

\* - Sampling time not specified for this sample

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# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	MW-4
Lab ID:	118328-01
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91.2		80	120
Fluorobenzene	102		80	120
Toluene-D8	105		80	120
Ethylbenzene-d10	112		80	120
Bromofluorobenzene	108		80	120
Trifluorotoluene	106		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-01 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	MW-44
Lab ID:	118328-02
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	94.5		80	120
Fluorobenzene	102		80	120
Toluene-D8	105		80	120
Ethylbenzene-d10	109		80	120
Bromofluorobenzene	105		80	120
Trifluorotoluene	104		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-02 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	MW-2
Lab ID:	118328-03
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91.6		80	120
Fluorobenzene	102		80	120
Toluene-D8	106		80	120
Ethylbenzene-d10	112		80	120
Bromofluorobenzene	105		80	120
Trifluorotoluene	106		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	



# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-03 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	MW-3
Lab ID:	118328-04
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	92.7		80	120
Fluorobenzene	102		80	120
Toluene-D8	106		80	120
Ethylbenzene-d10	111		80	120
Bromofluorobenzene	106		80	120
Trifluorotoluene	105		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-04 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	RW-2
Lab ID:	118328-05
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91.3		80	120
Fluorobenzene	101		80	120
Toluene-D8	106		80	120
Ethylbenzene-d10	109		80	120
Bromofluorobenzene	104		80	120
Trifluorotoluene	107		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	5.31	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-05 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	5.26	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	5.5	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	0.589	1	0.5
sec-Butylbenzene	3.29	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

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# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	MW-1
Lab ID:	118328-06
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	90.1		80	120
Fluorobenzene	101		80	120
Toluene-D8	107		80	120
Ethylbenzene-d10	111		80	120
Bromofluorobenzene	107		80	120
Trifluorotoluene	104		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-06 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	MW-5
Lab ID:	118328-07
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91.2		80	120
Fluorobenzene	100		80	120
Toluene-D8	105		80	120
Ethylbenzene-d10	109		80	120
Bromofluorobenzene	103		80	120
Trifluorotoluene	105		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	



# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-07 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	MW-6
Lab ID:	118328-08
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	92.3		80	120
Fluorobenzene	102		80	120
Toluene-D8	104		80	120
Ethylbenzene-d10	107		80	120
Bromofluorobenzene	103		80	120
Trifluorotoluene	104		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118328-08 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Lab ID:	Method Blank - VOA595
Date Received:	-
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	90.8		80	120
Fluorobenzene	101		80	120
Toluene-D8	106		80	120
Ethylbenzene-d10	114		80	120
Bromofluorobenzene	110		80	120
Trifluorotoluene	110		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for VOA595 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

## Blank Spike/Blank Spike Duplicate Report

Lab ID: VOA595  
Date Prepared: 12/15/2003  
Date Analyzed: 12/15/2003  
QC Batch ID: VOA595

### Volatile Organics by USEPA Method 5030/8260B

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	5	4.59	91.8	4.51	90.1	-1.9	
Benzene	0	5	4.87	97.5	4.73	94.5	-3.1	
Trichloroethene	0	5	4.86	97.3	5	100	2.7	
Toluene	0	5	4.8	96	4.74	94.9	-1.2	
Chlorobenzene	0	5	5	100	5.03	101	1	

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12

**CHAIN OF CUSTODY RECORD**

(FOR SUBCONTRACT LABORATORY)

Lab Reference Number: 12-046



14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Project Manager: David Baumeister

Project Number: 033-1000.000

Project Name: Consolidated Freightway

dash	Sample Number/Name	Date Sampled	Matrix	# Jars	Analysis Requested	Comments
	MW-4	12/03/2003	W	3	Volatiles EPA 8260B	<p><b>HOLD TIME</b> <b>12/17</b></p>
	MW-44	12/03/2003	W	3	Volatiles EPA 8260B	
	MW-2	12/03/2003	W	3	Volatiles EPA 8260B	
	MW-3	12/03/2003	W	3	Volatiles EPA 8260B	
	RW-2	12/03/2003	W	3	Volatiles EPA 8260B	
	MW-1	12/03/2003	W	3	Volatiles EPA 8260B	
	MW-5	12/03/2003	W	3	Volatiles EPA 8260B	
	MW-6	12/03/2003	W	3	Volatiles EPA 8260B	
Submitted: <i>[Signature]</i>		date: 12/12/03	Received by: <i>[Signature]</i>		date: 12-12-03	
Firm: <i>[Signature]</i>		time: 1105	Firm: STR		time: 1111	
Submitted: <i>[Signature]</i>		date: 12-12-03	Received by: <i>[Signature]</i>		date: 12/12/03	
Firm: STR		time: 1300	Firm: STR		time: 1300	

# Chain of Custody

**OnSite Environmental Inc.**  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • Fax: (425) 885-4603

Laboratory Number: **12-046**

Company: Golder  
 Project Number: 033-1000-000  
 Project Name: Consolidated Freightways  
 Project Manager: Neil Gilham  
 Sampled by: J. Kennedy

Turnaround Request (in working days)  
 Same Day  1 Day  
 2 Day  3 Day  
 Standard (7 working days)  
 (other) \_\_\_\_\_

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-GX/BTEX	NWTPH-DX	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total FCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	% Moisture	
1	MW-4	12-3-03	935	Water	7		X	X	X													
2	MW-44		945		7		X	X	X													
3	MW-2		1035		7		X	X	X													
4	MW-3		1120		7		X	X	X													
5	RW-2		1205		7		X	X	X													
6	MW-1		1255		7		X	X	X													
7	MW-5		1405		7		X	X	X													
8	MW-6	12-3-03	1450	Water	7		X	X	X													

Signature	Company	Date	Time	Comments/Special Instructions:
<u>[Signature]</u>	Golder	12-3-03	4:32	
<u>[Signature]</u>	Onsite	12-3-03	4:32	
Relinquished by				
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date				Chromatograms with final report <input type="checkbox"/>

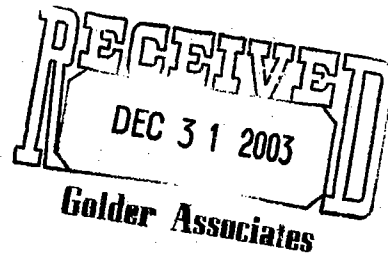






**OnSite  
Environmental Inc.**

Analytical Testing and Mobile Laboratory Services



December 29, 2003

Neil Gilham  
Golder Associates Inc.  
18300 NE Union Hill Road  
Suite 200  
Redmond, WA 98052-3333

Re: Analytical Data for Project 033-1000.000  
Laboratory Reference No. 0312-045

Dear Neil:

Enclosed are the analytical results and associated quality control data for samples submitted on December 3, 2003.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister  
Project Manager

Enclosures

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

### Case Narrative

Samples were collected on December 2, 2003, and received by the laboratory on December 3, 2003. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### NWTPH Dx Analysis

No surrogate data is available for sample GP-6 0-2.5 due to the necessary dilution of the sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

#### Volatiles EPA 8260B Analysis

The 12-065-18 Matrix Spike/Matrix Spike Duplicate RPD for Benzene is slightly outside control limits. The percent recoveries are within control limits and the associated Spike Blank data is within control limits. Please refer to the Spike Blank data associated with this MS/MSD (SB1212S2).

The 12-074-01 Matrix Spike/Matrix Spike Duplicate RPD for Trichloroethene is slightly outside control limits. The percent recoveries are within control limits and the associated Spike Blank data is within control limits. Please refer to the Spike Blank data associated with this MS/MSD (SB1213S1).

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
 Date Analyzed: 12-11-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID:	<b>GP-1 (6-8)</b>	<b>GP-1 (10-12)</b>
Lab ID:	12-045-02	12-045-03

	<b>Result</b>	Flags	PQL	<b>Result</b>	Flags	PQL
TPH-Gas	<b>ND</b>		7.1	<b>ND</b>		6.8
Surrogate Recovery: Fluorobenzene	.89%			93%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
Date Analyzed: 12-11-03

Matrix: Soil  
Units: mg/kg (ppm)

Client ID: **GP-2 (6-8)** **GP-2 (10-12)**  
Lab ID: 12-045-05 12-045-06

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		5.7	<b>ND</b>		7.0
Surrogate Recovery: Fluorobenzene	109%			92%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
Date Analyzed: 12-11-03

Matrix: Soil  
Units: mg/kg (ppm)

Client ID: **GP-3 (6-8)** **GP-3 (10-12)**  
Lab ID: 12-045-12 12-045-13

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		5.3	<b>ND</b>		7.0
Surrogate Recovery: Fluorobenzene	112%			90%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
 Date Analyzed: 12-11-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID:	<b>GP-4 (2-4)</b>	<b>GP-4 (6-8)</b>
Lab ID:	12-045-14	12-045-15

	<b>Result</b>	Flags	PQL	<b>Result</b>	Flags	PQL
TPH-Gas	<b>ND</b>		5.4	<b>ND</b>		5.5
Surrogate Recovery: Fluorobenzene	107%			103%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
 Date Analyzed: 12-11-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID:	<b>GP-4 (10-12)</b>	<b>GP-5 (6-8)</b>
Lab ID:	12-045-16	12-045-18

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		7.0	<b>ND</b>		5.5
Surrogate Recovery: Fluorobenzene	88%			107%		



Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
 Date Analyzed: 12-11-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID: **GP-5 (10-12)** **GP-6 0-2.5**  
 Lab ID: 12-045-19 12-045-21

	<b>Result</b>	Flags	PQL	<b>Result</b>	Flags	PQL
TPH-Gas	<b>ND</b>		7.1	<b>ND</b>		5.3
Surrogate Recovery: Fluorobenzene	89%			111%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
 Date Analyzed: 12-11-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID: **GP-8 (6-8')** **GP-8 (10-12')**  
 Lab ID: 12-045-24 12-045-25

	<b>Result</b>	Flags	PQL	<b>Result</b>	Flags	PQL
TPH-Gas	<b>ND</b>		7.2	<b>ND</b>		6.6
Surrogate Recovery: Fluorobenzene	88%			92%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
 Date Analyzed: 12-11-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID: **GP-7 (6-8')** **GP-7 (10-12')**  
 Lab ID: 12-045-26 12-045-27

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		6.7	<b>ND</b>		7.0
Surrogate Recovery: Fluorobenzene	93%			92%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-11-03  
Date Analyzed: 12-11-03

Matrix: Soil  
Units: mg/kg (ppm)

Client ID: **GP-44 (2-4')**  
Lab ID: 12-045-29

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		5.4
Surrogate Recovery: Fluorobenzene	108%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**  
**METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-11-03

Date Analyzed: 12-11-03

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB1211S1

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		5.0

Surrogate Recovery:  
Fluorobenzene 118%

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**  
**METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-11-03

Date Analyzed: 12-11-03

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB1211S2

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		5.0
Surrogate Recovery: Fluorobenzene	120%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**  
**DUPLICATE QUALITY CONTROL**

Date Extracted: 12-11-03  
Date Analyzed: 12-11-03

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID:	12-045-02 Original	12-045-02 Duplicate	RPD	Flags
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	89%	87%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx  
DUPLICATE QUALITY CONTROL**

Date Extracted: 12-11-03  
Date Analyzed: 12-11-03

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID:	12-045-12 Original	12-045-12 Duplicate	RPD	Flags
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	112%	110%		



Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-10-03  
Date Analyzed: 12-10-03

Matrix: Water  
Units: ug/L (ppb)

Client ID: **GP-1** **GP-2**  
Lab ID: 12-045-07 12-045-08

	<b>Result</b>	Flags	PQL	<b>Result</b>	Flags	PQL
TPH-Gas	<b>ND</b>		100	<b>ND</b>		100
Surrogate Recovery: Fluorobenzene	92%			93%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-10-03  
Date Analyzed: 12-10-03

Matrix: Water  
Units: ug/L (ppb)

Client ID:	<b>GP-3</b>	<b>GP-4</b>
Lab ID:	12-045-09	12-045-10

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		100	<b>ND</b>		100
Surrogate Recovery: Fluorobenzene	91%			93%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-10-03  
Date Analyzed: 12-10-03

Matrix: Water  
Units: ug/L (ppb)

Client ID:	<b>GP-5</b>	<b>GP-8</b>
Lab ID:	12-045-20	12-045-22

	<b>Result</b>	Flags	PQL	<b>Result</b>	Flags	PQL
TPH-Gas	<b>ND</b>		100	<b>ND</b>		100
Surrogate Recovery: Fluorobenzene	94%			93%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**

Date Extracted: 12-10-03  
Date Analyzed: 12-10-03

Matrix: Water  
Units: ug/L (ppb)

Client ID: **GP-7**  
Lab ID: 12-045-28

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		100
Surrogate Recovery: Fluorobenzene	95%		

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**  
**METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-10-03  
Date Analyzed: 12-10-03

Matrix: Water  
Units: ug/L (ppb)

Lab ID: MB1210W2

	<b>Result</b>	<b>Flags</b>	<b>PQL</b>
TPH-Gas	<b>ND</b>		100

Surrogate Recovery:  
Fluorobenzene 91%

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Gx**  
**DUPLICATE QUALITY CONTROL**

Date Extracted: 12-10-03  
Date Analyzed: 12-10-03

Matrix: Water  
Units: ug/L (ppb)

Lab ID:	12-045-08 Original	12-045-08 Duplicate	RPD	Flags
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	93%	89%		

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Client ID:</b>	<b>GP-1 (6-8)</b>	<b>GP-1 (10-12)</b>	<b>GP-2 (6-8)</b>
Lab ID:	12-045-02	12-045-03	12-045-05
Diesel Range:	<b>ND</b>	<b>ND</b>	<b>ND</b>
PQL:	36	34	28
Identification:	---	---	---
Lube Oil Range:	<b>ND</b>	<b>ND</b>	<b>ND</b>
PQL:	71	68	57
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	108%	121%	121%
Flags:	Y	Y	Y

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Client ID:</b>	<b>GP-2 (10-12)</b>	<b>GP-3 (6-8)</b>	<b>GP-3 (10-12)</b>
Lab ID:	12-045-06	12-045-12	12-045-13
Diesel Range:	ND	ND	ND
PQL:	35	26	35
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	70	53	70
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	105%	123%	115%
Flags:	Y	Y	Y



Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID:	GP-4 (2-4)	GP-4 (6-8)	GP-4 (10-12)
Lab ID:	12-045-14	12-045-15	12-045-16
Diesel Range:	ND	ND	ND
PQL:	130	28	35
Identification:	---	---	---
Lube Oil Range:	1300	ND	90
PQL:	270	55	70
Identification:	Lube Oil	---	Lube Oil
Surrogate Recovery			
o-Terphenyl:	140%	131%	101%
Flags:	Y	Y	Y

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Soil  
 Units: mg/kg (ppm)

Client ID:	GP-5 (6-8)	GP-5 (10-12)	GP-6 0-2.5
Lab ID:	12-045-18	12-045-19	12-045-21
Diesel Range:	ND	ND	ND
PQL:	28	36	270
Identification:	---	---	---
Lube Oil Range:	ND	ND	4000
PQL:	55	71	530
Identification:	---	---	Lube Oil
Surrogate Recovery			
o-Terphenyl:	146%	138%	---
Flags:	Y	Y	Y,S

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Client ID:</b>	<b>GP-8 (6-8')</b>	<b>GP-8 (10-12')</b>	<b>GP-7 (6-8')</b>
Lab ID:	12-045-24	12-045-25	12-045-26
Diesel Range:	ND	ND	ND
PQL:	36	33	33
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	72	66	67
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	130%	130%	114%
Flags:	Y	Y	Y

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Client ID:</b>	<b>GP-7 (10-12')</b>	<b>GP-44 (2-4')</b>
Lab ID:	12-045-27	12-045-29

Diesel Range:	ND	ND
PQL:	35	130
Identification:	---	---

Lube Oil Range:	ND	800
PQL:	70	270
Identification:	---	Lube Oil

Surrogate Recovery		
o-Terphenyl:	128%	139%

Flags:	Y	Y
--------	---	---

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Dx**  
**METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID: MB1212S2

Diesel Range: ND  
PQL: 25  
Identification: ---

Lube Oil Range: ND  
PQL: 50  
Identification: ---

Surrogate Recovery  
o-Terphenyl: 133%

Flags: Y

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Dx**  
**DUPLICATE QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID: 12-045-05 12-045-05 DUP

Diesel Range: ND ND  
PQL: 25 25

RPD: N/A

Surrogate Recovery  
o-Terphenyl: 121% 116%

Flags: Y Y

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Dx**  
**DUPLICATE QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID: 12-045-29 12-045-29 DUP

Diesel Range: ND ND  
PQL: 130 130

RPD: N/A

Surrogate Recovery  
o-Terphenyl: 139% 117%

Flags: Y Y

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14&15-03

Matrix: Water  
 Units: mg/L (ppm)

<b>Client ID:</b>	<b>GP-1</b>	<b>GP-2</b>	<b>GP-3</b>
Lab ID:	12-045-07	12-045-08	12-045-09
Diesel Range:	<b>ND</b>	<b>ND</b>	<b>ND</b>
PQL:	0.25	0.26	0.26
Identification:	---	---	---
Lube Oil Range:	<b>ND</b>	<b>ND</b>	<b>ND</b>
PQL:	0.40	0.41	0.42
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	79%	105%	88%
Flags:	Y	Y	Y



Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
 Date Analyzed: 12-14-03

Matrix: Water  
 Units: mg/L (ppm)

Client ID:	GP-4	GP-5	GP-8
Lab ID:	12-045-10	12-045-20	12-045-22
Diesel Range:	ND	ND	ND
PQL:	0.26	0.26	0.25
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	0.42	0.41	0.40
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	116%	117%	117%
Flags:	Y	Y	Y

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Dx**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Water  
Units: mg/L (ppm)

Client ID: GP-7  
Lab ID: 12-045-28

Diesel Range: ND  
PQL: 0.28  
Identification: ---

Lube Oil Range: ND  
PQL: 0.44  
Identification: ---

Surrogate Recovery  
o-Terphenyl: 102%

Flags: Y

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Dx**  
**METHOD BLANK QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Water  
Units: mg/L (ppm)

Lab ID: MB1212W1

Diesel Range: ND  
PQL: 0.25  
Identification: ---

Lube Oil Range: ND  
PQL: 0.40  
Identification: ---

Surrogate Recovery  
o-Terphenyl: 115%

Flags: Y

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**NWTPH-Dx  
DUPLICATE QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-14-03

Matrix: Water  
Units: mg/L (ppm)

Lab ID: 12-046-01 12-046-01 DUP

Diesel Range: ND ND  
PQL: 0.25 0.26

RPD: N/A

Surrogate Recovery  
o-Terphenyl: 105% 95%

Flags: Y Y

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-02  
 Client ID: GP-1 (6-8)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	ND		0.0071
Iodomethane	ND		0.0071
Carbon Disulfide	ND		0.0014
Methylene Chloride	ND		0.0071
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0071
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	ND		0.0071
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0071
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0071
Toluene	0.0020		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-02  
 Client ID: GP-1 (6-8)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	ND		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0071
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0029
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0071
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0071
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	60-137
Toluene, d8	89	71-129
4-Bromofluorobenzene	83	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-03  
 Client ID: GP-1 (10-12)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	0.036		0.0068
Iodomethane	ND		0.0068
Carbon Disulfide	ND		0.0014
Methylene Chloride	ND		0.0068
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0068
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	0.0084		0.0068
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0068
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0068
Toluene	ND		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 2 of 2

Lab ID: 12-045-03  
 Client ID: GP-1 (10-12)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	ND		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0068
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0027
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0068
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0068
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	90	60-137
Toluene, d8	88	71-129
4-Bromofluorobenzene	92	60-149



Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-05  
 Client ID: GP-2 (6-8)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0011
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0011
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0057
Iodomethane	ND		0.0057
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0057
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0057
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0057
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0057
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0057
Toluene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-05  
 Client ID: GP-2 (6-8)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0057
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0023
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0057
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0057
Naphthalene	ND		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	60-137
Toluene, d8	94	71-129
4-Bromofluorobenzene	89	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-06  
 Client ID: GP-2 (10-12)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	0.094		0.0070
Iodomethane	ND		0.0070
Carbon Disulfide	0.0026		0.0014
Methylene Chloride	ND		0.0070
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0070
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	ND		0.0070
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0070
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0070
Toluene	ND		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-06  
 Client ID: GP-2 (10-12)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	ND		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0070
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0028
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0070
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0070
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	93	60-137
Toluene, d8	95	71-129
4-Bromofluorobenzene	82	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-12  
 Client ID: GP-3 (6-8)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0011
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0011
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0053
Iodomethane	ND		0.0053
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0053
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0053
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0053
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0053
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0053
Toluene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-12  
 Client ID: GP-3 (6-8)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0053
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0021
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0053
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0053
Naphthalene	ND		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	60-137
Toluene, d8	87	71-129
4-Bromofluorobenzene	93	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 12-045-13  
 Client ID: GP-3 (10-12)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	0.15		0.0070
Iodomethane	ND		0.0070
Carbon Disulfide	ND		0.0014
Methylene Chloride	ND		0.0070
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0070
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	0.034		0.0070
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0070
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0070
Toluene	ND		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-13  
 Client ID: GP-3 (10-12)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	ND		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0070
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0028
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0070
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0070
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	91	60-137
Toluene, d8	86	71-129
4-Bromofluorobenzene	85	60-149



Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 12-045-14  
 Client ID: GP-4 (2-4)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0011
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0011
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0054
Iodomethane	ND		0.0054
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0054
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0054
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0054
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0054
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0054
Toluene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-14  
 Client ID: GP-4 (2-4)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0054
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0022
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0054
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0054
Naphthalene	ND		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	60-137
Toluene, d8	86	71-129
4-Bromofluorobenzene	82	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-15  
 Client ID: GP-4 (6-8)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0011
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0011
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0055
Iodomethane	ND		0.0055
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0055
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0055
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0055
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0055
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0055
Toluene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-15  
 Client ID: GP-4 (6-8)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0055
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0022
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0055
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0055
Naphthalene	ND		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	91	60-137
Toluene, d8	86	71-129
4-Bromofluorobenzene	86	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 12-045-16  
 Client ID: GP-4 (10-12)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	0.090		0.0070
Iodomethane	ND		0.0070
Carbon Disulfide	0.0027		0.0014
Methylene Chloride	ND		0.0070
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0070
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	0.017		0.0070
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0070
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0070
Toluene	ND		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-16  
 Client ID: GP-4 (10-12)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	ND		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0070
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0028
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0070
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0070
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	60-137
Toluene, d8	85	71-129
4-Bromofluorobenzene	84	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-18  
 Client ID: GP-5 (6-8)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0011
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0011
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0055
Iodomethane	ND		0.0055
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0055
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0055
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0055
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0055
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0055
Toluene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-18  
 Client ID: GP-5 (6-8)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0055
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0022
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0055
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0055
Naphthalene	ND		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	91	60-137
Toluene, d8	89	71-129
4-Bromofluorobenzene	90	60-149



Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-19  
 Client ID: GP-5 (10-12)

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	0.23		0.0071
Iodomethane	ND		0.0071
Carbon Disulfide	ND		0.0014
Methylene Chloride	ND		0.0071
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0071
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	0.048		0.0071
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0071
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0071
Toluene	ND		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-19  
 Client ID: GP-5 (10-12)

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	ND		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0071
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0029
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0071
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0071
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	60-137
Toluene, d8	84	71-129
4-Bromofluorobenzene	83	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-21  
 Client ID: GP-6 0-2.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0011
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0011
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0053
Iodomethane	ND		0.0053
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0053
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0053
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0053
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0053
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0053
Toluene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-21  
 Client ID: GP-6 0-2.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	0.0052		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0053
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0021
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	0.0012		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0053
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0053
Naphthalene	0.0015		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	97	60-137
Toluene, d8	83	71-129
4-Bromofluorobenzene	78	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-24  
 Client ID: GP-8 (6-8')

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	ND		0.0072
Iodomethane	ND		0.0072
Carbon Disulfide	ND		0.0014
Methylene Chloride	ND		0.0072
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0072
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	ND		0.0072
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0072
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0072
Toluene	0.0016		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-24  
 Client ID: GP-8 (6-8')

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	0.0096		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0072
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0029
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0072
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0072
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	90	60-137
Toluene, d8	88	71-129
4-Bromofluorobenzene	82	60-149

Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-13-03

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 12-045-25  
 Client ID: GP-8 (10-12')

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0013
Chloromethane	ND		0.0013
Vinyl Chloride	ND		0.0013
Bromomethane	ND		0.0013
Chloroethane	ND		0.0013
Trichlorofluoromethane	ND		0.0013
1,1-Dichloroethene	ND		0.0013
Acetone	0.040		0.0066
Iodomethane	ND		0.0066
Carbon Disulfide	ND		0.0013
Methylene Chloride	ND		0.0066
(trans) 1,2-Dichloroethene	ND		0.0013
Methyl t-Butyl Ether	ND		0.0013
1,1-Dichloroethane	ND		0.0013
Vinyl Acetate	ND		0.0066
2,2-Dichloropropane	ND		0.0013
(cis) 1,2-Dichloroethene	ND		0.0013
2-Butanone	0.011		0.0066
Bromochloromethane	ND		0.0013
Chloroform	ND		0.0013
1,1,1-Trichloroethane	ND		0.0013
Carbon Tetrachloride	ND		0.0013
1,1-Dichloropropene	ND		0.0013
Benzene	ND		0.0013
1,2-Dichloroethane	ND		0.0013
Trichloroethene	ND		0.0013
1,2-Dichloropropane	ND		0.0013
Dibromomethane	ND		0.0013
Bromodichloromethane	ND		0.0013
2-Chloroethyl Vinyl Ether	ND		0.0066
(cis) 1,3-Dichloropropene	ND		0.0013
Methyl Isobutyl Ketone	ND		0.0066
Toluene	ND		0.0013
(trans) 1,3-Dichloropropene	ND		0.0013

Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-25  
 Client ID: GP-8 (10-12')

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0013
Tetrachloroethene	ND		0.0013
1,3-Dichloropropane	ND		0.0013
2-Hexanone	ND		0.0066
Dibromochloromethane	ND		0.0013
1,2-Dibromoethane	ND		0.0013
Chlorobenzene	ND		0.0013
1,1,1,2-Tetrachloroethane	ND		0.0013
Ethylbenzene	ND		0.0013
m,p-Xylene	ND		0.0026
o-Xylene	ND		0.0013
Styrene	ND		0.0013
Bromoform	ND		0.0013
Isopropylbenzene	ND		0.0013
Bromobenzene	ND		0.0013
1,1,2,2-Tetrachloroethane	ND		0.0013
1,2,3-Trichloropropane	ND		0.0013
n-Propylbenzene	ND		0.0013
2-Chlorotoluene	ND		0.0013
4-Chlorotoluene	ND		0.0013
1,3,5-Trimethylbenzene	ND		0.0013
tert-Butylbenzene	ND		0.0013
1,2,4-Trimethylbenzene	ND		0.0013
sec-Butylbenzene	ND		0.0013
1,3-Dichlorobenzene	ND		0.0013
p-Isopropyltoluene	ND		0.0013
1,4-Dichlorobenzene	ND		0.0013
1,2-Dichlorobenzene	ND		0.0013
n-Butylbenzene	ND		0.0013
1,2-Dibromo-3-chloropropane	ND		0.0066
1,2,4-Trichlorobenzene	ND		0.0013
Hexachlorobutadiene	ND		0.0066
Naphthalene	ND		0.0013
1,2,3-Trichlorobenzene	ND		0.0013

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	86	60-137
Toluene, d8	91	71-129
4-Bromofluorobenzene	84	60-149



Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-13-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-26  
 Client ID: GP-7 (6-8')

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0013
Chloromethane	ND		0.0013
Vinyl Chloride	ND		0.0013
Bromomethane	ND		0.0013
Chloroethane	ND		0.0013
Trichlorofluoromethane	ND		0.0013
1,1-Dichloroethene	ND		0.0013
Acetone	0.012		0.0067
Iodomethane	ND		0.0067
Carbon Disulfide	ND		0.0013
Methylene Chloride	ND		0.0067
(trans) 1,2-Dichloroethene	ND		0.0013
Methyl t-Butyl Ether	ND		0.0013
1,1-Dichloroethane	ND		0.0013
Vinyl Acetate	ND		0.0067
2,2-Dichloropropane	ND		0.0013
(cis) 1,2-Dichloroethene	ND		0.0013
2-Butanone	ND		0.0067
Bromochloromethane	ND		0.0013
Chloroform	ND		0.0013
1,1,1-Trichloroethane	ND		0.0013
Carbon Tetrachloride	ND		0.0013
1,1-Dichloropropene	ND		0.0013
Benzene	ND		0.0013
1,2-Dichloroethane	ND		0.0013
Trichloroethene	ND		0.0013
1,2-Dichloropropane	ND		0.0013
Dibromomethane	ND		0.0013
Bromodichloromethane	ND		0.0013
2-Chloroethyl Vinyl Ether	ND		0.0067
(cis) 1,3-Dichloropropene	ND		0.0013
Methyl Isobutyl Ketone	ND		0.0067
Toluene	ND		0.0013
(trans) 1,3-Dichloropropene	ND		0.0013

Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 2 of 2

Lab ID: 12-045-26  
 Client ID: GP-7 (6-8')

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0013
Tetrachloroethene	ND		0.0013
1,3-Dichloropropane	ND		0.0013
2-Hexanone	ND		0.0067
Dibromochloromethane	ND		0.0013
1,2-Dibromoethane	ND		0.0013
Chlorobenzene	ND		0.0013
1,1,1,2-Tetrachloroethane	ND		0.0013
Ethylbenzene	ND		0.0013
m,p-Xylene	ND		0.0027
o-Xylene	ND		0.0013
Styrene	ND		0.0013
Bromoform	ND		0.0013
Isopropylbenzene	ND		0.0013
Bromobenzene	ND		0.0013
1,1,2,2-Tetrachloroethane	ND		0.0013
1,2,3-Trichloropropane	ND		0.0013
n-Propylbenzene	ND		0.0013
2-Chlorotoluene	ND		0.0013
4-Chlorotoluene	ND		0.0013
1,3,5-Trimethylbenzene	ND		0.0013
tert-Butylbenzene	ND		0.0013
1,2,4-Trimethylbenzene	ND		0.0013
sec-Butylbenzene	ND		0.0013
1,3-Dichlorobenzene	ND		0.0013
p-Isopropyltoluene	ND		0.0013
1,4-Dichlorobenzene	ND		0.0013
1,2-Dichlorobenzene	ND		0.0013
n-Butylbenzene	ND		0.0013
1,2-Dibromo-3-chloropropane	ND		0.0067
1,2,4-Trichlorobenzene	ND		0.0013
Hexachlorobutadiene	ND		0.0067
Naphthalene	ND		0.0013
1,2,3-Trichlorobenzene	ND		0.0013

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	90	60-137
Toluene, d8	93	71-129
4-Bromofluorobenzene	85	60-149

Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-13-03  
 Date Analyzed: 12-13-03

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 12-045-27  
 Client ID: GP-7 (10-12')

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0014
Chloromethane	ND		0.0014
Vinyl Chloride	ND		0.0014
Bromomethane	ND		0.0014
Chloroethane	ND		0.0014
Trichlorofluoromethane	ND		0.0014
1,1-Dichloroethene	ND		0.0014
Acetone	0.076		0.0070
Iodomethane	ND		0.0070
Carbon Disulfide	ND		0.0014
Methylene Chloride	ND		0.0070
(trans) 1,2-Dichloroethene	ND		0.0014
Methyl t-Butyl Ether	ND		0.0014
1,1-Dichloroethane	ND		0.0014
Vinyl Acetate	ND		0.0070
2,2-Dichloropropane	ND		0.0014
(cis) 1,2-Dichloroethene	ND		0.0014
2-Butanone	0.015		0.0070
Bromochloromethane	ND		0.0014
Chloroform	ND		0.0014
1,1,1-Trichloroethane	ND		0.0014
Carbon Tetrachloride	ND		0.0014
1,1-Dichloropropene	ND		0.0014
Benzene	ND		0.0014
1,2-Dichloroethane	ND		0.0014
Trichloroethene	ND		0.0014
1,2-Dichloropropane	ND		0.0014
Dibromomethane	ND		0.0014
Bromodichloromethane	ND		0.0014
2-Chloroethyl Vinyl Ether	ND		0.0070
(cis) 1,3-Dichloropropene	ND		0.0014
Methyl Isobutyl Ketone	ND		0.0070
Toluene	ND		0.0014
(trans) 1,3-Dichloropropene	ND		0.0014

Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 2 of 2

Lab ID: 12-045-27  
 Client ID: GP-7 (10-12')

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0014
Tetrachloroethene	ND		0.0014
1,3-Dichloropropane	ND		0.0014
2-Hexanone	ND		0.0070
Dibromochloromethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014
Chlorobenzene	ND		0.0014
1,1,1,2-Tetrachloroethane	ND		0.0014
Ethylbenzene	ND		0.0014
m,p-Xylene	ND		0.0028
o-Xylene	ND		0.0014
Styrene	ND		0.0014
Bromoform	ND		0.0014
Isopropylbenzene	ND		0.0014
Bromobenzene	ND		0.0014
1,1,2,2-Tetrachloroethane	ND		0.0014
1,2,3-Trichloropropane	ND		0.0014
n-Propylbenzene	ND		0.0014
2-Chlorotoluene	ND		0.0014
4-Chlorotoluene	ND		0.0014
1,3,5-Trimethylbenzene	ND		0.0014
tert-Butylbenzene	ND		0.0014
1,2,4-Trimethylbenzene	ND		0.0014
sec-Butylbenzene	ND		0.0014
1,3-Dichlorobenzene	ND		0.0014
p-Isopropyltoluene	ND		0.0014
1,4-Dichlorobenzene	ND		0.0014
1,2-Dichlorobenzene	ND		0.0014
n-Butylbenzene	ND		0.0014
1,2-Dibromo-3-chloropropane	ND		0.0070
1,2,4-Trichlorobenzene	ND		0.0014
Hexachlorobutadiene	ND		0.0070
Naphthalene	ND		0.0014
1,2,3-Trichlorobenzene	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	85	60-137
Toluene, d8	88	71-129
4-Bromofluorobenzene	83	60-149

Date of Report: December 16, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted: 12-13-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: 12-045-29  
 Client ID: GP-44 (2-4')

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0011
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0011
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
Acetone	ND		0.0054
Iodomethane	ND		0.0054
Carbon Disulfide	ND		0.0011
Methylene Chloride	ND		0.0054
(trans) 1,2-Dichloroethene	ND		0.0011
Methyl t-Butyl Ether	ND		0.0011
1,1-Dichloroethane	ND		0.0011
Vinyl Acetate	ND		0.0054
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
2-Butanone	ND		0.0054
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
Benzene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0054
(cis) 1,3-Dichloropropene	ND		0.0011
Methyl Isobutyl Ketone	ND		0.0054
Toluene	0.0011		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
 Page 2 of 2

Lab ID: 12-045-29  
 Client ID: GP-44 (2-4')

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
2-Hexanone	ND		0.0054
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Ethylbenzene	ND		0.0011
m,p-Xylene	ND		0.0022
o-Xylene	ND		0.0011
Styrene	ND		0.0011
Bromoform	ND		0.0011
Isopropylbenzene	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
n-Propylbenzene	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3,5-Trimethylbenzene	ND		0.0011
tert-Butylbenzene	ND		0.0011
1,2,4-Trimethylbenzene	ND		0.0011
sec-Butylbenzene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
p-Isopropyltoluene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
n-Butylbenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0054
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0054
Naphthalene	0.0013		0.0011
1,2,3-Trichlorobenzene	ND		0.0011

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	60-137
Toluene, d8	91	71-129
4-Bromofluorobenzene	81	60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B  
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Date Extracted: 12-12-03  
 Date Analyzed: 12-12-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: MB1212S2

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0010
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0010
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Acetone	ND		0.0050
Iodomethane	ND		0.0050
Carbon Disulfide	ND		0.0010
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
Methyl t-Butyl Ether	ND		0.0010
1,1-Dichloroethane	ND		0.0010
Vinyl Acetate	ND		0.0050
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
2-Butanone	ND		0.0050
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
Benzene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
Methyl Isobutyl Ketone	ND		0.0050
Toluene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B  
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Lab ID: MB1212S2

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
2-Hexanone	ND		0.0050
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Ethylbenzene	ND		0.0010
m,p-Xylene	ND		0.0020
o-Xylene	ND		0.0010
Styrene	ND		0.0010
Bromoform	ND		0.0010
Isopropylbenzene	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
n-Propylbenzene	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3,5-Trimethylbenzene	ND		0.0010
tert-Butylbenzene	ND		0.0010
1,2,4-Trimethylbenzene	ND		0.0010
sec-Butylbenzene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
p-Isopropyltoluene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
n-Butylbenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
Naphthalene	ND		0.0010
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	60-137
Toluene, d8	89	71-129
4-Bromofluorobenzene	83	60-149



Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B  
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Date Extracted: 12-13-03  
 Date Analyzed: 12-13-03  
 Matrix: Soil  
 Units: mg/kg (ppm)  
 Lab ID: MB1213S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0010
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0010
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Acetone	ND		0.0050
Iodomethane	ND		0.0050
Carbon Disulfide	ND		0.0010
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
Methyl t-Butyl Ether	ND		0.0010
1,1-Dichloroethane	ND		0.0010
Vinyl Acetate	ND		0.0050
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
2-Butanone	ND		0.0050
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
Benzene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
Methyl Isobutyl Ketone	ND		0.0050
Toluene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B**  
**METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Lab ID: MB1213S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
2-Hexanone	ND		0.0050
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Ethylbenzene	ND		0.0010
m,p-Xylene	ND		0.0020
o-Xylene	ND		0.0010
Styrene	ND		0.0010
Bromoform	ND		0.0010
Isopropylbenzene	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
n-Propylbenzene	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3,5-Trimethylbenzene	ND		0.0010
tert-Butylbenzene	ND		0.0010
1,2,4-Trimethylbenzene	ND		0.0010
sec-Butylbenzene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
p-Isopropyltoluene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
n-Butylbenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
Naphthalene	ND		0.0010
1,2,3-Trichlorobenzene	ND		0.0010
<b>Surrogate</b>	<b>Percent Recovery</b>		<b>Control Limits</b>
Dibromofluoromethane	83		60-137
Toluene, d8	87		71-129
4-Bromofluorobenzene	88		60-149

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B  
 MS/MSD QUALITY CONTROL**

Date Extracted: 12-12-03

Date Analyzed: 12-12-03

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 12-065-18

Compound	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	ND	0.0500	0.056	113	0.054	108	30-153	
Benzene	ND	0.0500	0.055	111	0.0553	99	58-140	
Trichloroethene	ND	0.0500	0.052	105	0.053	106	38-130	
Toluene	ND	0.0500	0.053	105	0.053	106	28-147	
Chlorobenzene	ND	0.0500	0.057	114	0.056	111	47-131	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	5	11	
Benzene	12	11	L
Trichloroethene	1	11	
Toluene	1	10	
Chlorobenzene	3	11	

Date of Report: December 29, 2003  
 Samples Submitted: December 3, 2003  
 Laboratory Reference: 0312-045  
 Project: 033-1000.000

**VOLATILES by EPA 8260B  
 MS/MSD QUALITY CONTROL**

Date Extracted: 12-13-03  
 Date Analyzed: 12-13-03

Matrix: Soil  
 Units: mg/kg (ppm)

Lab ID: 12-074-01

Compound	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	ND	0.0500	0.0520	104	0.0551	110	30-153	
Benzene	ND	0.0500	0.0505	101	0.0536	107	58-140	
Trichloroethene	ND	0.0500	0.0435	87	0.0494	99	38-130	
Toluene	ND	0.0500	0.0488	98	0.0505	101	28-147	
Chlorobenzene	ND	0.0500	0.0514	103	0.0508	102	47-131	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	6	11	
Benzene	6	11	
Trichloroethene	13	11	L
Toluene	3	10	
Chlorobenzene	1	11	

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**VOLATILES by EPA 8260B  
SPIKE BLANK QUALITY CONTROL**

Date Extracted: 12-12-03  
Date Analyzed: 12-12-03

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID: SB1212S2

<b>Compound</b>	<b>Spike Amount</b>	<b>Spike Recovery</b>	<b>Percent Recovery</b>	<b>Recovery Limits</b>	<b>Flags</b>
1,1-Dichloroethene	0.0500	0.0580	116	45-145	
Benzene	0.0500	0.0531	106	67-138	
Trichloroethene	0.0500	0.0521	104	49-136	
Toluene	0.0500	0.0522	104	72-121	
Chlorobenzene	0.0500	0.0568	114	66-137	

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**VOLATILES by EPA 8260B  
SPIKE BLANK QUALITY CONTROL**

Date Extracted: 12-13-03  
Date Analyzed: 12-13-03

Matrix: Soil  
Units: mg/kg (ppm)

Lab ID: SB1213S1

<b>Compound</b>	<b>Spike Amount</b>	<b>Spike Recovery</b>	<b>Percent Recovery</b>	<b>Recovery Limits</b>	<b>Flags</b>
1,1-Dichloroethene	0.0500	0.0534	107	45-145	
Benzene	0.0500	0.0519	104	67-138	
Trichloroethene	0.0500	0.0529	106	49-136	
Toluene	0.0500	0.0541	108	72-121	
Chlorobenzene	0.0500	0.0556	111	66-137	

Date of Report: December 29, 2003  
Samples Submitted: December 3, 2003  
Laboratory Reference: 0312-045  
Project: 033-1000.000

**% MOISTURE**

Date Analyzed: 12-11-03

Client ID	Lab ID	% Moisture
GP-1 (6-8)	12-045-02	30
GP-1 (10-12)	12-045-03	27
GP-2 (6-8)	12-045-05	12
GP-2 (10-12)	12-045-06	29
GP-3 (6-8)	12-045-12	5
GP-3 (10-12)	12-045-13	29
GP-4 (2-4)	12-045-14	7
GP-4 (6-8)	12-045-15	9
GP-4 (10-12)	12-045-16	29
GP-5 (6-8)	12-045-18	9
GP-5 (10-12)	12-045-19	30
GP-6 0-2.5	12-045-21	6
GP-8 (6-8)	12-045-24	31
GP-8 (10-12)	12-045-25	24
GP-7 (6-8)	12-045-26	25
GP-7 (10-12)	12-045-27	29
GP-44 (2-4)	12-045-29	7



#### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - G - Insufficient sample quantity for duplicate analysis.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - O - Hydrocarbons outside the defined gasoline range are present in the sample.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a silica gel cleanup procedure.
  - Y - Sample extract treated with an acid cleanup procedure.
  - Z -
- ND - Not Detected at PQL  
PQL - Practical Quantitation Limit  
RPD - Relative Percent Difference





# STL

**STL Seattle**  
5755 8<sup>th</sup> Street East  
Tacoma, WA 98424

Tel: 253 922 2310  
Fax: 253 922 5047  
[www.stl-inc.com](http://www.stl-inc.com)

## TRANSMITTAL MEMORANDUM

DATE: December 19, 2003

TO: David Baumeister  
OnSite Environmental, Inc.  
14648 N. E. 95th St.  
Redmond, WA 98052

PROJECT: 12-045

REPORT NUMBER: 118327

TOTAL NUMBER OF PAGES: 20

Enclosed are the test results for seven samples received at STL Seattle on December 12, 2003.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

A handwritten signature in black ink, appearing to read "Stan Palmquist".

Stan Palmquist  
Project Manager

---

STL Seattle is a part of Severn Trent Laboratories, Inc.

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# STL Seattle

## Sample Identification:

<u>Lab. No.</u>	<u>Client ID</u>	<u>Date/Time Sampled</u>	<u>Matrix</u>
118327-1	GP-1	12-02-03 *	Liquid
118327-2	GP-2	12-02-03 *	Liquid
118327-3	GP-3	12-02-03 *	Liquid
118327-4	GP-4	12-02-03 *	Liquid
118327-5	GP-5	12-02-03 *	Liquid
118327-6	GP-8	12-02-03 *	Liquid
118327-7	GP-7	12-02-03 *	Liquid

\* - Sampling time not specified for this sample

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	GP-1
Lab ID:	118327-01
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	92.4		80	120
Fluorobenzene	102		80	120
Toluene-D8	105		80	120
Ethylbenzene-d10	113		80	120
Bromofluorobenzene	110		80	120
Trifluorotoluene	103		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118327-01 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	GP-2
Lab ID:	118327-02
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	90.8		80	120
Fluorobenzene	101		80	120
Toluene-D8	106		80	120
Ethylbenzene-d10	110		80	120
Bromofluorobenzene	106		80	120
Trifluorotoluene	107		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118327-02 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	GP-3
Lab ID:	118327-03
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91.4		80	120
Fluorobenzene	101		80	120
Toluene-D8	105		80	120
Ethylbenzene-d10	111		80	120
Bromofluorobenzene	106		80	120
Trifluorotoluene	102		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118327-03 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5



# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	GP-4
Lab ID:	118327-04
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	92.5		80	120
Fluorobenzene	102		80	120
Toluene-D8	107		80	120
Ethylbenzene-d10	111		80	120
Bromofluorobenzene	109		80	120
Trifluorotoluene	106		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118327-04 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	GP-5
Lab ID:	118327-05
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91.3		80	120
Fluorobenzene	100		80	120
Toluene-D8	107		80	120
Ethylbenzene-d10	109		80	120
Bromofluorobenzene	107		80	120
Trifluorotoluene	102		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118327-05 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	GP-8
Lab ID:	118327-06
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91.5		80	120
Fluorobenzene	102		80	120
Toluene-D8	104		80	120
Ethylbenzene-d10	108		80	120
Bromofluorobenzene	107		80	120
Trifluorotoluene	101		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	1.69	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118327-06 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	0.554	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

J

# STL Seattle

Client Name	OnSite Environmental, Inc.
Client ID:	GP-7
Lab ID:	118327-07
Date Received:	12/12/2003
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	92.1		80	120
Fluorobenzene	101		80	120
Toluene-D8	105		80	120
Ethylbenzene-d10	112		80	120
Bromofluorobenzene	109		80	120
Trifluorotoluene	108		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	10.2	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for 118327-07 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5



# STL Seattle

Lab ID:	Method Blank - VOA595
Date Received:	-
Date Prepared:	12/15/2003
Date Analyzed:	12/15/2003
% Solids	-
Dilution Factor	1

## Volatile Organics by USEPA Method 5030/8260B

SMC / Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	90.8		80	120
Fluorobenzene	101		80	120
Toluene-D8	106		80	120
Ethylbenzene-d10	114		80	120
Bromofluorobenzene	110		80	120
Trifluorotoluene	110		80	120

Analyte	Result (ug/L)	PQL	MRL	Flags
Dichlorodifluoromethane	ND	1	0.5	
Chloromethane	ND	2	1	
Vinyl chloride	ND	1	0.5	
Bromomethane	ND	2.5	1.25	
Chloroethane	ND	1	0.5	
Trichlorofluoromethane	ND	1	0.5	
1,1-Dichloroethene	ND	1	0.5	
Methylene chloride	ND	2	1	
trans-1,2-Dichloroethene	ND	1	0.5	
1,1-Dichloroethane	ND	1	0.5	
2,2-Dichloropropane	ND	1	0.5	
cis-1,2-Dichloroethene	ND	1	0.5	
Bromochloromethane	ND	1	0.5	
Chloroform	ND	1	0.5	
1,1,1-Trichloroethane	ND	1	0.5	
Carbon Tetrachloride	ND	1	0.5	
1,1-Dichloropropene	ND	1	0.5	
Benzene	ND	1	0.5	
1,2-Dichloroethane	ND	1	0.5	
Trichloroethene	ND	1	0.5	
1,2-Dichloropropane	ND	1	0.5	
Dibromomethane	ND	1	0.5	
Bromodichloromethane	ND	1	0.5	
cis-1,3-Dichloropropene	ND	1	0.5	
Toluene	ND	1	0.5	
trans-1,3-Dichloropropene	ND	1	0.5	

# STL Seattle

Volatile Organics by USEPA Method 5030/8260B data for VOA595 continued...

Analyte	Result (ug/L)	PQL	MRL
1,1,2-Trichloroethane	ND	1	0.5
Tetrachloroethene	ND	1	0.5
1,3-Dichloropropane	ND	1	0.5
Dibromochloromethane	ND	1	0.5
1,2-Dibromoethane	ND	1	0.5
Chlorobenzene	ND	1	0.5
Ethylbenzene	ND	1	0.5
1,1,1,2-Tetrachloroethane	ND	1	0.5
m,p-Xylene	ND	2	1
o-Xylene	ND	1	0.5
Styrene	ND	1	0.5
Bromoform	ND	1	0.5
Isopropylbenzene	ND	1	0.5
Bromobenzene	ND	1	0.5
n-Propylbenzene	ND	1	0.5
1,1,2,2-Tetrachloroethane	ND	1	0.5
1,2,3-Trichloropropane	ND	1	0.5
2-Chlorotoluene	ND	1	0.5
1,3,5-Trimethylbenzene	ND	1	0.5
4-Chlorotoluene	ND	1	0.5
t-Butylbenzene	ND	1	0.5
1,2,4-Trimethylbenzene	ND	1	0.5
sec-Butylbenzene	ND	1	0.5
1,3-Dichlorobenzene	ND	1	0.5
4-Isopropyltoluene	ND	1	0.5
1,4-Dichlorobenzene	ND	1	0.5
n-Butylbenzene	ND	1	0.5
1,2-Dichlorobenzene	ND	1	0.5
1,2-Dibromo-3-chloropropane	ND	1	0.5
1,2,4-Trichlorobenzene	ND	1	0.5
Hexachlorobutadiene	ND	1	0.5
Naphthalene	ND	2	1
1,2,3-Trichlorobenzene	ND	1	0.5

# STL Seattle

## Blank Spike/Blank Spike Duplicate Report

Lab ID: VOA595  
Date Prepared: 12/15/2003  
Date Analyzed: 12/15/2003  
QC Batch ID: VOA595

### Volatile Organics by USEPA Method 5030/8260B

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	5	4.59	91.8	4.51	90.1	-1.9	
Benzene	0	5	4.87	97.5	4.73	94.5	-3.1	
Trichloroethene	0	5	4.86	97.3	5	100	2.7	
Toluene	0	5	4.8	96	4.74	94.9	-1.2	
Chlorobenzene	0	5	5	100	5.03	101	1	





# Chain of Custody

**OnSite Environmental Inc.**  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-9881 • Fax: (425) 885-4603

Company: Gelder  
 Project Number: 033-10001000  
 Project Name: Consolidated Freightway  
 Project Manager: Neil Gilham  
 Sampled by: J Kennedy

Turnaround Request (in working days)  
 Same Day  1 Day  
 2 Day  3 Day  
 Standard (7 working days)  
 (other) \_\_\_\_\_

## Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTFH-HCID	NWTFH-GX/PTX	NWTFH-DX	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total PCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	% Moisture	
1	GP-1 (2-4)	12-2-03	840	Soil	2		X	X	X													
2	GP-1 (6-8)	"	850	Soil	2		X	X	X													
3	GP-1 (10-12)	"	900	Soil	2		X	X	X													
4	GP-2 (2-4)	"	930	Soil	2		X	X	X													
5	GP-2 (6-8)	"	940	Soil	2		X	X	X													
6	GP-2 (10-12)	"	950	Soil	2		X	X	X													
7	GP-1	"	910	water	7		X	X	X													
8	GP-2	"	1030	water	7		X	X	X													
9	GP-3	"	1100	"	7		X	X	X													
10	GP-4	12-2-03	1130	"	7		X	X	X													

Comments/Special Instructions:

Signature	Company	Date	Time
<u>[Signature]</u>	Gelder	12-3-03	4:32
<u>[Signature]</u>	OnSite	12-3-03	4:32
Relinquished by			
Received by			
Relinquished by			
Received by			
Relinquished by			
Received by			

Reviewed by/Date \_\_\_\_\_  
 Chromatograms with final report

# Chain of Custody



Company: Goldier Associates  
 Project Number: 033-1000.000  
 Project Name: Consolidated Freight  
 Project Manager: Neil Gilman  
 Sampled by: J Kennedy

Turnaround Request  
(in working days)

(Check One)

- Same Day  1 Day  
 2 Day  3 Day  
 Standard (7 working days)  
 \_\_\_\_\_ (other)

Laboratory Number 2-U42

## Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-GX/PTX	NWTPH-DX	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	% Moisture	
11	GP-3 (2-4)	12-2-03	1605	Soil	2	X	X	X	X													
12	GP-3 (6-8)	"	1010	"	2	X	X	X	X													X HOLD
13	GP-3 (10-12)	"	1015	"	2	X	X	X	X													X
14	GP-4 (2-4)	"	1045	"	2	X	X	X	X													X
15	GP-4 (6-8)	"	1050	"	2	X	X	X	X													X
16	GP-4 (10-12)	"	1055	"	2	X	X	X	X													X
17	GP-5 (2-4)	"	1155	"	2	X	X	X	X													X
18	GP-5 (6-8)	"	1200	"	2	X	X	X	X													X
19	GP-5 (10-12)	12-2-03	1205	"	2	X	X	X	X													X
20	GP-5	"	1230	Water	76	X	X	X	X													X

Comments/Special Instructions:

Date

Time

Company

Signature

Relinquished by	<u>Neil Gilman</u>	Date	<u>12-3-03</u>	Time	<u>4:32</u>
Received by	<u>Walter</u>	Date	<u>12-3-03</u>	Time	<u>4:32</u>
Relinquished by		Date		Time	
Received by		Date		Time	
Relinquished by		Date		Time	
Received by		Date		Time	
Reviewed by/Date		Reviewed by/Date		Chromatograms with final report	<input type="checkbox"/>



**OnSite Environmental Inc.**  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • Fax: (425) 885-4603

# Chain of Custody

Turnaround Request (in working days) **12-045**  
 Laboratory Number: **12-045**

(Check One)

Same Day  1 Day

2 Day  3 Day

Standard (7 working days)

(other)

Company: Gelder

Project Number: 033-1000.000

Project Name: Consolidated Freight

Project Manager: Neil Gilman

Sampled by: J Kennedy

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-GV/PEX	NWTPH-DX	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	% Moisture	
21	GP-6 0-2.5	12-2-03	1310	Soil	2		X	X	X													X
22	<del>GP-6 6P-8</del>		1410	WATER	7		X	X	X													
23	GP-8 (2-4')		1345	soil	2		X	X	X													
24	GP-8 (6-8')		1350		2		X	X	X													
25	GP-8 (10-12')		1355		2		X	X	X													X
	<del>GP-7 (2-4')</del>		1430		2		X	X	X													X
26	GP-7 (6-8')		1435		2		X	X	X													X
27	GP-7 (10-12')		1440	soil	2		X	X	X													X
28	GP-7		1455	WATER	7		X	X	X													X
29	GP-44 (2-4')		1045	S	2		X	X	X													X

Requested Analysis	Date	Time	Company	Signature
	12-3-03	4:32	Gelder	<i>Neil Gilman</i>
	12-3-03	4:32	OnSite	<i>J Kennedy</i>

Comments/Special Instructions:

Reviewed by/Date

Chromatograms with final report

**Laboratory Analytical Reports  
2014**





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

August 20, 2014

Emerald Erickson-Mulanax  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1408-079

Dear Emerald:

Enclosed are the analytical results and associated quality control data for samples submitted on August 12, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister  
Project Manager

Enclosures

Date of Report: August 20, 2014  
Samples Submitted: August 12, 2014  
Laboratory Reference: 1408-079  
Project: 1071-007

### **Case Narrative**

Samples were collected on August 11, 2014 and received by the laboratory on August 12, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### PAHs EPA 8270D/SIM Analysis

Sample CB-IN-081114, OWS-1-INF-081114 and spike blank had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-IN-081114</b>					
Laboratory ID:	08-079-01					
Naphthalene	<b>0.077</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
2-Methylnaphthalene	<b>0.20</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
1-Methylnaphthalene	<b>0.13</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthylene	<b>0.030</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthene	<b>0.025</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Fluorene	<b>0.066</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Phenanthrene	<b>0.35</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Anthracene	<b>0.090</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Fluoranthene	<b>0.44</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Pyrene	<b>0.44</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]anthracene	<b>0.11</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Chrysene	<b>0.22</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[b]fluoranthene	<b>0.15</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo(j,k)fluoranthene	<b>0.046</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]pyrene	<b>0.075</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Indeno(1,2,3-c,d)pyrene	<b>0.053</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Dibenz[a,h]anthracene	<b>ND</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[g,h,i]perylene	<b>0.12</b>	0.021	EPA 8270D/SIM	8-15-14	8-20-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	41	43 - 116				Q
Pyrene-d10	42	33 - 124				
Terphenyl-d14	42	38 - 125				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>OWS-2-INF-081114</b>					
Laboratory ID:	08-079-02					
Naphthalene	<b>0.14</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
2-Methylnaphthalene	<b>0.32</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
1-Methylnaphthalene	<b>0.22</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthylene	<b>0.075</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthene	<b>0.12</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Fluorene	<b>0.22</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Phenanthrene	<b>1.0</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Anthracene	<b>0.26</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Fluoranthene	<b>1.1</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Pyrene	<b>1.3</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]anthracene	<b>0.29</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Chrysene	<b>0.56</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[b]fluoranthene	<b>0.45</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo(j,k)fluoranthene	<b>0.15</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]pyrene	<b>0.24</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Indeno(1,2,3-c,d)pyrene	<b>0.21</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Dibenz[a,h]anthracene	<b>0.063</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[g,h,i]perylene	<b>0.38</b>	0.029	EPA 8270D/SIM	8-15-14	8-20-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>49</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>55</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>56</i>	<i>38 - 125</i>				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>OWS-1-INF-081114</b>					
Laboratory ID:	08-079-03					
Naphthalene	<b>0.098</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
2-Methylnaphthalene	<b>0.29</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
1-Methylnaphthalene	<b>0.19</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthylene	<b>ND</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthene	<b>0.066</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Fluorene	<b>0.10</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Phenanthrene	<b>0.59</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Anthracene	<b>0.13</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Fluoranthene	<b>0.68</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Pyrene	<b>0.71</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]anthracene	<b>0.21</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Chrysene	<b>0.41</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[b]fluoranthene	<b>0.32</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo(j,k)fluoranthene	<b>0.091</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]pyrene	<b>0.18</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Indeno(1,2,3-c,d)pyrene	<b>0.15</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Dibenz[a,h]anthracene	<b>0.042</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[g,h,i]perylene	<b>0.23</b>	0.037	EPA 8270D/SIM	8-15-14	8-20-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>32</i>	<i>43 - 116</i>				<i>Q</i>
<i>Pyrene-d10</i>	<i>41</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>40</i>	<i>38 - 125</i>				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-5N-081114</b>					
Laboratory ID:	08-079-04					
Naphthalene	<b>0.16</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
2-Methylnaphthalene	<b>0.16</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
1-Methylnaphthalene	<b>0.10</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthylene	<b>0.064</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthene	<b>0.29</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Fluorene	<b>0.47</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Phenanthrene	<b>1.5</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Anthracene	<b>0.36</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Fluoranthene	<b>1.7</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Pyrene	<b>1.3</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]anthracene	<b>0.37</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Chrysene	<b>0.67</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[b]fluoranthene	<b>0.44</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo(j,k)fluoranthene	<b>0.13</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]pyrene	<b>0.21</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Indeno(1,2,3-c,d)pyrene	<b>0.15</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Dibenz[a,h]anthracene	<b>0.058</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[g,h,i]perylene	<b>0.23</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>61</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>66</i>	<i>38 - 125</i>				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-7N-081114</b>					
Laboratory ID:	08-079-05					
Naphthalene	<b>0.040</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
2-Methylnaphthalene	<b>0.033</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
1-Methylnaphthalene	<b>ND</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthylene	<b>0.030</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthene	<b>ND</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Fluorene	<b>0.048</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Phenanthrene	<b>0.32</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Anthracene	<b>0.082</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Fluoranthene	<b>0.38</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Pyrene	<b>0.42</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]anthracene	<b>0.12</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Chrysene	<b>0.40</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[b]fluoranthene	<b>0.18</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo(j,k)fluoranthene	<b>0.049</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]pyrene	<b>0.097</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Indeno(1,2,3-c,d)pyrene	<b>0.073</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Dibenz[a,h]anthracene	<b>0.027</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[g,h,i]perylene	<b>0.15</b>	0.026	EPA 8270D/SIM	8-15-14	8-20-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>60</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>66</i>	<i>38 - 125</i>				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-10N-081114</b>					
Laboratory ID:	08-079-06					
Naphthalene	<b>0.068</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
2-Methylnaphthalene	<b>0.062</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
1-Methylnaphthalene	<b>0.028</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthylene	<b>0.047</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthene	<b>0.027</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Fluorene	<b>0.045</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Phenanthrene	<b>0.34</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Anthracene	<b>0.088</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Fluoranthene	<b>0.51</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Pyrene	<b>0.53</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]anthracene	<b>0.15</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Chrysene	<b>0.38</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[b]fluoranthene	<b>0.29</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo(j,k)fluoranthene	<b>0.092</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]pyrene	<b>0.15</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Indeno(1,2,3-c,d)pyrene	<b>0.14</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Dibenz[a,h]anthracene	<b>0.044</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[g,h,i]perylene	<b>0.24</b>	0.025	EPA 8270D/SIM	8-15-14	8-20-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>52</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>67</i>	<i>38 - 125</i>				



Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**PAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-1S-081114</b>					
Laboratory ID:	08-079-07					
Naphthalene	<b>0.20</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
2-Methylnaphthalene	<b>0.19</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
1-Methylnaphthalene	<b>0.13</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthylene	<b>0.10</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Acenaphthene	<b>0.47</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Fluorene	<b>0.81</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Phenanthrene	<b>4.4</b>	0.17	EPA 8270D/SIM	8-15-14	8-20-14	
Anthracene	<b>0.95</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Fluoranthene	<b>4.7</b>	0.17	EPA 8270D/SIM	8-15-14	8-20-14	
Pyrene	<b>3.7</b>	0.17	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]anthracene	<b>1.0</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Chrysene	<b>1.4</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[b]fluoranthene	<b>1.0</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo(j,k)fluoranthene	<b>0.31</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[a]pyrene	<b>0.77</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Indeno(1,2,3-c,d)pyrene	<b>0.46</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Dibenz[a,h]anthracene	<b>0.12</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
Benzo[g,h,i]perylene	<b>0.58</b>	0.017	EPA 8270D/SIM	8-15-14	8-20-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>62</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>72</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>71</i>	<i>38 - 125</i>				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB0815S1					
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>112</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>98</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>94</i>	<i>38 - 125</i>				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0815S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0682	0.0650	0.0833	0.0833	82	78	45 - 109	5	29	
Acenaphthylene	0.0749	0.0707	0.0833	0.0833	90	85	54 - 118	6	18	
Acenaphthene	0.0704	0.0685	0.0833	0.0833	85	82	60 - 108	3	14	
Fluorene	0.0704	0.0715	0.0833	0.0833	85	86	61 - 113	2	13	
Phenanthrene	0.0650	0.0656	0.0833	0.0833	78	79	63 - 106	1	13	
Anthracene	0.102	0.103	0.0833	0.0833	122	124	55 - 135	1	13	
Fluoranthene	0.0727	0.0730	0.0833	0.0833	87	88	66 - 118	0	13	
Pyrene	0.0734	0.0725	0.0833	0.0833	88	87	69 - 112	1	12	
Benzo[a]anthracene	0.0767	0.0776	0.0833	0.0833	92	93	58 - 118	1	13	
Chrysene	0.0737	0.0719	0.0833	0.0833	88	86	64 - 114	2	11	
Benzo[b]fluoranthene	0.0733	0.0725	0.0833	0.0833	88	87	52 - 125	1	19	
Benzo(j,k)fluoranthene	0.0758	0.0753	0.0833	0.0833	91	90	50 - 126	1	22	
Benzo[a]pyrene	0.0863	0.0857	0.0833	0.0833	104	103	43 - 123	1	16	
Indeno(1,2,3-c,d)pyrene	0.0718	0.0696	0.0833	0.0833	86	84	55 - 118	3	16	
Dibenz[a,h]anthracene	0.0707	0.0696	0.0833	0.0833	85	84	57 - 120	2	15	
Benzo[g,h,i]perylene	0.0697	0.0689	0.0833	0.0833	84	83	58 - 113	1	18	
<i>Surrogate:</i>										
2-Fluorobiphenyl					119	116	43 - 116			Q
Pyrene-d10					89	90	33 - 124			
Terphenyl-d14					85	85	38 - 125			

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**PCBs**  
**EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-IN-081114</b>					
Laboratory ID:	08-079-01					
Aroclor 1016	ND	0.16	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	ND	0.16	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	ND	0.16	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	ND	0.16	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	ND	0.16	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	ND	0.16	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	ND	0.16	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	112	51-138				
<b>Client ID:</b>	<b>OWS-2-INF-081114</b>					
Laboratory ID:	08-079-02					
Aroclor 1016	ND	0.22	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	ND	0.22	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	ND	0.22	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	ND	0.22	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	ND	0.22	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	ND	0.22	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	ND	0.22	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	122	51-138				
<b>Client ID:</b>	<b>OWS-1-INF-081114</b>					
Laboratory ID:	08-079-03					
Aroclor 1016	ND	0.27	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	ND	0.27	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	ND	0.27	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	ND	0.27	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	ND	0.27	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	ND	0.27	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	ND	0.27	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	114	51-138				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-5N-081114</b>					
Laboratory ID:	08-079-04					
Aroclor 1016	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	ND	0.19	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	122	51-138				
<b>Client ID:</b>	<b>CB-7N-081114</b>					
Laboratory ID:	08-079-05					
Aroclor 1016	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	ND	0.19	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	108	51-138				
<b>Client ID:</b>	<b>CB-10N-081114</b>					
Laboratory ID:	08-079-06					
Aroclor 1016	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	ND	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	<b>0.23</b>	0.19	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	<b>0.47</b>	0.19	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	112	51-138				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**PCBs**  
**EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>CB-1S-081114</b>					
Laboratory ID:	08-079-07					
Aroclor 1016	<b>ND</b>	0.13	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	<b>ND</b>	0.13	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	<b>ND</b>	0.13	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	<b>ND</b>	0.13	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	<b>ND</b>	0.13	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	<b>ND</b>	0.13	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	<b>ND</b>	0.13	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>107</i>	<i>51-138</i>				

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0813S1					
Aroclor 1016	ND	0.050	EPA 8082A	8-13-14	8-13-14	
Aroclor 1221	ND	0.050	EPA 8082A	8-13-14	8-13-14	
Aroclor 1232	ND	0.050	EPA 8082A	8-13-14	8-13-14	
Aroclor 1242	ND	0.050	EPA 8082A	8-13-14	8-13-14	
Aroclor 1248	ND	0.050	EPA 8082A	8-13-14	8-13-14	
Aroclor 1254	ND	0.050	EPA 8082A	8-13-14	8-13-14	
Aroclor 1260	ND	0.050	EPA 8082A	8-13-14	8-13-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
DCB	108		51-138			

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	08-077-05										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.444	0.411	0.500	0.500	ND	89	82	49-136	8	14	
<i>Surrogate:</i>											
DCB						99	98	51-138			

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	08-079-01					
<b>Client ID:</b>	<b>CB-IN-081114</b>					
Arsenic	<b>ND</b>	16	6010C	8-20-14	8-20-14	
Chromium	<b>58</b>	0.80	6010C	8-20-14	8-20-14	
Copper	<b>150</b>	1.6	6010C	8-20-14	8-20-14	
Lead	<b>81</b>	8.0	6010C	8-20-14	8-20-14	
Zinc	<b>640</b>	4.0	6010C	8-20-14	8-20-14	

Lab ID:	08-079-02					
<b>Client ID:</b>	<b>OWS-2-INF-081114</b>					
Arsenic	<b>14</b>	11	6010C	8-20-14	8-20-14	
Chromium	<b>91</b>	1.1	6010C	8-20-14	8-20-14	
Copper	<b>290</b>	2.2	6010C	8-20-14	8-20-14	
Lead	<b>170</b>	11	6010C	8-20-14	8-20-14	
Zinc	<b>1200</b>	5.5	6010C	8-20-14	8-20-14	

Lab ID:	08-079-03					
<b>Client ID:</b>	<b>OWS-1-INF-081114</b>					
Arsenic	<b>ND</b>	14	6010C	8-20-14	8-20-14	
Chromium	<b>78</b>	1.4	6010C	8-20-14	8-20-14	
Copper	<b>250</b>	2.7	6010C	8-20-14	8-20-14	
Lead	<b>150</b>	14	6010C	8-20-14	8-20-14	
Zinc	<b>960</b>	6.9	6010C	8-20-14	8-20-14	



Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	08-079-04					
<b>Client ID:</b>	<b>CB-5N-081114</b>					
Arsenic	<b>ND</b>	19	6010C	8-20-14	8-20-14	
Chromium	<b>86</b>	0.96	6010C	8-20-14	8-20-14	
Copper	<b>260</b>	1.9	6010C	8-20-14	8-20-14	
Lead	<b>150</b>	9.6	6010C	8-20-14	8-20-14	
Zinc	<b>790</b>	4.8	6010C	8-20-14	8-20-14	

Lab ID:	08-079-05					
<b>Client ID:</b>	<b>CB-7N-081114</b>					
Arsenic	<b>ND</b>	19	6010C	8-20-14	8-20-14	
Chromium	<b>54</b>	0.97	6010C	8-20-14	8-20-14	
Copper	<b>130</b>	1.9	6010C	8-20-14	8-20-14	
Lead	<b>79</b>	9.7	6010C	8-20-14	8-20-14	
Zinc	<b>480</b>	4.9	6010C	8-20-14	8-20-14	

Lab ID:	08-079-06					
<b>Client ID:</b>	<b>CB-10N-081114</b>					
Arsenic	<b>ND</b>	19	6010C	8-20-14	8-20-14	
Chromium	<b>89</b>	0.95	6010C	8-20-14	8-20-14	
Copper	<b>210</b>	1.9	6010C	8-20-14	8-20-14	
Lead	<b>150</b>	9.5	6010C	8-20-14	8-20-14	
Zinc	<b>1100</b>	4.8	6010C	8-20-14	8-20-14	

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	08-079-07					
<b>Client ID:</b>	<b>CB-1S-081114</b>					
Arsenic	<b>ND</b>	13	6010C	8-20-14	8-20-14	
Chromium	<b>39</b>	0.63	6010C	8-20-14	8-20-14	
Copper	<b>63</b>	1.3	6010C	8-20-14	8-20-14	
Lead	<b>130</b>	6.3	6010C	8-20-14	8-20-14	
Zinc	<b>280</b>	3.1	6010C	8-20-14	8-20-14	

Date of Report: August 20, 2014  
Samples Submitted: August 12, 2014  
Laboratory Reference: 1408-079  
Project: 1071-007

**TOTAL METALS  
EPA 6010C  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 8-20-14  
Date Analyzed: 8-20-14  
  
Matrix: Soil  
Units: mg/kg (ppm)  
  
Lab ID: MB0820SM1

Analyte	Method	Result	PQL
Arsenic	6010C	<b>ND</b>	5.0
Chromium	6010C	<b>ND</b>	0.50
Copper	6010C	<b>ND</b>	1.0
Lead	6010C	<b>ND</b>	5.0
Zinc	6010C	<b>ND</b>	2.5

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C  
 DUPLICATE QUALITY CONTROL**

Date Extracted: 8-20-14

Date Analyzed: 8-20-14

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 08-085-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	9.75	8.95	9	5.0	
Chromium	32.9	27.9	17	0.50	
Copper	14.1	13.9	1	1.0	
Lead	7.50	6.35	17	5.0	
Zinc	41.1	40.4	2	2.5	

Date of Report: August 20, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-079  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C  
 MS/MSD QUALITY CONTROL**

Date Extracted: 8-20-14

Date Analyzed: 8-20-14

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 08-085-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>102</b>	92	<b>99.9</b>	90	2	
Chromium	100	<b>123</b>	90	<b>123</b>	90	0	
Copper	50.0	<b>64.4</b>	101	<b>63.4</b>	99	2	
Lead	250	<b>270</b>	105	<b>243</b>	94	10	
Zinc	100	<b>137</b>	96	<b>133</b>	92	2	

Date of Report: August 20, 2014  
Samples Submitted: August 12, 2014  
Laboratory Reference: 1408-079  
Project: 1071-007

**% MOISTURE**

Date Analyzed: 8-13-14

Client ID	Lab ID	% Moisture
CB-IN-081114	08-079-01	37
OWS-2-INF-081114	08-079-02	54
OWS-1-INF-081114	08-079-03	64
CB-5N-081114	08-079-04	48
CB-7N-081114	08-079-05	49
CB-10N-081114	08-079-06	47
CB-1S-081114	08-079-07	20



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference



**Onsite Environmental Inc.**

Analytical Laboratory Testing Services  
 14648 NE 95th Street • Redmond, WA 98052  
 Phone: (425) 883-3881 • www.onsite-env.com

**Chain of Custody**

Laboratory Number: **08-079**

Company:

**ERRALON**

Project Number:

**1071-007**

Project Name:

**S4 DRAYSON**

Project Manager:

**EMERALD ERICKSON**

Sampled by:

**DINGER K.**

**Terraround Request (In working days)**

(Check One)

- Same Day  1 Day
- 2 Days  3 Days
- Standard (7 Days) (TPH analysis 5 Days)
- (other) \_\_\_\_\_

**Lab ID Sample Identification**

**Date Sampled Time Sampled Matrix**

**Number of Containers**

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx	
Volatiles 8260C	
Halogenated Volatiles 8260C	
Semivolatiles 8270D/SIM (with low-level PAHs)	
PAHs 8270D/SIM (low-level)	
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total <del>Trace</del> Metals <b>As, Pb, Cr, Cu, Zn</b>	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	
% Moisture	

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Date	Time	Comments/Special Instructions
1	IN CB-7N-08114	8/11/14	0905	S	2	8/12/14	0926	COMMENTS: SAMPLES OF EMERALD DRAYSON FOR ANALYSIS. X requested 8/12/14. DB (STA)
2	OWS-2-INP-08114	8/11/14	1105	S	2	8/12/14	1200	
3	OWS-1-INP-08114	8/11/14	1350	S	2	8/12/14	1200	
4	CB-5N-08114	8/11/14	1410	S	2	8/12/14	1200	
5	CB-7N-08114	8/11/14	1455	S	2	8/12/14	1200	
6	CB-10N-08114	8/11/14	1550	S	2	8/12/14	1200	
7	CB-15-08114	8/11/14	1648	S	2	8/12/14	1200	
	DK							
	Signature	Company						
Relinquished	<i>[Signature]</i>	Errallon						
Received	<i>[Signature]</i>	Sphq						
Relinquished	<i>[Signature]</i>	CBE						
Received	<i>[Signature]</i>							
Relinquished	<i>[Signature]</i>							
Received	<i>[Signature]</i>							
Relinquished	<i>[Signature]</i>							
Reviewed/Date		Reviewed/Date						

Data Package: Standard  Level III  Level IV

Electronic Data Deliverables (EDDs)

Chromatograms with final report





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

August 18, 2014

Beth Padgett  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1408-083

Dear Beth:

Enclosed are the analytical results and associated quality control data for samples submitted on August 12, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures

Date of Report: August 18, 2014  
Samples Submitted: August 12, 2014  
Laboratory Reference: 1408-083  
Project: 1071-007

### **Case Narrative**

Samples were collected on August 12, 2014 and received by the laboratory on August 12, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**NWTPH-Gx**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>RW-2-081214</b>					
Laboratory ID:	08-083-01					
Gasoline	<b>800</b>	100	NWTPH-Gx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	78	71-112				
<b>Client ID:</b>	<b>MW-4-081214</b>					
Laboratory ID:	08-083-02					
Gasoline	<b>ND</b>	100	NWTPH-Gx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	80	71-112				
<b>Client ID:</b>	<b>MW-2-081214</b>					
Laboratory ID:	08-083-03					
Gasoline	<b>280</b>	100	NWTPH-Gx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	76	71-112				
<b>Client ID:</b>	<b>MW-3-081214</b>					
Laboratory ID:	08-083-04					
Gasoline	<b>ND</b>	100	NWTPH-Gx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	77	71-112				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0814W2					
Gasoline	<b>ND</b>	100	NWTPH-Gx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	77	71-112				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	08-083-04							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				77	77	71-112		

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>RW-2-081214</b>					
Laboratory ID:	08-083-01					
Diesel Range Organics	<b>3.7</b>	0.26	NWTPH-Dx	8-14-14	8-14-14	
Lube Oil Range Organics	<b>ND</b>	0.64	NWTPH-Dx	8-14-14	8-14-14	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				
<b>Client ID:</b>	<b>MW-4-081214</b>					
Laboratory ID:	08-083-02					
Diesel Range Organics	<b>ND</b>	0.26	NWTPH-Dx	8-14-14	8-14-14	
Lube Oil Range Organics	<b>ND</b>	0.41	NWTPH-Dx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				
<b>Client ID:</b>	<b>MW-2-081214</b>					
Laboratory ID:	08-083-03					
Diesel Range Organics	<b>2.7</b>	0.26	NWTPH-Dx	8-14-14	8-14-14	
Lube Oil Range Organics	<b>ND</b>	0.49	NWTPH-Dx	8-14-14	8-14-14	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	81	50-150				
<b>Client ID:</b>	<b>MW-3-081214</b>					
Laboratory ID:	08-083-04					
Diesel Range Organics	<b>0.51</b>	0.26	NWTPH-Dx	8-14-14	8-14-14	
Lube Oil Range Organics	<b>0.62</b>	0.41	NWTPH-Dx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0814W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	8-14-14	8-14-14	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	08-083-01							
	ORIG	DUP						
Diesel Range Organics	<b>3.68</b>	<b>3.38</b>	NA	NA	NA	NA	8	NA
Lube Oil Range	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	U1
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				88	84	50-150		

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
 Page 1 of 2

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>RW-2-081214</b>					
Laboratory ID:	08-083-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloromethane	ND	1.3	EPA 8260C	8-14-14	8-14-14	
Vinyl Chloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromomethane	ND	0.56	EPA 8260C	8-14-14	8-14-14	
Chloroethane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Acetone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Iodomethane	ND	2.9	EPA 8260C	8-14-14	8-14-14	
Carbon Disulfide	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methylene Chloride	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Vinyl Acetate	ND	1.0	EPA 8260C	8-14-14	8-14-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
(cis) 1,2-Dichloroethene	0.21	0.20	EPA 8260C	8-14-14	8-14-14	
2-Butanone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Bromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloroform	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Benzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Trichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Dibromomethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromodichloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Toluene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>RW-2-081214</b>					
<b>Laboratory ID:</b>	<b>08-083-01</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Tetrachloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Hexanone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Dibromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Ethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
m,p-Xylene	ND	0.40	EPA 8260C	8-14-14	8-14-14	
o-Xylene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Styrene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromoform	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Isopropylbenzene	13	0.20	EPA 8260C	8-14-14	8-14-14	
Bromobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Propylbenzene	19	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
tert-Butylbenzene	0.26	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
sec-Butylbenzene	7.6	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Butylbenzene	6.6	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Naphthalene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-120</i>				



Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
 Page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-4-081214</b>					
Laboratory ID:	08-083-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloromethane	ND	1.3	EPA 8260C	8-14-14	8-14-14	
Vinyl Chloride	0.30	0.20	EPA 8260C	8-14-14	8-14-14	
Bromomethane	ND	0.56	EPA 8260C	8-14-14	8-14-14	
Chloroethane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Acetone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Iodomethane	ND	2.9	EPA 8260C	8-14-14	8-14-14	
Carbon Disulfide	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methylene Chloride	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Vinyl Acetate	ND	1.0	EPA 8260C	8-14-14	8-14-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Butanone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Bromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloroform	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Benzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Trichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Dibromomethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromodichloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Toluene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-4-081214</b>					
<b>Laboratory ID:</b>	<b>08-083-02</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Tetrachloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Hexanone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Dibromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Ethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
m,p-Xylene	ND	0.40	EPA 8260C	8-14-14	8-14-14	
o-Xylene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Styrene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromoform	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Isopropylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Propylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
tert-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
sec-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Naphthalene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-120</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
 Page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-2-081214</b>					
Laboratory ID:	08-083-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloromethane	ND	1.3	EPA 8260C	8-14-14	8-14-14	
Vinyl Chloride	0.23	0.20	EPA 8260C	8-14-14	8-14-14	
Bromomethane	ND	0.56	EPA 8260C	8-14-14	8-14-14	
Chloroethane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Acetone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Iodomethane	ND	2.9	EPA 8260C	8-14-14	8-14-14	
Carbon Disulfide	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methylene Chloride	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Vinyl Acetate	ND	1.0	EPA 8260C	8-14-14	8-14-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Butanone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Bromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloroform	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Benzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Trichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Dibromomethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromodichloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Toluene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-2-081214</b>					
<b>Laboratory ID:</b>	<b>08-083-03</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Tetrachloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Hexanone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Dibromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Ethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
m,p-Xylene	ND	0.40	EPA 8260C	8-14-14	8-14-14	
o-Xylene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Styrene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromoform	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Isopropylbenzene	0.42	0.20	EPA 8260C	8-14-14	8-14-14	
Bromobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Propylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
tert-Butylbenzene	0.30	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
sec-Butylbenzene	0.28	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Naphthalene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>104</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-120</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**

Page 1 of 2

Matrix: Water

Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>MW-3-081214</b>					
Laboratory ID:	08-083-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloromethane	ND	1.3	EPA 8260C	8-14-14	8-14-14	
Vinyl Chloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromomethane	ND	0.56	EPA 8260C	8-14-14	8-14-14	
Chloroethane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Acetone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Iodomethane	ND	2.9	EPA 8260C	8-14-14	8-14-14	
Carbon Disulfide	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methylene Chloride	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Vinyl Acetate	ND	1.0	EPA 8260C	8-14-14	8-14-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Butanone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Bromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloroform	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Benzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Trichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Dibromomethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromodichloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Toluene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-3-081214</b>					
<b>Laboratory ID:</b>	<b>08-083-04</b>					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Tetrachloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Hexanone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Dibromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Ethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
m,p-Xylene	ND	0.40	EPA 8260C	8-14-14	8-14-14	
o-Xylene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Styrene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromoform	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Isopropylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Propylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
tert-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
sec-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Naphthalene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-120</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0814W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloromethane	ND	1.3	EPA 8260C	8-14-14	8-14-14	
Vinyl Chloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromomethane	ND	0.56	EPA 8260C	8-14-14	8-14-14	
Chloroethane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Acetone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Iodomethane	ND	2.9	EPA 8260C	8-14-14	8-14-14	
Carbon Disulfide	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methylene Chloride	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Vinyl Acetate	ND	1.0	EPA 8260C	8-14-14	8-14-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Butanone	ND	5.0	EPA 8260C	8-14-14	8-14-14	
Bromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chloroform	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Benzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Trichloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Dibromomethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromodichloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Toluene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-14-14	8-14-14	

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C**  
**METHOD BLANK QUALITY CONTROL**  
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:		MB0814W1				
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Tetrachloroethene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Hexanone	ND	2.0	EPA 8260C	8-14-14	8-14-14	
Dibromochloromethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Chlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Ethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
m,p-Xylene	ND	0.40	EPA 8260C	8-14-14	8-14-14	
o-Xylene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Styrene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromoform	ND	1.0	EPA 8260C	8-14-14	8-14-14	
Isopropylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Bromobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Propylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
tert-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
sec-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
p-Isopropyltoluene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
n-Butylbenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
Naphthalene	ND	1.0	EPA 8260C	8-14-14	8-14-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>105</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-120</i>				



Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**VOLATILES EPA 8260C  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0814W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.71	9.49	10.0	10.0	97	95	63-142	2	17	
Benzene	10.0	9.50	10.0	10.0	100	95	78-125	5	15	
Trichloroethene	8.47	8.31	10.0	10.0	85	83	75-125	2	15	
Toluene	9.90	9.70	10.0	10.0	99	97	80-125	2	15	
Chlorobenzene	10.0	9.79	10.0	10.0	100	98	80-140	2	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					114	106	62-122			
<i>Toluene-d8</i>					104	105	70-120			
<i>4-Bromofluorobenzene</i>					98	97	71-120			

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**PAHs EPA 8270D/SIM**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>RW-2-081214</b>					
Laboratory ID:	08-083-01					
Naphthalene	<b>1.3</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
2-Methylnaphthalene	<b>38</b>	1.9	EPA 8270D/SIM	8-14-14	8-15-14	
1-Methylnaphthalene	<b>39</b>	1.9	EPA 8270D/SIM	8-14-14	8-15-14	
Acenaphthylene	<b>0.17</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Acenaphthene	<b>1.2</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Fluorene	<b>3.9</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Phenanthrene	<b>1.5</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Anthracene	<b>0.14</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Fluoranthene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Pyrene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[a]anthracene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Chrysene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[b]fluoranthene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[a]pyrene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Dibenz[a,h]anthracene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[g,h,i]perylene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>62</i>	<i>40 - 107</i>				
<i>Pyrene-d10</i>	<i>90</i>	<i>41 - 106</i>				
<i>Terphenyl-d14</i>	<i>87</i>	<i>44 - 124</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**PAHs EPA 8270D/SIM**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-2-081214</b>					
Laboratory ID:	08-083-03					
Naphthalene	<b>0.17</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
2-Methylnaphthalene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
1-Methylnaphthalene	<b>0.60</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Acenaphthylene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Acenaphthene	<b>0.33</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Fluorene	<b>0.18</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Phenanthrene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Anthracene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Fluoranthene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Pyrene	<b>ND</b>	0.094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[a]anthracene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Chrysene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[b]fluoranthene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo(j,k)fluoranthene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[a]pyrene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Dibenz[a,h]anthracene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[g,h,i]perylene	<b>ND</b>	0.0094	EPA 8270D/SIM	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	45	40 - 107				
Pyrene-d10	52	41 - 106				
Terphenyl-d14	69	44 - 124				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB0814W1					
Naphthalene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
2-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
1-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Acenaphthylene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Acenaphthene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Fluorene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Phenanthrene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Anthracene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Fluoranthene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Pyrene	ND	0.10	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[a]anthracene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
Chrysene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[b]fluoranthene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[a]pyrene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270D/SIM	8-14-14	8-14-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>74</i>	<i>40 - 107</i>				
<i>Pyrene-d10</i>	<i>82</i>	<i>41 - 106</i>				
<i>Terphenyl-d14</i>	<i>100</i>	<i>44 - 124</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 12, 2014  
 Laboratory Reference: 1408-083  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0814W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.376	0.392	0.500	0.500	75	78	31 - 110	4	46	
Acenaphthylene	0.391	0.421	0.500	0.500	78	84	40 - 118	7	43	
Acenaphthene	0.390	0.417	0.500	0.500	78	83	38 - 112	7	40	
Fluorene	0.438	0.451	0.500	0.500	88	90	45 - 114	3	41	
Phenanthrene	0.403	0.418	0.500	0.500	81	84	47 - 112	4	36	
Anthracene	0.570	0.605	0.500	0.500	114	121	46 - 135	6	37	
Fluoranthene	0.502	0.533	0.500	0.500	100	107	51 - 127	6	35	
Pyrene	0.512	0.543	0.500	0.500	102	109	50 - 125	6	37	
Benzo[a]anthracene	0.504	0.525	0.500	0.500	101	105	46 - 123	4	34	
Chrysene	0.526	0.560	0.500	0.500	105	112	49 - 120	6	34	
Benzo[b]fluoranthene	0.480	0.496	0.500	0.500	96	99	46 - 126	3	37	
Benzo(j,k)fluoranthene	0.411	0.435	0.500	0.500	82	87	43 - 125	6	39	
Benzo[a]pyrene	0.439	0.461	0.500	0.500	88	92	44 - 129	5	37	
Indeno(1,2,3-c,d)pyrene	0.431	0.443	0.500	0.500	86	89	40 - 124	3	42	
Dibenz[a,h]anthracene	0.422	0.439	0.500	0.500	84	88	35 - 122	4	44	
Benzo(g,h,i)perylene	0.486	0.492	0.500	0.500	97	98	37 - 122	1	45	
<i>Surrogate:</i>										
2-Fluorobiphenyl					76	79	40 - 107			
Pyrene-d10					88	93	41 - 106			
Terphenyl-d14					104	106	44 - 124			



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference



# OnSite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

# 08-083

Turnaround Request  
(in working days)  
(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days) **SS**

Monday  
(other)

Laboratory Number:

Company:

*Farella*

Project Number:

*1071-007*

Project Name:

*6050 Marginal Way*

Project Manager:

*Beth Padgett*

Sampled by:

*Ryan Ostrow, Jared Kern*

Lab ID Sample Identification

*1 RW-2-081214*

*2 MW-4-081214*

*3 MW-2-081214*

*4 MW-3-081214*

Date Sampled Time Sampled Matrix

*8/12/14 1042 W*

*1139*

*1228*

*1345*

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Gx

NWTPH-Dx

Volatiles 8260C

Halogenated Volatiles 8260C

Semivolatiles 8270D/SIM  
(with low-level PAHs)

PAHs 8270D/SIM (low-level)

PCBs 8082A

Organochlorine Pesticides 8081B

Organophosphorus Pesticides 8270D/SIM

Chlorinated Acid Herbicides 8151A

Total RCRA Metals

Total MTCA Metals

TCLP Metals

HEM (oil and grease) 1664A

% Moisture

Signature

*Ryan Ostrow*

*Beth Padgett*

Company

*Farella*

*OSE*

Date

*8/12/14*

*8.12.14*

Time

*1513*

*15:15*

Comments/Special Instructions

*RE*

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Chromatograms with final report



# Onsite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

Laboratory Number: 08-102

Turnaround Request  
(In working days)  
(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days) **DB**

(other)

Company: FARALLON  
Project Number: 1071-007  
Project Name: 6050 MARGINAL WAY  
Project Manager: BETH PRADGITT  
Sampled by: DINER VAYHAN

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers																		
1	F1-2.4-081314	8/13/14	0923	S	5	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
2	F1-CW-081314		0935	W	7			X	X	X													
3	F8-5.0-081314		1025	S	5			X	X	X													X
4	F8-CW-081314		1035	W	7			X	X	X													
5	F2-6.0-081314		1055	S	5																		
6	F2-CW-081314		1100	W	7			X	X	X													
7	F3-5.2-081314		1125	S	5																		
8	F3-CW-081314		1138	W	7			X	X	X													
9	F4-6.0-081314		1200	S	5																		
10	F4-CW-081314		1205	W	7			X	X	X													

Signature	Company	Date	Time	Comments/Special Instructions
	FARALLON	8/13/14	1600	HOLD SOIL SAMPLES WILL CALL FOR ANALYSIS ANALYZE F8-5.0-081314 F5-6.7-081314

Reviewed/Date: \_\_\_\_\_

Reviewed/Date: \_\_\_\_\_

Chromatograms with final report

Data Package: Standard  Level III  Level IV

Electronic Data Deliverables (EDDs)





# OnSite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

Turnaround Request (in working days)  
(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days) (TPH analysis 5 Days)  DO

(other) \_\_\_\_\_

Laboratory Number: **08-102**

Company: **ERRAVON**  
Project Number: **1071-007**  
Project Name: **6050 MARSHALL WAY**  
Project Manager: **BETH PADGETT**  
Sampled by: **DIVERA KAYHAN**

Lab ID Sample Identification Date Sampled Time Sampled Matrix

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
11	F5-6.7-081314	8/13/14	1243	S
12	F5-6W-081314		1250	W
13	F6-5.3-081314		1310	S
14	F6-6W-081314		1317	W
15	F7-5.0-081314		1335	S
16	F7-6W-081314		1350	W

Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
5			X	X	X												
5			X	X	X												
5			X	X	X												
7			X	X	X												
5			X	X	X												
9			X	X	X												

Signature	Company	Date	Time	Comments/Special Instructions
	ERRAVON	8/13/14	1600	
	ERRAVON	8/13/14	1600	

Relinquished  
Received  
Relinquished  
Received  
Relinquished  
Received  
Reviewed/Date

Reviewed/Date

Chromatograms with final report



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

September 18, 2014

Beth Padgett  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1408-102B

Dear Beth:

Enclosed are the analytical results and associated quality control data for samples submitted on August 13, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right from the end of the signature.

David Baumeister  
Project Manager

Enclosures

Date of Report: September 18, 2014  
Samples Submitted: August 13, 2014  
Laboratory Reference: 1408-102B  
Project: 1071-007

### **Case Narrative**

Samples were collected on August 13, 2014 and received by the laboratory on August 13, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: September 18, 2014  
 Samples Submitted: August 13, 2014  
 Laboratory Reference: 1408-102B  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>F8-5.0-081314</b>					
Laboratory ID:	08-102-03					
Aroclor 1016	ND	0.064	EPA 8082A	9-18-14	9-18-14	
Aroclor 1221	ND	0.064	EPA 8082A	9-18-14	9-18-14	
Aroclor 1232	ND	0.064	EPA 8082A	9-18-14	9-18-14	
Aroclor 1242	ND	0.064	EPA 8082A	9-18-14	9-18-14	
Aroclor 1248	ND	0.064	EPA 8082A	9-18-14	9-18-14	
Aroclor 1254	ND	0.064	EPA 8082A	9-18-14	9-18-14	
Aroclor 1260	ND	0.064	EPA 8082A	9-18-14	9-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	92	51-138				
<b>Client ID:</b>	<b>F5-6.7-081314</b>					
Laboratory ID:	08-102-11					
Aroclor 1016	ND	0.069	EPA 8082A	9-18-14	9-18-14	
Aroclor 1221	ND	0.069	EPA 8082A	9-18-14	9-18-14	
Aroclor 1232	ND	0.069	EPA 8082A	9-18-14	9-18-14	
Aroclor 1242	ND	0.069	EPA 8082A	9-18-14	9-18-14	
Aroclor 1248	ND	0.069	EPA 8082A	9-18-14	9-18-14	
Aroclor 1254	ND	0.069	EPA 8082A	9-18-14	9-18-14	
Aroclor 1260	ND	0.069	EPA 8082A	9-18-14	9-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	86	51-138				

Date of Report: September 18, 2014  
 Samples Submitted: August 13, 2014  
 Laboratory Reference: 1408-102B  
 Project: 1071-007

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0918S1					
Aroclor 1016	<b>ND</b>	0.050	EPA 8082A	9-18-14	9-18-14	
Aroclor 1221	<b>ND</b>	0.050	EPA 8082A	9-18-14	9-18-14	
Aroclor 1232	<b>ND</b>	0.050	EPA 8082A	9-18-14	9-18-14	
Aroclor 1242	<b>ND</b>	0.050	EPA 8082A	9-18-14	9-18-14	
Aroclor 1248	<b>ND</b>	0.050	EPA 8082A	9-18-14	9-18-14	
Aroclor 1254	<b>ND</b>	0.050	EPA 8082A	9-18-14	9-18-14	
Aroclor 1260	<b>ND</b>	0.050	EPA 8082A	9-18-14	9-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
<i>DCB</i>	109		51-138			

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>											
Laboratory ID:	SB0918S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	<b>0.529</b>	<b>0.461</b>	0.500	0.500	N/A	<b>106</b>	<b>92</b>	66-120	14	14	
<i>Surrogate:</i>											
<i>DCB</i>						116	101	51-138			



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference









14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

August 18, 2014

Beth Padgett  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1408-126

Dear Beth:

Enclosed are the analytical results and associated quality control data for samples submitted on August 15, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right from the end of the signature.

David Baumeister  
Project Manager

Enclosures

Date of Report: August 18, 2014  
Samples Submitted: August 15, 2014  
Laboratory Reference: 1408-126  
Project: 1071-007

### **Case Narrative**

Samples were collected on August 15, 2014 and received by the laboratory on August 15, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>Lift Station-081514</b>					
Laboratory ID:	08-126-01					
Naphthalene	<b>ND</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
2-Methylnaphthalene	<b>2.1</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
1-Methylnaphthalene	<b>1.1</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthylene	<b>ND</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthene	<b>0.39</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Fluorene	<b>0.65</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Phenanthrene	<b>1.2</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Anthracene	<b>0.87</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Fluoranthene	<b>0.90</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Pyrene	<b>0.93</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]anthracene	<b>0.46</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Chrysene	<b>0.71</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[b]fluoranthene	<b>0.56</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo(j,k)fluoranthene	<b>0.25</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]pyrene	<b>0.42</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Indeno(1,2,3-c,d)pyrene	<b>0.28</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Dibenz[a,h]anthracene	<b>ND</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[g,h,i]perylene	<b>0.53</b>	0.22	EPA 8270D/SIM	8-15-14	8-15-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>85</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>55</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>63</i>	<i>38 - 125</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-2-081514</b>					
Laboratory ID:	08-126-02					
Naphthalene	<b>0.046</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
2-Methylnaphthalene	<b>0.025</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
1-Methylnaphthalene	<b>ND</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthylene	<b>0.029</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthene	<b>ND</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Fluorene	<b>0.033</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Phenanthrene	<b>0.22</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Anthracene	<b>0.065</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Fluoranthene	<b>0.36</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Pyrene	<b>0.34</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]anthracene	<b>0.23</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Chrysene	<b>0.35</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[b]fluoranthene	<b>0.29</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo(j,k)fluoranthene	<b>0.13</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]pyrene	<b>0.21</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Indeno(1,2,3-c,d)pyrene	<b>0.12</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Dibenz[a,h]anthracene	<b>0.058</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[g,h,i]perylene	<b>0.25</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>66</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>76</i>	<i>38 - 125</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-1-081514</b>					
Laboratory ID:	08-126-03					
Naphthalene	<b>0.040</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
2-Methylnaphthalene	<b>0.031</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
1-Methylnaphthalene	<b>ND</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthylene	<b>ND</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthene	<b>ND</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Fluorene	<b>0.032</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Phenanthrene	<b>0.22</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Anthracene	<b>0.036</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Fluoranthene	<b>0.23</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Pyrene	<b>0.23</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]anthracene	<b>0.11</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Chrysene	<b>0.21</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[b]fluoranthene	<b>0.16</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo(j,k)fluoranthene	<b>0.070</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]pyrene	<b>0.13</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Indeno(1,2,3-c,d)pyrene	<b>0.072</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Dibenz[a,h]anthracene	<b>0.032</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[g,h,i]perylene	<b>0.17</b>	0.022	EPA 8270D/SIM	8-15-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>65</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>72</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>76</i>	<i>38 - 125</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-3-081514</b>					
Laboratory ID:	08-126-04					
Naphthalene	<b>0.033</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
2-Methylnaphthalene	<b>0.028</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
1-Methylnaphthalene	<b>ND</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthylene	<b>0.028</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthene	<b>ND</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Fluorene	<b>0.037</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Phenanthrene	<b>0.19</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Anthracene	<b>0.066</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Fluoranthene	<b>0.31</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Pyrene	<b>0.40</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]anthracene	<b>0.20</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Chrysene	<b>0.40</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[b]fluoranthene	<b>0.19</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo(j,k)fluoranthene	<b>0.15</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]pyrene	<b>0.24</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Indeno(1,2,3-c,d)pyrene	<b>0.11</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Dibenz[a,h]anthracene	<b>0.067</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[g,h,i]perylene	<b>0.26</b>	0.017	EPA 8270D/SIM	8-15-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>65</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>67</i>	<i>38 - 125</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**PAHs EPA 8270D/SIM**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-4-081514</b>					
Laboratory ID:	08-126-05					
Naphthalene	<b>ND</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
2-Methylnaphthalene	<b>ND</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
1-Methylnaphthalene	<b>ND</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthylene	<b>0.48</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthene	<b>ND</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Fluorene	<b>ND</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Phenanthrene	<b>1.3</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Anthracene	<b>0.62</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Fluoranthene	<b>1.0</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Pyrene	<b>1.6</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]anthracene	<b>1.0</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Chrysene	<b>1.1</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[b]fluoranthene	<b>0.54</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo(j,k)fluoranthene	<b>0.45</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]pyrene	<b>0.77</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Indeno(1,2,3-c,d)pyrene	<b>ND</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Dibenz[a,h]anthracene	<b>ND</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[g,h,i]perylene	<b>0.44</b>	0.34	EPA 8270D/SIM	8-15-14	8-15-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>84</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>70</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>75</i>	<i>38 - 125</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

PAHs EPA 8270D/SIM

Matrix: Soil  
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>CB-5-081514</b>					
Laboratory ID:	08-126-06					
Naphthalene	<b>0.058</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
2-Methylnaphthalene	<b>0.032</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
1-Methylnaphthalene	<b>ND</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthylene	<b>0.044</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Acenaphthene	<b>ND</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Fluorene	<b>0.046</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Phenanthrene	<b>0.29</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Anthracene	<b>0.095</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Fluoranthene	<b>0.42</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Pyrene	<b>0.43</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]anthracene	<b>0.25</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Chrysene	<b>0.45</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[b]fluoranthene	<b>0.30</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo(j,k)fluoranthene	<b>0.17</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[a]pyrene	<b>0.26</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Indeno(1,2,3-c,d)pyrene	<b>0.16</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Dibenz[a,h]anthracene	<b>0.081</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
Benzo[g,h,i]perylene	<b>0.28</b>	0.019	EPA 8270D/SIM	8-15-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>57</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>67</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>53</i>	<i>38 - 125</i>				



Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB0815S1					
Naphthalene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Fluorene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Anthracene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Pyrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Chrysene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	8-15-14	8-15-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>112</i>	<i>43 - 116</i>				
<i>Pyrene-d10</i>	<i>98</i>	<i>33 - 124</i>				
<i>Terphenyl-d14</i>	<i>94</i>	<i>38 - 125</i>				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 SB/SBD QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					SB	SBD	Limits	RPD	Limit	
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0815S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	<b>0.0682</b>	<b>0.0650</b>	0.0833	0.0833	82	78	45 - 109	5	29	
Acenaphthylene	<b>0.0749</b>	<b>0.0707</b>	0.0833	0.0833	90	85	54 - 118	6	18	
Acenaphthene	<b>0.0704</b>	<b>0.0685</b>	0.0833	0.0833	85	82	60 - 108	3	14	
Fluorene	<b>0.0704</b>	<b>0.0715</b>	0.0833	0.0833	85	86	61 - 113	2	13	
Phenanthrene	<b>0.0650</b>	<b>0.0656</b>	0.0833	0.0833	78	79	63 - 106	1	13	
Anthracene	<b>0.102</b>	<b>0.103</b>	0.0833	0.0833	122	124	55 - 135	1	13	
Fluoranthene	<b>0.0727</b>	<b>0.0730</b>	0.0833	0.0833	87	88	66 - 118	0	13	
Pyrene	<b>0.0734</b>	<b>0.0725</b>	0.0833	0.0833	88	87	69 - 112	1	12	
Benzo[a]anthracene	<b>0.0767</b>	<b>0.0776</b>	0.0833	0.0833	92	93	58 - 118	1	13	
Chrysene	<b>0.0737</b>	<b>0.0719</b>	0.0833	0.0833	88	86	64 - 114	2	11	
Benzo[b]fluoranthene	<b>0.0733</b>	<b>0.0725</b>	0.0833	0.0833	88	87	52 - 125	1	19	
Benzo(j,k)fluoranthene	<b>0.0758</b>	<b>0.0753</b>	0.0833	0.0833	91	90	50 - 126	1	22	
Benzo[a]pyrene	<b>0.0863</b>	<b>0.0857</b>	0.0833	0.0833	104	103	43 - 123	1	16	
Indeno(1,2,3-c,d)pyrene	<b>0.0718</b>	<b>0.0696</b>	0.0833	0.0833	86	84	55 - 118	3	16	
Dibenz[a,h]anthracene	<b>0.0707</b>	<b>0.0696</b>	0.0833	0.0833	85	84	57 - 120	2	15	
Benzo[g,h,i]perylene	<b>0.0697</b>	<b>0.0689</b>	0.0833	0.0833	84	83	58 - 113	1	18	
<i>Surrogate:</i>										
2-Fluorobiphenyl					119	116	43 - 116			Q
Pyrene-d10					89	90	33 - 124			
Terphenyl-d14					85	85	38 - 125			

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID: Lift Station-081514</b>						
Laboratory ID:	08-126-01					
Aroclor 1016	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1221	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1232	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1242	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1248	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1254	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1260	2.6	0.17	EPA 8082A	8-18-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	128	51-138				
<b>Client ID: CB-2-081514</b>						
Laboratory ID:	08-126-02					
Aroclor 1016	ND	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1221	ND	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1232	ND	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1242	ND	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1248	ND	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1254	ND	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1260	ND	0.13	EPA 8082A	8-18-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	122	51-138				
<b>Client ID: CB-1-081514</b>						
Laboratory ID:	08-126-03					
Aroclor 1016	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1221	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1232	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1242	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1248	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1254	ND	0.17	EPA 8082A	8-18-14	8-18-14	
Aroclor 1260	ND	0.17	EPA 8082A	8-18-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	115	51-138				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>CB-3-081514</b>					
Laboratory ID:	08-126-04					
Aroclor 1016	<b>ND</b>	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1221	<b>ND</b>	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1232	<b>ND</b>	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1242	<b>ND</b>	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1248	<b>ND</b>	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1254	<b>ND</b>	0.13	EPA 8082A	8-18-14	8-18-14	
Aroclor 1260	<b>ND</b>	0.13	EPA 8082A	8-18-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	122	51-138				
<b>Client ID:</b>	<b>CB-4-081514</b>					
Laboratory ID:	08-126-05					
Aroclor 1016	<b>ND</b>	0.25	EPA 8082A	8-18-14	8-18-14	
Aroclor 1221	<b>ND</b>	0.25	EPA 8082A	8-18-14	8-18-14	
Aroclor 1232	<b>ND</b>	0.25	EPA 8082A	8-18-14	8-18-14	
Aroclor 1242	<b>ND</b>	0.25	EPA 8082A	8-18-14	8-18-14	
Aroclor 1248	<b>ND</b>	0.25	EPA 8082A	8-18-14	8-18-14	
Aroclor 1254	<b>ND</b>	0.25	EPA 8082A	8-18-14	8-18-14	
Aroclor 1260	<b>ND</b>	0.25	EPA 8082A	8-18-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	112	51-138				
<b>Client ID:</b>	<b>CB-5-081514</b>					
Laboratory ID:	08-126-06					
Aroclor 1016	<b>ND</b>	0.14	EPA 8082A	8-18-14	8-18-14	
Aroclor 1221	<b>ND</b>	0.14	EPA 8082A	8-18-14	8-18-14	
Aroclor 1232	<b>ND</b>	0.14	EPA 8082A	8-18-14	8-18-14	
Aroclor 1242	<b>ND</b>	0.14	EPA 8082A	8-18-14	8-18-14	
Aroclor 1248	<b>ND</b>	0.14	EPA 8082A	8-18-14	8-18-14	
Aroclor 1254	<b>ND</b>	0.14	EPA 8082A	8-18-14	8-18-14	
Aroclor 1260	<b>ND</b>	0.14	EPA 8082A	8-18-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	126	51-138				

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0818S1					
Aroclor 1016	<b>ND</b>	0.050	EPA 8082A	8-18-14	8-18-14	
Aroclor 1221	<b>ND</b>	0.050	EPA 8082A	8-18-14	8-18-14	
Aroclor 1232	<b>ND</b>	0.050	EPA 8082A	8-18-14	8-18-14	
Aroclor 1242	<b>ND</b>	0.050	EPA 8082A	8-18-14	8-18-14	
Aroclor 1248	<b>ND</b>	0.050	EPA 8082A	8-18-14	8-18-14	
Aroclor 1254	<b>ND</b>	0.050	EPA 8082A	8-18-14	8-18-14	
Aroclor 1260	<b>ND</b>	0.050	EPA 8082A	8-18-14	8-18-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
<i>DCB</i>	105		51-138			

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>											
Laboratory ID:	SB0818S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	<b>0.461</b>	<b>0.434</b>	0.500	0.500	N/A	<b>92</b>	<b>87</b>	66-120	6	14	
<i>Surrogate:</i>											
<i>DCB</i>						110	105	51-138			

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	08-126-01					
<b>Client ID:</b>	<b>Lift Station-081514</b>					
Arsenic	<b>ND</b>	17	6010C	8-18-14	8-18-14	
Chromium	<b>75</b>	0.83	6010C	8-18-14	8-18-14	
Copper	<b>140</b>	1.7	6010C	8-18-14	8-18-14	
Lead	<b>170</b>	8.3	6010C	8-18-14	8-18-14	
Zinc	<b>1300</b>	4.2	6010C	8-18-14	8-18-14	

Lab ID:	08-126-02					
<b>Client ID:</b>	<b>CB-2-081514</b>					
Arsenic	<b>ND</b>	13	6010C	8-18-14	8-18-14	
Chromium	<b>49</b>	0.64	6010C	8-18-14	8-18-14	
Copper	<b>56</b>	1.3	6010C	8-18-14	8-18-14	
Lead	<b>65</b>	6.4	6010C	8-18-14	8-18-14	
Zinc	<b>710</b>	3.2	6010C	8-18-14	8-18-14	

Lab ID:	08-126-03					
<b>Client ID:</b>	<b>CB-1-081514</b>					
Arsenic	<b>ND</b>	17	6010C	8-18-14	8-18-14	
Chromium	<b>55</b>	0.83	6010C	8-18-14	8-18-14	
Copper	<b>75</b>	1.7	6010C	8-18-14	8-18-14	
Lead	<b>62</b>	8.3	6010C	8-18-14	8-18-14	
Zinc	<b>630</b>	4.2	6010C	8-18-14	8-18-14	

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>EPA Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Lab ID:	08-126-04					
<b>Client ID:</b>	<b>CB-3-081514</b>					
Arsenic	<b>ND</b>	13	6010C	8-18-14	8-18-14	
Chromium	<b>34</b>	0.65	6010C	8-18-14	8-18-14	
Copper	<b>65</b>	1.3	6010C	8-18-14	8-18-14	
Lead	<b>85</b>	6.5	6010C	8-18-14	8-18-14	
Zinc	<b>740</b>	3.3	6010C	8-18-14	8-18-14	

Lab ID:	08-126-05					
<b>Client ID:</b>	<b>CB-4-081514</b>					
Arsenic	<b>68</b>	25	6010C	8-18-14	8-18-14	
Chromium	<b>140</b>	1.3	6010C	8-18-14	8-18-14	
Copper	<b>1300</b>	2.5	6010C	8-18-14	8-18-14	
Lead	<b>370</b>	13	6010C	8-18-14	8-18-14	
Zinc	<b>1900</b>	6.3	6010C	8-18-14	8-18-14	

Lab ID:	08-126-06					
<b>Client ID:</b>	<b>CB-5-081514</b>					
Arsenic	<b>ND</b>	14	6010C	8-18-14	8-18-14	
Chromium	<b>48</b>	0.71	6010C	8-18-14	8-18-14	
Copper	<b>75</b>	1.4	6010C	8-18-14	8-18-14	
Lead	<b>110</b>	7.1	6010C	8-18-14	8-18-14	
Zinc	<b>1100</b>	3.5	6010C	8-18-14	8-18-14	

Date of Report: August 18, 2014  
Samples Submitted: August 15, 2014  
Laboratory Reference: 1408-126  
Project: 1071-007

**TOTAL METALS  
EPA 6010C  
METHOD BLANK QUALITY CONTROL**

Date Extracted: 8-18-14  
Date Analyzed: 8-18-14  
  
Matrix: Soil  
Units: mg/kg (ppm)  
  
Lab ID: MB0818SM1&MB0818SM2

Analyte	Method	Result	PQL
Arsenic	6010C	<b>ND</b>	10
Chromium	6010C	<b>ND</b>	0.50
Copper	6010C	<b>ND</b>	1.0
Lead	6010C	<b>ND</b>	5.0
Zinc	6010C	<b>ND</b>	2.5



Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C  
 DUPLICATE QUALITY CONTROL**

Date Extracted: 8-18-14

Date Analyzed: 8-18-14

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 08-126-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	<b>ND</b>	<b>ND</b>	NA	10	
Chromium	<b>38.1</b>	<b>44.3</b>	15	0.50	
Copper	<b>43.9</b>	<b>43.4</b>	1	1.0	
Lead	<b>51.1</b>	<b>50.4</b>	1	5.0	
Zinc	<b>557</b>	<b>562</b>	1	2.5	

Date of Report: August 18, 2014  
 Samples Submitted: August 15, 2014  
 Laboratory Reference: 1408-126  
 Project: 1071-007

**TOTAL METALS  
 EPA 6010C  
 MS/MSD QUALITY CONTROL**

Date Extracted: 8-18-14

Date Analyzed: 8-18-14

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 08-126-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	<b>93.5</b>	94	<b>93.3</b>	93	0	
Chromium	100	<b>134</b>	96	<b>135</b>	97	1	
Copper	50.0	<b>90.5</b>	93	<b>91.1</b>	94	1	
Lead	250	<b>307</b>	102	<b>301</b>	100	2	
Zinc	100	<b>669</b>	112	<b>656</b>	99	2	

Date of Report: August 18, 2014  
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Laboratory Reference: 1408-126  
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**% MOISTURE**

Date Analyzed: 8-15-14

Client ID	Lab ID	% Moisture
Lift Station-081514	08-126-01	40
CB-2-081514	08-126-02	22
CB-1-081514	08-126-03	40
CB-3-081514	08-126-04	23
CB-4-081514	08-126-05	61
CB-5-081514	08-126-06	29



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference

# Chain of Custody

Company: Farallon  
Project Number: 1071-007  
Project Name: 6050 Marginal Way  
Project Manager: Beth Padgett  
Sampled by: Dincer Kayhan Ryan Ostrom

**Turnaround Request (in working days)**  
(Check One)

Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days) (TPH analysis 5 Days)  
 \_\_\_\_\_ (other)

Laboratory Number: **08-126**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Analytical Parameters													% Moisture						
						NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total PCBs Metals *		Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A			
1	Lift Station - 081514	8/15/14	0842	S	2								X	X				X							X
2	CB-2-081514	↓	1302	↓	↓								X	X				X							X
3	CB-1-081514	↓	1313	↓	↓								X	X				X							X
4	CB-3-081514	↓	1325	↓	↓								X	X				X							X
5	CB-4-081514	↓	1335	↓	↓								X	X				X							X
6	CB-5-081514	↓	1355	↓	↓								X	X				X							X
RO																									

Signature	Company	Date	Time	Comments/Special Instructions
<u>Ryan Ostrom</u>	<u>Farallon</u>	<u>8/15/14</u>	<u>1450</u>	<u>*Analyze for Arsenic, lead, Chromium, Copper, Zinc by EPA Methods 6010C/7470A.</u>
<u>Alex Armandreout</u>	<u>OSE</u>	<u>8/15/14</u>	<u>1450</u>	
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date	Reviewed/Date	Chromatograms with final report <input type="checkbox"/>		



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

September 30, 2014

Scott Allan  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1409-205

Dear Scott:

Enclosed are the analytical results and associated quality control data for samples submitted on September 23, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister  
Project Manager

Enclosures

Date of Report: September 30, 2014  
Samples Submitted: September 23, 2014  
Laboratory Reference: 1409-205  
Project: 1071-007

### **Case Narrative**

Samples were collected on September 22, 2014 and received by the laboratory on September 23, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-205  
 Project: 1071-007

**NWTPH-Gx**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>F9-9.0-092214</b>					
Laboratory ID:	09-205-01					
Gasoline	<b>ND</b>	4.7	NWTPH-Gx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	94	71-121				
<b>Client ID:</b>	<b>F10-12.0-092214</b>					
Laboratory ID:	09-205-02					
Gasoline	<b>ND</b>	9.4	NWTPH-Gx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	108	71-121				
<b>Client ID:</b>	<b>F11-12.0-092214</b>					
Laboratory ID:	09-205-03					
Gasoline	<b>ND</b>	8.6	NWTPH-Gx	9-25-14	9-26-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	108	71-121				
<b>Client ID:</b>	<b>F12-7.0-092214</b>					
Laboratory ID:	09-205-04					
Gasoline	<b>ND</b>	4.5	NWTPH-Gx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	99	71-121				
<b>Client ID:</b>	<b>F15-7.4-092214</b>					
Laboratory ID:	09-205-07					
Gasoline	<b>ND</b>	7.9	NWTPH-Gx	9-25-14	9-29-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	106	71-121				
<b>Client ID:</b>	<b>F16-7.0-092214</b>					
Laboratory ID:	09-205-08					
Gasoline	<b>ND</b>	10	NWTPH-Gx	9-25-14	9-29-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	99	71-121				



Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-205  
 Project: 1071-007

**NWTPH-Gx**

Matrix: Soil  
 Units: mg/kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>F17-8.0-092214</b>					
Laboratory ID:	09-205-09					
Gasoline	<b>ND</b>	3.1	NWTPH-Gx	9-25-14	9-29-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	<i>102</i>	<i>71-121</i>				

Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
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 Project: 1071-007

**NWTPH-Gx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0925S1					
Gasoline	<b>ND</b>	5.0	NWTPH-Gx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	94	71-121				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	09-228-01							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	NA	30
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				101	103	71-121		

Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-205  
 Project: 1071-007

**NWTPH-Gx**

Matrix: Water  
 Units: ug/L (ppb)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>F10-GW-092214</b>					
Laboratory ID:	09-205-11					
Gasoline	<b>ND</b>	100	NWTPH-Gx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	86	71-112				
<b>Client ID:</b>	<b>F11-GW-092214</b>					
Laboratory ID:	09-205-12					
Gasoline	<b>ND</b>	100	NWTPH-Gx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	88	71-112				

Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-205  
 Project: 1071-007

### NWTPH-Gx

Matrix: Water  
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0924W1					
Gasoline	<b>ND</b>	100	NWTPH-Gx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	91	71-112				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	09-214-01							
	ORIG	DUP						
Gasoline	<b>ND</b>	<b>ND</b>	NA	NA	NA	NA	30	
<i>Surrogate:</i>								
<i>Fluorobenzene</i>				88	88	71-112		

Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-205  
 Project: 1071-007

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>F9-9.0-092214</b>					
Laboratory ID:	09-205-01					
Diesel Range Organics	<b>ND</b>	120	NWTPH-Dx	9-24-14	9-24-14	U1
Lube Oil	<b>1400</b>	55	NWTPH-Dx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				
<b>Client ID:</b>	<b>F10-12.0-092214</b>					
Laboratory ID:	09-205-02					
Diesel Range Organics	<b>ND</b>	40	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	81	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				
<b>Client ID:</b>	<b>F11-12.0-092214</b>					
Laboratory ID:	09-205-03					
Diesel Range Organics	<b>ND</b>	38	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	77	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				
<b>Client ID:</b>	<b>F12-7.0-092214</b>					
Laboratory ID:	09-205-04					
Diesel Range Organics	<b>ND</b>	27	NWTPH-Dx	9-24-14	9-24-14	
Lube Oil Range Organics	<b>ND</b>	55	NWTPH-Dx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	61	50-150				
<b>Client ID:</b>	<b>F13-6.7-092214</b>					
Laboratory ID:	09-205-05					
Diesel Range Organics	<b>440</b>	27	NWTPH-Dx	9-24-14	9-24-14	
Lube Oil Range Organics	<b>ND</b>	54	NWTPH-Dx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				
<b>Client ID:</b>	<b>F14-7.0-092214</b>					
Laboratory ID:	09-205-06					
Diesel Range Organics	<b>5700</b>	29	NWTPH-Dx	9-24-14	9-24-14	
Lube Oil Range Organics	<b>ND</b>	270	NWTPH-Dx	9-24-14	9-24-14	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	63	50-150				

Date of Report: September 30, 2014  
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 Project: 1071-007

### NWTPH-Dx

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>F15-7.4-092214</b>					
Laboratory ID:	09-205-07					
Diesel Range Organics	<b>ND</b>	38	NWTPH-Dx	9-24-14	9-24-14	
Lube Oil Range Organics	<b>ND</b>	77	NWTPH-Dx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	58	50-150				
<b>Client ID:</b>	<b>F16-7.0-092214</b>					
Laboratory ID:	09-205-08					
Diesel Range Organics	<b>ND</b>	40	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	80	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	90	50-150				
<b>Client ID:</b>	<b>F17-8.0-092214</b>					
Laboratory ID:	09-205-09					
Diesel Fuel #2	<b>380</b>	28	NWTPH-Dx	9-24-14	9-24-14	
Lube Oil Range Organics	<b>ND</b>	59	NWTPH-Dx	9-24-14	9-24-14	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	68	50-150				
<b>Client ID:</b>	<b>F18-8.0-092214</b>					
Laboratory ID:	09-205-10					
Diesel Range Organics	<b>9700</b>	140	NWTPH-Dx	9-24-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	580	NWTPH-Dx	9-24-14	9-25-14	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	83	50-150				

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**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0924S1					
Diesel Range Organics	ND	25	NWTPH-Dx	9-24-14	9-24-14	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	99	50-150				
Laboratory ID:	MB0925S2					
Diesel Range Organics	ND	25	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	09-186-03							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				90	96	50-150		
Laboratory ID:	09-205-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	U1
Lube Oil	1280	1170	NA	NA	NA	NA	9	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				84	77	50-150		

Date of Report: September 30, 2014  
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 Laboratory Reference: 1409-205  
 Project: 1071-007

### NWTPH-Dx

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>F10-GW-092214</b>					
Laboratory ID:	09-205-11					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	79	50-150				
<b>Client ID:</b>	<b>F11-GW-092214</b>					
Laboratory ID:	09-205-12					
Diesel Range Organics	<b>ND</b>	0.26	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	0.42	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				



Date of Report: September 30, 2014  
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 Project: 1071-007

**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0925W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	94	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	09-215-01							
	ORIG	DUP						
Diesel Range Organics	<b>0.552</b>	<b>0.377</b>	NA	NA	NA	NA	38	NA
Lube Oil Range Organics	<b>0.697</b>	<b>0.506</b>	NA	NA	NA	NA	32	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				77	77	50-150		

Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-205  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>F13-6.7-092214</b>					
Laboratory ID:	09-205-05					
Aroclor 1016	ND	0.054	EPA 8082A	9-24-14	9-24-14	
Aroclor 1221	ND	0.054	EPA 8082A	9-24-14	9-24-14	
Aroclor 1232	ND	0.054	EPA 8082A	9-24-14	9-24-14	
Aroclor 1242	ND	0.054	EPA 8082A	9-24-14	9-24-14	
Aroclor 1248	ND	0.054	EPA 8082A	9-24-14	9-24-14	
Aroclor 1254	ND	0.054	EPA 8082A	9-24-14	9-24-14	
Aroclor 1260	ND	0.054	EPA 8082A	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	58	51-138				
<b>Client ID:</b>	<b>F18-8.0-092214</b>					
Laboratory ID:	09-205-10					
Aroclor 1016	ND	0.056	EPA 8082A	9-24-14	9-24-14	
Aroclor 1221	ND	0.056	EPA 8082A	9-24-14	9-24-14	
Aroclor 1232	ND	0.056	EPA 8082A	9-24-14	9-24-14	
Aroclor 1242	ND	0.056	EPA 8082A	9-24-14	9-24-14	
Aroclor 1248	ND	0.056	EPA 8082A	9-24-14	9-24-14	
Aroclor 1254	ND	0.056	EPA 8082A	9-24-14	9-24-14	
Aroclor 1260	ND	0.056	EPA 8082A	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	62	51-138				

Date of Report: September 30, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-205  
 Project: 1071-007

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0924S1					
Aroclor 1016	ND	0.050	EPA 8082A	9-24-14	9-24-14	
Aroclor 1221	ND	0.050	EPA 8082A	9-24-14	9-24-14	
Aroclor 1232	ND	0.050	EPA 8082A	9-24-14	9-24-14	
Aroclor 1242	ND	0.050	EPA 8082A	9-24-14	9-24-14	
Aroclor 1248	ND	0.050	EPA 8082A	9-24-14	9-24-14	
Aroclor 1254	ND	0.050	EPA 8082A	9-24-14	9-24-14	
Aroclor 1260	ND	0.050	EPA 8082A	9-24-14	9-24-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
DCB	83		51-138			

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	09-205-05										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.322	0.334	0.500	0.500	ND	64	67	49-136	4	14	
<i>Surrogate:</i>											
DCB						56	59	51-138			

Date of Report: September 30, 2014  
Samples Submitted: September 23, 2014  
Laboratory Reference: 1409-205  
Project: 1071-007

### % MOISTURE

Date Analyzed: 9-24-14

Client ID	Lab ID	% Moisture
F9-9.0-092214	09-205-01	8
F10-12.0-092214	09-205-02	38
F11-12.0-092214	09-205-03	35
F12-7.0-092214	09-205-04	9
F13-6.7-092214	09-205-05	7
F14-7.0-092214	09-205-06	13
F15-7.4-092214	09-205-07	35
F16-7.0-092214	09-205-08	37
F17-8.0-092214	09-205-09	10
F18-8.0-092214	09-205-10	10



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# OnSite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

### Turnaround Request (in working days)

(Check One)

- Same Day     1 Day  
 2 Days     3 Days  
 Standard (7 Days)  
 (TPH analysis 5 Days)

### Laboratory Number:

**09-205**

Company: **FARALLON**  
 Project Number: **1071-007**  
 Project Name: **6050 E MARSHALL WAY**  
 Project Manager: **SCOTT AULIN**  
 Sampled by: **DINER L**

(other)

### Lab ID      Sample Identification

11 F10-GW-0922134<sup>03</sup>  
 12 F11-GW-0922134<sup>03</sup>

Date Sampled: 9/22  
 Time Sampled: 1020  
 Matrix: W

### Number of Containers

NWTPH-HCID  
 NWTPH-Gx/BTEX  
 NWTPH-Gx    X  
 NWTPH-Dx    X  
 Volatiles 8260C  
 Halogenated Volatiles 8260C  
 Semivolatiles 8270D/SIM (with low-level PAHs)  
 PAHs 8270D/SIM (low-level)  
 PCBs 8082A  
 Organochlorine Pesticides 8081B  
 Organophosphorus Pesticides 8270D/SIM  
 Chlorinated Acid Herbicides 8151A  
 Total RCRA Metals  
 Total MTCA Metals  
 TCLP Metals  
 HEM (oil and grease) 1664A

% Moisture

*DL*

### Signature

*[Handwritten Signature]*  
*[Handwritten Signature]*  
*[Handwritten Signature]*

### Company

**FARALLON**  
**SPCDDY M99**  
**SPCDD7**  
*[Handwritten Signature]*

### Date

9/22/14  
 9/23/14  
 9/23/14  
 9/23/14

### Time

9:30  
 9:30  
 10:14  
 10:44

### Comments/Special Instructions

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Chromatograms with final report



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 2, 2014

Scott Allin  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1409-217

Dear Scott:

Enclosed are the analytical results and associated quality control data for samples submitted on September 23, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal line extending to the right.

David Baumeister  
Project Manager

Enclosures



Date of Report: October 2, 2014  
Samples Submitted: September 23, 2014  
Laboratory Reference: 1409-217  
Project: 1071-007

### **Case Narrative**

Samples were collected on September 23, 2014 and received by the laboratory on September 23, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: October 2, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-217  
 Project: 1071-007

**NWTPH-Dx**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-6-092314</b>					
Laboratory ID:	09-217-01					
Diesel Range Organics	<b>ND</b>	0.26	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	0.42	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	74	50-150				
<b>Client ID:</b>	<b>MW-5-092314</b>					
Laboratory ID:	09-217-02					
Diesel Range Organics	<b>0.43</b>	0.26	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	0.41	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				

Date of Report: October 2, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-217  
 Project: 1071-007

**NWTPH-Dx  
 QUALITY CONTROL**

Matrix: Water  
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0925W1					
Diesel Range Organics	<b>ND</b>	0.25	NWTPH-Dx	9-25-14	9-25-14	
Lube Oil Range Organics	<b>ND</b>	0.40	NWTPH-Dx	9-25-14	9-25-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	94	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>DUPLICATE</b>								
Laboratory ID:	09-214-01							
	ORIG	DUP						
Diesel Range Organics	<b>1.63</b>	<b>0.755</b>	NA	NA	NA	NA	73	NA
Lube Oil Range Organics	<b>3.05</b>	<b>1.76</b>	NA	NA	NA	NA	54	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				60	76	50-150		

Date of Report: October 2, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-217  
 Project: 1071-007

**PAHs EPA 8270D/SIM**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-6-092314</b>					
Laboratory ID:	09-217-01					
Naphthalene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
2-Methylnaphthalene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
1-Methylnaphthalene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Acenaphthylene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Acenaphthene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Fluorene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Phenanthrene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Anthracene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Fluoranthene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Pyrene	ND	0.096	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[a]anthracene	<b>0.010</b>	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
Chrysene	ND	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[b]fluoranthene	ND	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo(j,k)fluoranthene	ND	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[a]pyrene	ND	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
Indeno(1,2,3-c,d)pyrene	ND	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
Dibenz[a,h]anthracene	ND	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[g,h,i]perylene	ND	0.0096	EPA 8270D/SIM	9-28-14	9-29-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>66</i>	<i>40 - 107</i>				
<i>Pyrene-d10</i>	<i>65</i>	<i>41 - 106</i>				
<i>Terphenyl-d14</i>	<i>70</i>	<i>44 - 124</i>				

Date of Report: October 2, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-217  
 Project: 1071-007

**PAHs EPA 8270D/SIM**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-5-092314</b>					
Laboratory ID:	09-217-02					
Naphthalene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
2-Methylnaphthalene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
1-Methylnaphthalene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Acenaphthylene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Acenaphthene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Fluorene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Phenanthrene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Anthracene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Fluoranthene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Pyrene	ND	0.095	EPA 8270D/SIM	9-28-14	9-30-14	
Benzo[a]anthracene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
Chrysene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
Benzo[b]fluoranthene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
Benzo(j,k)fluoranthene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
Benzo[a]pyrene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
Indeno(1,2,3-c,d)pyrene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
Dibenz[a,h]anthracene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
Benzo[g,h,i]perylene	ND	0.0095	EPA 8270D/SIM	9-28-14	9-30-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	102	40 - 107				
Pyrene-d10	83	41 - 106				
Terphenyl-d14	101	44 - 124				

Date of Report: October 2, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-217  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 METHOD BLANK QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
Laboratory ID:	MB0928W1					
Naphthalene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
2-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
1-Methylnaphthalene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Acenaphthylene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Acenaphthene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Fluorene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Phenanthrene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Anthracene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Fluoranthene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Pyrene	ND	0.10	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[a]anthracene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
Chrysene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[b]fluoranthene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo(j,k)fluoranthene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[a]pyrene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
Indeno(1,2,3-c,d)pyrene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
Dibenz[a,h]anthracene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
Benzo[g,h,i]perylene	ND	0.010	EPA 8270D/SIM	9-28-14	9-29-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>64</i>	<i>40 - 107</i>				
<i>Pyrene-d10</i>	<i>80</i>	<i>41 - 106</i>				
<i>Terphenyl-d14</i>	<i>77</i>	<i>44 - 124</i>				

Date of Report: October 2, 2014  
 Samples Submitted: September 23, 2014  
 Laboratory Reference: 1409-217  
 Project: 1071-007

**PAHs EPA 8270D/SIM  
 SB/SBD QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0928W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.386	0.359	0.500	0.500	77	72	31 - 110	7	46	
Acenaphthylene	0.338	0.352	0.500	0.500	68	70	40 - 118	4	43	
Acenaphthene	0.397	0.393	0.500	0.500	79	79	38 - 112	1	40	
Fluorene	0.400	0.428	0.500	0.500	80	86	45 - 114	7	41	
Phenanthrene	0.386	0.418	0.500	0.500	77	84	47 - 112	8	36	
Anthracene	0.399	0.422	0.500	0.500	80	84	46 - 135	6	37	
Fluoranthene	0.409	0.440	0.500	0.500	82	88	51 - 127	7	35	
Pyrene	0.408	0.429	0.500	0.500	82	86	50 - 125	5	37	
Benzo[a]anthracene	0.472	0.484	0.500	0.500	94	97	46 - 123	3	34	
Chrysene	0.427	0.432	0.500	0.500	85	86	49 - 120	1	34	
Benzo[b]fluoranthene	0.438	0.431	0.500	0.500	88	86	46 - 126	2	37	
Benzo(j,k)fluoranthene	0.445	0.472	0.500	0.500	89	94	43 - 125	6	39	
Benzo[a]pyrene	0.390	0.410	0.500	0.500	78	82	44 - 129	5	37	
Indeno(1,2,3-c,d)pyrene	0.435	0.450	0.500	0.500	87	90	40 - 124	3	42	
Dibenz[a,h]anthracene	0.448	0.457	0.500	0.500	90	91	35 - 122	2	44	
Benzo(g,h,i)perylene	0.435	0.448	0.500	0.500	87	90	37 - 122	3	45	
<i>Surrogate:</i>										
2-Fluorobiphenyl					84	71	40 - 107			
Pyrene-d10					87	90	41 - 106			
Terphenyl-d14					85	89	44 - 124			



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# Onsite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

Turnaround Request  
(in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)  
(TPH analysis 5 Days)

\_\_\_\_\_ (other)

Laboratory Number: **09-217**

Company: **FARALLO N**

Project Number: **1071-007**

Project Name: **PROLOGIS**

Project Manager: **Scott Allin**

Sampled by: **Anna Sigel**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	MW-6-092314	9/23/14	8:10	W
2	MW-5-092314	9/23/14	9:10	W

Number of Containers	
NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	239/24
NWTPH-Dx	
Volatiles 8260C	
Halogenated Volatiles 8260C	
Semivolatiles 8270D/SIM (with low-level PAHs)	
PAHs 8270D/SIM (low-level)	
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	
% Moisture	

Signature	Company	Date	Time	Comments/Special Instructions
<i>[Signature]</i>	FARALLO N	9/23/14	10:00	
<i>[Signature]</i>	Speedy Hanger	9-28-14	11:55	
<i>[Signature]</i>	" "	" "	13:18	
<i>[Signature]</i>	ORIE	9/23/14	13:00	

Received \_\_\_\_\_

Relinquished \_\_\_\_\_

Received \_\_\_\_\_

Relinquished \_\_\_\_\_

Reviewed/Date \_\_\_\_\_

Reviewed/Date \_\_\_\_\_

Chromatograms with final report



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 1, 2014

Scott Allin  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1409-252

Dear Scott:

Enclosed are the analytical results and associated quality control data for samples submitted on September 25, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures

Date of Report: October 1, 2014  
Samples Submitted: September 25, 2014  
Laboratory Reference: 1409-252  
Project: 1071-007

### **Case Narrative**

Samples were collected on September 24, 2014 and received by the laboratory on September 25, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: October 1, 2014  
 Samples Submitted: September 25, 2014  
 Laboratory Reference: 1409-252  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>CB-6-092414</b>					
Laboratory ID:	09-252-04					
Aroclor 1016	ND	0.065	EPA 8082A	9-30-14	9-30-14	
Aroclor 1221	ND	0.065	EPA 8082A	9-30-14	9-30-14	
Aroclor 1232	ND	0.065	EPA 8082A	9-30-14	9-30-14	
Aroclor 1242	ND	0.065	EPA 8082A	9-30-14	9-30-14	
Aroclor 1248	ND	0.065	EPA 8082A	9-30-14	9-30-14	
Aroclor 1254	ND	0.065	EPA 8082A	9-30-14	9-30-14	
Aroclor 1260	ND	0.065	EPA 8082A	9-30-14	9-30-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	94	51-138				
<b>Client ID:</b>	<b>CB-8-092414</b>					
Laboratory ID:	09-252-05					
Aroclor 1016	ND	0.062	EPA 8082A	9-30-14	9-30-14	
Aroclor 1221	ND	0.062	EPA 8082A	9-30-14	9-30-14	
Aroclor 1232	ND	0.062	EPA 8082A	9-30-14	9-30-14	
Aroclor 1242	ND	0.062	EPA 8082A	9-30-14	9-30-14	
Aroclor 1248	ND	0.062	EPA 8082A	9-30-14	9-30-14	
Aroclor 1254	ND	0.062	EPA 8082A	9-30-14	9-30-14	
Aroclor 1260	ND	0.062	EPA 8082A	9-30-14	9-30-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	110	51-138				
<b>Client ID:</b>	<b>CB-10-092414</b>					
Laboratory ID:	09-252-06					
Aroclor 1016	ND	0.068	EPA 8082A	9-30-14	9-30-14	
Aroclor 1221	ND	0.068	EPA 8082A	9-30-14	9-30-14	
Aroclor 1232	ND	0.068	EPA 8082A	9-30-14	9-30-14	
Aroclor 1242	ND	0.068	EPA 8082A	9-30-14	9-30-14	
Aroclor 1248	ND	0.068	EPA 8082A	9-30-14	9-30-14	
Aroclor 1254	ND	0.068	EPA 8082A	9-30-14	9-30-14	
Aroclor 1260	ND	0.068	EPA 8082A	9-30-14	9-30-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	95	51-138				

Date of Report: October 1, 2014  
 Samples Submitted: September 25, 2014  
 Laboratory Reference: 1409-252  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Soil  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>CB-12-092414</b>					
Laboratory ID:	09-252-07					
Aroclor 1016	<b>ND</b>	0.074	EPA 8082A	9-30-14	9-30-14	
Aroclor 1221	<b>ND</b>	0.074	EPA 8082A	9-30-14	9-30-14	
Aroclor 1232	<b>ND</b>	0.074	EPA 8082A	9-30-14	9-30-14	
Aroclor 1242	<b>0.31</b>	0.074	EPA 8082A	9-30-14	9-30-14	
Aroclor 1248	<b>ND</b>	0.074	EPA 8082A	9-30-14	9-30-14	
Aroclor 1254	<b>ND</b>	0.074	EPA 8082A	9-30-14	9-30-14	
Aroclor 1260	<b>ND</b>	0.074	EPA 8082A	9-30-14	9-30-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	93	51-138				
<b>Client ID:</b>	<b>CB-13-092414</b>					
Laboratory ID:	09-252-08					
Aroclor 1016	<b>ND</b>	0.063	EPA 8082A	9-30-14	9-30-14	
Aroclor 1221	<b>ND</b>	0.063	EPA 8082A	9-30-14	9-30-14	
Aroclor 1232	<b>ND</b>	0.063	EPA 8082A	9-30-14	9-30-14	
Aroclor 1242	<b>ND</b>	0.063	EPA 8082A	9-30-14	9-30-14	
Aroclor 1248	<b>ND</b>	0.063	EPA 8082A	9-30-14	9-30-14	
Aroclor 1254	<b>ND</b>	0.063	EPA 8082A	9-30-14	9-30-14	
Aroclor 1260	<b>ND</b>	0.063	EPA 8082A	9-30-14	9-30-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	95	51-138				

Date of Report: October 1, 2014  
 Samples Submitted: September 25, 2014  
 Laboratory Reference: 1409-252  
 Project: 1071-007

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0930S1					
Aroclor 1016	<b>ND</b>	0.050	EPA 8082A	9-30-14	9-30-14	
Aroclor 1221	<b>ND</b>	0.050	EPA 8082A	9-30-14	9-30-14	
Aroclor 1232	<b>ND</b>	0.050	EPA 8082A	9-30-14	9-30-14	
Aroclor 1242	<b>ND</b>	0.050	EPA 8082A	9-30-14	9-30-14	
Aroclor 1248	<b>ND</b>	0.050	EPA 8082A	9-30-14	9-30-14	
Aroclor 1254	<b>ND</b>	0.050	EPA 8082A	9-30-14	9-30-14	
Aroclor 1260	<b>ND</b>	0.050	EPA 8082A	9-30-14	9-30-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
DCB	91		51-138			

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	09-272-08										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	<b>0.441</b>	<b>0.462</b>	0.500	0.500	ND	<b>88</b>	<b>92</b>	49-136	5	14	
<i>Surrogate:</i>											
DCB						94	112	51-138			

Date of Report: October 1, 2014  
Samples Submitted: September 25, 2014  
Laboratory Reference: 1409-252  
Project: 1071-007

### % MOISTURE

Date Analyzed: 9-30-14

Client ID	Lab ID	% Moisture
CB-6-092414	09-252-04	23
CB-8-092414	09-252-05	19
CB-10-092414	09-252-06	27
CB-12-092414	09-252-07	33
CB-13-092414	09-252-08	21



### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





**M Onsite Environmental Inc.**  
 Analytical Laboratory Testing Services  
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 Phone: (425) 883-3881 • www.onsite-env.com

# Chain of Custody

Terraround Request (in working days)  
 (Check One)  
 Same Day  1 Day  
 2 Days  3 Days  
 Standard (7 Days) (TPH analysis 5 Days)  
 5 day (other)

Laboratory Number: **09-252**

Company: Favallon  
 Project Number: 1071-007  
 Project Name: 6050 E Marginal Way S  
 Project Manager: Scott Allin  
 Sampled by: Amber Bailey

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	CB-7-092414	9/24/14	1047	S
2	CB-9-092414	1	1106	
3	CB-11-092414		1155	

Number of Containers		Laboratory Tests																			
		NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	PCBs 8082	HOLD	% Moisture	
																		X	X	X	

Relinquished	Received	Relinquished	Received	Relinquished	Received	Relinquished	Received	Relinquished	Received
Signature	Signature	Company	Company	Date	Time	Comments/Special Instructions	Comments/Special Instructions	Comments/Special Instructions	Comments/Special Instructions
	<u>[Signature]</u>	<u>Favallon</u>	<u>Favallon</u>	<u>9-25-1000</u>	<u>1000</u>	<u>Please Hold, will call for analysis - DR</u>			
	<u>[Signature]</u>			<u>9-25-1030</u>	<u>1030</u>				
	<u>[Signature]</u>			<u>9-25-1030</u>	<u>1030</u>				
	<u>[Signature]</u>			<u>9-25-1030</u>	<u>1030</u>				
	<u>[Signature]</u>			<u>9-25-1030</u>	<u>1030</u>				

Reviewed/Date \_\_\_\_\_  
 Data Package: Standard  Level III  Level IV   
 Electronic Data Deliverables (EDDs)  \_\_\_\_\_  
 Chromatograms with final report





14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

October 9, 2014

Scott Allin  
Farallon Consulting, LLC  
975 5<sup>th</sup> Avenue NW  
Issaquah, WA 98027

Re: Analytical Data for Project 1071-007  
Laboratory Reference No. 1410-031

Dear Scott:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister  
Project Manager

Enclosures

Date of Report: October 9, 2014  
Samples Submitted: October 2, 2014  
Laboratory Reference: 1410-031  
Project: 1071-007

### **Case Narrative**

Samples were collected on October 2, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: October 9, 2014  
 Samples Submitted: October 2, 2014  
 Laboratory Reference: 1410-031  
 Project: 1071-007

**PCBs  
 EPA 8082A**

Matrix: Sediment  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>CB-14-100214</b>					
Laboratory ID:	10-031-01					
Aroclor 1016	ND	0.34	EPA 8082A	10-7-14	10-7-14	
Aroclor 1221	ND	0.34	EPA 8082A	10-7-14	10-7-14	
Aroclor 1232	ND	0.34	EPA 8082A	10-7-14	10-7-14	
Aroclor 1242	ND	0.34	EPA 8082A	10-7-14	10-7-14	
Aroclor 1248	ND	0.34	EPA 8082A	10-7-14	10-7-14	
Aroclor 1254	ND	0.34	EPA 8082A	10-7-14	10-7-14	
Aroclor 1260	ND	0.34	EPA 8082A	10-7-14	10-7-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	122	51-138				
<b>Client ID:</b>	<b>CB-15-100214</b>					
Laboratory ID:	10-031-02					
Aroclor 1016	ND	0.068	EPA 8082A	10-4-14	10-6-14	
Aroclor 1221	ND	0.068	EPA 8082A	10-4-14	10-6-14	
Aroclor 1232	ND	0.068	EPA 8082A	10-4-14	10-6-14	
Aroclor 1242	ND	0.068	EPA 8082A	10-4-14	10-6-14	
Aroclor 1248	ND	0.068	EPA 8082A	10-4-14	10-6-14	
Aroclor 1254	ND	0.068	EPA 8082A	10-4-14	10-6-14	
Aroclor 1260	1.8	0.068	EPA 8082A	10-4-14	10-6-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	53	51-138				
<b>Client ID:</b>	<b>CB-16-100214</b>					
Laboratory ID:	10-031-03					
Aroclor 1016	ND	0.11	EPA 8082A	10-4-14	10-6-14	
Aroclor 1221	ND	0.11	EPA 8082A	10-4-14	10-6-14	
Aroclor 1232	ND	0.11	EPA 8082A	10-4-14	10-6-14	
Aroclor 1242	ND	0.11	EPA 8082A	10-4-14	10-6-14	
Aroclor 1248	ND	0.11	EPA 8082A	10-4-14	10-6-14	
Aroclor 1254	ND	0.11	EPA 8082A	10-4-14	10-6-14	
Aroclor 1260	ND	0.11	EPA 8082A	10-4-14	10-6-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
DCB	76	51-138				

Date of Report: October 9, 2014  
 Samples Submitted: October 2, 2014  
 Laboratory Reference: 1410-031  
 Project: 1071-007

**PCBs**  
**EPA 8082A**

Matrix: Sediment  
 Units: mg/Kg (ppm)

<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>Method</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Flags</b>
<b>Client ID:</b>	<b>CB-20-100214</b>					
Laboratory ID:	10-031-04					
Aroclor 1016	<b>ND</b>	0.066	EPA 8082A	10-4-14	10-6-14	
Aroclor 1221	<b>ND</b>	0.066	EPA 8082A	10-4-14	10-6-14	
Aroclor 1232	<b>ND</b>	0.066	EPA 8082A	10-4-14	10-6-14	
Aroclor 1242	<b>ND</b>	0.066	EPA 8082A	10-4-14	10-6-14	
Aroclor 1248	<b>ND</b>	0.066	EPA 8082A	10-4-14	10-6-14	
Aroclor 1254	<b>ND</b>	0.066	EPA 8082A	10-4-14	10-6-14	
Aroclor 1260	<b>ND</b>	0.066	EPA 8082A	10-4-14	10-6-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	69	51-138				

Date of Report: October 9, 2014  
 Samples Submitted: October 2, 2014  
 Laboratory Reference: 1410-031  
 Project: 1071-007

**PCBs EPA 8082A  
 QUALITY CONTROL**

Matrix: Soil  
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB1004S1					
Aroclor 1016	ND	0.050	EPA 8082A	10-4-14	10-6-14	
Aroclor 1221	ND	0.050	EPA 8082A	10-4-14	10-6-14	
Aroclor 1232	ND	0.050	EPA 8082A	10-4-14	10-6-14	
Aroclor 1242	ND	0.050	EPA 8082A	10-4-14	10-6-14	
Aroclor 1248	ND	0.050	EPA 8082A	10-4-14	10-6-14	
Aroclor 1254	ND	0.050	EPA 8082A	10-4-14	10-6-14	
Aroclor 1260	ND	0.050	EPA 8082A	10-4-14	10-6-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
DCB	102		51-138			

Laboratory ID:	MB1007S1					
Aroclor 1016	ND	0.050	EPA 8082A	10-7-14	10-7-14	
Aroclor 1221	ND	0.050	EPA 8082A	10-7-14	10-7-14	
Aroclor 1232	ND	0.050	EPA 8082A	10-7-14	10-7-14	
Aroclor 1242	ND	0.050	EPA 8082A	10-7-14	10-7-14	
Aroclor 1248	ND	0.050	EPA 8082A	10-7-14	10-7-14	
Aroclor 1254	ND	0.050	EPA 8082A	10-7-14	10-7-14	
Aroclor 1260	ND	0.050	EPA 8082A	10-7-14	10-7-14	
<i>Surrogate:</i>	<i>Percent Recovery</i>		<i>Control Limits</i>			
DCB	99		51-138			

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>											
Laboratory ID:	09-315-02										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.392	0.387	0.500	0.500	ND	78	77	49-136	1	14	
<i>Surrogate:</i>											
DCB						78	81	51-138			
Laboratory ID:	09-278-04										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.492	0.526	0.500	0.500	ND	98	105	49-136	7	14	
<i>Surrogate:</i>											
DCB						100	99	51-138			

Date of Report: October 9, 2014  
Samples Submitted: October 2, 2014  
Laboratory Reference: 1410-031  
Project: 1071-007

### % MOISTURE

Date Analyzed: 10-3-14

Client ID	Lab ID	% Moisture
CB-14-100214	10-031-01	41
CB-15-100214	10-031-02	27
CB-16-100214	10-031-03	52
CB-20-100214	10-031-04	24





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference



**APPENDIX C**  
**SOIL DISPOSAL DOCUMENTATION**

REMEDIAL INVESTIGATION, FOCUSED FEASIBILITY STUDY,  
AND CLEANUP ACTION PLAN  
6050 East Marginal Way  
Seattle, Washington

Farallon PN: 1071-010

# TPS TECHNOLOGIES INC.

Tacoma, WA  
Soil Recycling Facility

Soil Data and Certification Sheet

Date: \_\_\_\_\_

**GENERATOR:** Consolidated Freightways  
Mailing Address: 175 Linfield Drive  
Menlo Park, CA 94025

Contact: Ms. Lynne Carlson  
Phone: ( 650 ) 326-1700  
Fax: ( 650 ) 617-6716

**SITENAME:** Consolidated Freightways, Seattle  
Street Address: 6050 East Marginal Way South  
Seattle, WA

Contact: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_  
Fax: ( \_\_\_\_\_ ) \_\_\_\_\_

**CONSULTANT:** Golder Associates, Inc.  
Address: 4104-148th Ave. N.E.  
Redmond, WA 98052

Contact: Rob Long / Gary Zimmerman  
Phone: ( 425 ) 883-0777  
Fax: ( 425 ) 882-5498

**TRANSPORTER:** TPS Technologies  
Address: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_  
Fax: ( \_\_\_\_\_ ) \_\_\_\_\_

### Site History

Type of contamination (gas, diesel, used oil, coal tar, etc) Diesel Estimated quantity in tons: 1,350  
How did soil contamination occur? Release from Underground Storage Tank and Piping

Source of Contamination:  UST  AST  SPILL  EMERGENCY RESPONSE  OTHER \_\_\_\_\_  
Name of Testing Lab: Sound Analytical Contact: Tom Watson Phone: 1-253-922-2310

How and where at site were samples taken? 5 discrete samples collected ~1.5 ft below surface of pile. Plus 3 samples collected from pile during excavation (analyzed by North Creek)

Please check appropriate box below and attach all required analytical reports, including test methodologies used. Unless otherwise noted, discrete grab samples should be collected with the following frequency: Three samples for the first 150 tons; five samples for 750 tons or less, seven samples for 1500 tons or less, ten samples for 3000 tons or less, and one additional sample for each 750 additional tons.

I certify that the soil referenced herein is contaminated solely by virgin petroleum products from leaking underground storage tank(s).

Attach analysis for the following:  
1. Total petroleum hydrocarbons (WTPH-G, WTPH-D, 418-1)  
2. Benzene/ toluene/ ethylbenzene/ xylene (Method 8020 BTEX for gasoline soils only)  
3. Total lead (Method 6010, 7420, or 7421 for gasoline soils only)  
Total Metals and 6010 also ran on 1 composite

I certify that some or all of the contaminants in the soil referenced herein is used oil or some other non-virgin petroleum product, or virgin petroleum or hydrocarbon product from a leaking above-ground storage tank or spill.

Attach analysis for the following:  
1. Total petroleum hydrocarbons (WTPH-G, WTPH-D, or WTPH - 418.1 Modified)  
2. Benzene/ toluene/ ethylbenzene/ xylene (Method 8020 BTEX for gasoline soils only)\*  
3. Halogenated Volatile Organics (Method 8010, 8021, or 8240)  
4. Pesticides and PCB's (Method 8080)  
5. Total metals concentration for (a) through (h): \*  
(a) arsenic (d) chromium (g) selenium  
(b) barium (e) lead (h) silver  
(c) cadmium (f) mercury

\* If elevated benzene and total metal concentrations are detected, additional analyses for TCLP benzene and TCLP metals may be required.

No soils referenced herein may be delivered until this certificate is received and approved by TPST, and TPST issues manifest(s) and assigns a delivery date. If any soils delivered to TPST are found to be "hazardous waste" pursuant to federal regulations or "dangerous waste" pursuant to state regulations, Client shall be solely responsible for their removal. If Client fails to so remove such soils, TPST, acting as Client's agent, may arrange for such removal at Client's expense.

This is a complete and accurate description of the soil referenced herein; no deliberate or willful omissions have been made and all known or suspected hazards have been disclosed herein. I further hereby certify that the soil is not "hazardous" or "dangerous" as defined by U.S. Environmental Protection Agency (EPA), State of Washington, or local regulations, and that no other knowledge concerning other TCLP constituents have been withheld. I further certify that the soils referenced herein contain no free liquids. All required analysis reports are attached.

Generator/Owner Authorized Signature: Lynne Carlson Date: 11/10/98  
Print Name: LYNNE CARLSON Title: Mgr, Env Programs

Soil Master (c)

TPS Technologies, Inc.

# Customer Job Report

Gross & Tare Weight Codes: M=Manual; S=Scale; T=Trk File

Job Number Name	SiteAddress	SiteCity	State	ZipCode
A03 -- 02091 CONSOLIDATED FREIGHT	6050 EAST MARGINAL WAY SOUTH	SEATTLE	WA	00000

Load #	Date & Time Out	Transporter #	Truck & Trailer Number	Gross (lb)	Tare (lb)	Net (lb)	Net Wt (tons)
1	11/16/98 08:58	1003608	MERLIN	114,920M	40,440M	74,480	37.24
2	11/16/98 08:59	1003608	SCOTT	113,920M	38,160M	75,760	37.88
3	11/16/98 08:59	1003608	SHANE	108,340M	38,560M	69,780	34.89
4	11/16/98 09:00	1003608	JOHN	103,740M	46,700M	57,040	28.52
5	11/16/98 09:00	1003608	MERLIN	110,120M	40,440M	69,680	34.84
6	11/16/98 09:01	1003608	SCOTT	109,480M	38,160M	71,320	35.66
7	11/16/98 09:01	1003608	SHANE	110,040M	38,560M	71,480	35.74
8	11/16/98 09:01	1003608	JOHN	109,420M	46,700M	62,720	31.36
9	11/16/98 09:02	1003608	MERLIN	106,160M	40,440M	65,720	32.86
10	11/16/98 09:02	1003608	SCOTT	110,480M	38,160M	72,320	36.16
11	11/16/98 09:03	1003608	SHANE	110,180M	38,560M	71,620	35.81
12	11/16/98 09:03	1003608	JOHN	110,260M	46,700M	63,560	31.78
13	11/16/98 09:03	1003608	MERLIN	114,320M	40,440M	73,880	36.94
14	11/16/98 09:03	1003608	SCOTT	111,360M	38,160M	73,200	36.60
15	11/16/98 09:04	1003608	ALLEN	90,740M	37,680M	53,060	26.53
16	11/16/98 09:04	1003608	SCOTT	100,360M	41,900M	58,460	29.23
17	11/16/98 09:04	1003608	JAY	104,580M	43,240M	61,340	30.67
18	11/16/98 09:05	1003608	JR	102,060M	37,280M	64,780	32.39
19	11/16/98 09:05	1003608	DUSTIN	107,320M	41,460M	65,860	32.93
20	11/16/98 09:06	1003608	SHANE	102,920M	38,560M	64,360	32.18
21	11/16/98 09:07	1003608	JOHN	93,040M	46,700M	46,340	23.17
22	11/16/98 09:07	1003608	LAMARR	102,080M	38,000M	64,080	32.04
23	11/16/98 09:09	1003608	PEGGY	82,900M	33,680M	49,220	24.61
24	11/16/98 09:10	1003608	DAN	104,420M	41,400M	63,020	31.51
25	11/16/98 09:12	1003608	AL	115,500M	42,560M	72,940	36.47

Completed Loads	Manifests Received	Completed Weight	Estimated Weight	TOTAL Net Wt:
33.30%	25	60.60%	1,350.00 (tons)	818.01 (tons)

Post-It® Fax Note	7671	Date	11/18	# of pages	2/1
To	GARY ZIMMERMAN	From	LENEE AVELINO		
Co./Dept	Golden Assoc.	Co.	TPS		
Phone #		Phone #	253/584-8430		
Fax #	425/882-5498	Fax #			

*Corrected Copy*

# Marine Vacuum Service, Inc.

A WASHINGTON ENVIRONMENTAL COMPANY  
MARINE AND INDUSTRIAL CLEANING  
TANK REMOVAL

P.O. Box 24263 Seattle, Washington 98124  
Telephone (206) 762 0240  
FAX (206) 763-8084  
1-800-540-7491

## CERTIFICATE OF DISPOSAL

DATE: November 16, 1998

GENERAL CONTRACTOR:

DISPOSAL FACILITY:

Consolidated Freightways  
175 Lindfield Drive  
Menlo Park, CA 94025

Marine Vacuum Service, Inc.  
1516 South Graham St.  
Seattle, Wa. 98108

### IDENTIFICATION:

JOB NO:	98-11-055
LOCATION:	Consolidated Freightways 6050 L. Marginal Way Seattle, Wa.
DESCRIPTION:	450 Gallons Waste Water

Marine Vacuum Service, Inc. certifies that the above described products have been disposed of in accordance with all applicable Local, State and Federal regulations.



Representative  
Marine Vacuum Service