SOIL CHARACTERIZATION AND
REMEDIAL EXCAVATION REPORT
COVINGTON GATE STATION
SE 272ND STREET AND 192ND AVENUE SE
COVINGTON, WASHINGTON

OCTOBER 15, 2008 FOR PUGET SOUND ENERGY



Soil Characterization and Remedial Excavation Report Covington Gate Station SE 272nd Street and 192nd Avenue SE Covington, Washington File No. 0186-753-00

October 15, 2008

Prepared for:

Puget Sound Energy PO Box 90868, EST-06E Bellevue, Washington 98009-0868

Attention:

Gordon Johnston

Prepared by:

GeoEngineers, Inc. 8410 154th Avenue NE Redmond, Washington 98052 (425) 861-6000

GeoEngineers, Inc.

Paul R. Craig, LG

Senior Project Manager

Kurt R. Fraese, LG Senior Principal

PRC:KRF:ja

P:\0\0186753\00\Finals\0186-753-00, Final Report.doc

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Paul R. Craig

Copyright© 2008 by GeoEngineers, Inc. All rights reserved.

cc: Donna Musa

Washington State Department of Ecology

Northwest Regional Office dmus461@ecy.wa.gov

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
SCOPE OF SERVICES	1
SITE CHARACTERIZATION ACTIVITIES	2 2
REMEDIAL EXCAVATION ACTIVITIES	3 3
SITE RESTORATION	4
CONCLUSIONS AND RECOMMENDATIONS	4
LIMITATIONS	4

List of Tables

Table 1. Soil Chemical Analytical Data

List of Figures

- Figure 1. Vicinity Map
- Figure 2. Site Plan with Limits of Excavation
- Figure 3. Limits of Excavation and Soil Sample Locations

APPENDICES

APPENDIX A - FIELD EXPLORATIONS

APPENDIX B - CHEMICAL ANALYTICAL PROGRAM

APPENDIX C - WEIGHT TICKETS

SOIL CHARACTERIZATION AND REMEDIAL EXCAVATION REPORT COVINGTON GATE STATION SE 272ND STREET AND 192ND AVENUE SE COVINGTON, WASHINGTON FOR PUGET SOUND ENERGY

INTRODUCTION

This report presents the results of soil characterization and remedial excavation monitoring services pertaining to Puget Sound Energy's (PSE's) Covington Gate Station located at SE 272nd Street and 192nd Avenue SE in Covington, Washington (referred to herein as "the site"). The approximate location of the site relative to surrounding physical features is shown on the attached vicinity map in Figure 1.

The site is a location where natural gas is transferred from a bulk carrier pipeline owned by Williams Pipeline (Williams) to a distribution pipeline owned by PSE. This site also is a location where odorant (Mercaptan) is added to the odorless natural gas, giving the gas its unique aroma and helping to identify leaks of natural gas throughout public and private distribution systems. The gate station is situated on a gravel lot, is enclosed by a chain-link fence and includes one building, aboveground and underground piping and one mercaptan tank. The general site layout is shown in Figure 2.

The flow of natural gas through the gate station is measured with devices that may have contained mercury in the past. Based on our observations at the site and information provided by PSE, mercury-containing devices are not present at the site at the time this report was prepared.

SCOPE OF SERVICES

The purpose of the services summarized in this report is to (1) evaluate soil conditions at the site for the potential presence of mercury (selected lead and polycyclic aromatic hydrocarbons [PAHs] analysis also was conducted), which may have inadvertently been released from historic mercury-containing devices; and (2) monitor and document remedial activities to excavate and transport mercury- and PAH-contaminated soil identified at the site to a permitted off-site disposal facility. Characterization of groundwater beneath the site was not an objective of this study. Our specific scope of services included the following:

- 1. Prepare a health and safety plan for use by GeoEngineers personnel during site activities.
- **2.** Complete soil sampling at the site using hand augers to obtain soil samples for potential chemical analysis.
- **3.** Submit 66 soil samples to OnSite Environmental, Inc. (OnSite) of Redmond, Washington, for one or more of the following chemical analyses:
 - Mercury and/or lead by Environmental Protection Agency (EPA) Method 6010B/7471A
 (lead testing of select soil samples was completed to evaluate the potential impacts to soil
 from lead based paint that may or may not have been used at the site);
 - PAHs by EPA Method 8270D/SIM (PAH testing of select soil samples was completed to evaluate the potential impacts to soil from tar-coated pipe wrap that is present at the site); and/or
 - Toxicity Characteristic Leaching Procedure (TCLP) mercury by EPA Method 1311/7470A.

- **4.** Evaluate chemical analytical data results relative to the Model Toxics Control Act (MTCA) Method A cleanup levels.
- 5. Observe and document the excavation of mercury and PAH-contaminated soil from site.
- **6.** Assist PSE in coordinating the disposal of soil removed from the site through Allied Waste, Inc. (Allied) located in Seattle, Washington.

SITE CHARACTERIZATION ACTIVITIES

EXPLORATION PROGRAM

GeoEngineers conducted site reconnaissance and exploration activities at the site between January and May 2008. A total of 47 hand auger borings (HA-1 through HA-47) were completed to evaluate the potential presence of mercury, lead and/or PAHs in soil at the site. The soil explorations were completed to depths ranging from approximately ½ foot to 4 feet beneath the ground surface (bgs). Initial exploration locations were selected based on their proximity to buildings, tanks and piping at the site where mercury-containing metering equipment potentially could have been present in the past. Select soil samples in proximity to painted structures or pipelines at the site were submitted for chemical analysis of lead. Additionally, select soil samples adjacent to tar-coated pipe wrap at the site were submitted for chemical analysis of PAHs. Supplemental soil samples were obtained from the site after chemical analytical testing identified mercury or PAHs in soil samples at concentrations that exceeded the corresponding MTCA Method A cleanup level. Approximate exploration locations are shown in Figure 3. Field methods are described in Appendix A.

SUBSURFACE CONDITIONS

Based on subsurface explorations completed during this study, soil beneath the site generally consists of fill overlying glacially-deposited sediments. The fill generally consists of 2 to 3 inches of ¾-inch to 1¼-inch crushed rock. Below the crushed rock, glacially-deposited sediments of sand and gravel with varying amounts of silt generally were present in the excavation.

Groundwater was not encountered during our exploration or excavation activities at the site.

CHEMICAL ANALYTICAL RESULTS

Sixty six soil samples were obtained from 43 sample locations and submitted to OnSite for chemical analysis of one or more of the following: PAHs by EPA 8270D/SIM; total lead by EPA Method 6010B; total mercury by EPA Method 7471A; and/or TCLP mercury by EPA Method 1311/7470A. The approximate soil sample exploration locations are shown in Figure 3.

Contaminants of concern were detected at concentrations that exceeded the corresponding MTCA Method A cleanup level in 13 of the 66 soil samples submitted for chemical analysis. Total mercury was detected at concentrations ranging from 2.2 milligrams per kilogram (mg/kg) to 46.0 mg/kg in 10 samples, which exceeded the MTCA Method A cleanup level of 2 mg/kg. Carcinogenic PAHs (cPAHs) were detected at concentrations ranging from 0.140 mg/kg to 2.215 mg/kg in 4 samples, which exceeded the MTCA Method A cleanup level of 0.1 mg/kg. The concentration of cPAHs was calculated using the toxicity equivalency methodology per WAC 173-340-708(8). Chemical analytical results are presented in the laboratory reports in Appendix B and summarized in Table 1.

Subsequent sampling and chemical analysis of soil samples obtained beneath or in a lateral direction to each of the 13 samples in which mercury and/or cPAHs were detected at concentrations that exceeded the corresponding MTCA cleanup level was completed in order to evaluate the vertical and lateral limits of contamination at the site. Total mercury and/or PAHs either were not detected or were detected at concentrations that were less than the corresponding MTCA Method A cleanup level in the remaining 48 soil samples tested.

Total lead either was not detected or was detected at concentrations that were less than the MTCA Method A cleanup level of 250 mg/kg in the soil samples tested.

One soil sample (HA-2-0.5) also was submitted for chemical analysis of TCLP testing by EPA Method 7470A to characterize excavated soil at the site for disposal. Mercury was not detected in the leachate from HA-4-0.5 (less than 0.005 milligrams per liter [mg/l]), which is less than the maximum concentration level for mercury (for designation as a dangerous waste [WAC 173-303-100]) of 0.2 mg/l.

REMEDIAL EXCAVATION ACTIVITIES

SOIL EXCAVATION

Remedial excavation activities were completed in two areas at the site (within the Instrumentation Building and on the exterior of the southwest corner of the building) and were based upon the results of the soil characterization sampling. The objective of the remedial activities was to remove soil where mercury and/or cPAHs were identified in soil samples at concentrations that exceeded MTCA Method A cleanup levels.

Remedial excavation activities were completed between July 7 and July 9, 2008 by Western Refinery Services (Western) using a combination of a vactor truck and hand tools. A representative from GeoEngineers was present during soil removal activities to delineate the lateral and vertical extent of excavation and to document that the contractor had attained the targeted limits of excavation.

The excavation limits were defined by the results of the soil characterization sampling and chemical analytical results. Soil represented by samples that exceeded the corresponding MTCA Method A cleanup level for mercury and/or cPAHs was excavated, stockpiled and removed from the site for permitted disposal. The final limits of excavation were based upon "clean" confirmation soil samples obtained during the soil characterization in which total mercury and/or cPAHs either were not detected or were detected at concentrations that were less than the corresponding MTCA Method A cleanup level. Soil removal at the location of sample HA-2-0.5 extended laterally to a 2-foot deep concrete footing that exists beneath the wall of the Instrumentation Building. Confirmation sample HA-41-0.5 was obtained on the exterior of the building wall to characterize soil conditions for potential mercury contamination.

The depth of excavation at the site was based upon the elevation of the clean confirmation samples located beneath areas of known contamination at the site. Survey equipment was used to identify the elevation of a clean confirmation sample beneath known contamination in an excavation area and that elevation was designated as the targeted depth of excavation. Survey measurements were taken throughout the course of remedial activities and soil excavation continued until the base of the entire excavation matched the targeted depth of excavation.

The excavation in the interior of the building measured approximately 44 feet long by 24 feet wide and ranged in depth between one and 4 feet deep. The excavation in the southwest exterior portion of the building measured approximately 6 feet long by 5 feet wide by 2 feet deep. The approximate limits of excavation are presented in Figure 2 and Figure 3.

Excavated soil was temporarily stockpiled at the site on a 20 mil liner, which was located on a larger piece of 6 mil plastic sheeting in order to prevent the contamination of clean soil outside of the excavation area. Soil remaining in the stockpile at the end of each work day was covered and secured with plastic sheeting to help prevent the inadvertent migration of excavated soil from the stockpile location due to wind and/or precipitation.

SOIL DISPOSAL

A total of approximately 45 cubic yards (101.2 tons) were transferred by dump truck to Allied Waste, Inc.'s transfer station located at 3rd Avenue South and South Lander Street in Seattle, Washington for permitted disposal. Copies of the weight tickets are presented in Appendix C.

SITE RESTORATION

Site restoration activities to backfill the two excavations were completed by Western. Imported fine to medium sand was used as backfill in the excavations where subsurface natural gas piping and electrical conduits were exposed. Backfilling around the subsurface utilities was completed by the end of each work day in order to prevent potential damage to the exposed pipes and conduits. Imported 5/8-inch minus material was used to backfill the remaining portions of the excavations at the site. Backfill materials were placed in lifts that were 6 inches or less in thickness and compacted in place using plate compactors. GeoEngineers was not present during placement and compaction of the backfill materials.

CONCLUSIONS AND RECOMMENDATIONS

Based on the chemical analytical results and our observations during remedial activities at the site, it is our opinion that soil with mercury and/or cPAH concentrations exceeding MTCA Method A cleanup levels identified during the soil characterization study was successfully excavated and removed from the site for permitted off-site disposal.

LIMITATIONS

We have prepared this report for the exclusive use of Puget Sound Energy, their authorized agents and regulatory agencies. No other party may rely on the product of our services unless we agree in advance and in writing to such reliance. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions.

Our interpretation of soil conditions for this study is based on field observations and chemical analysis of a limited number of widely spaced soil samples. It is always possible that contamination not identified by our study exists in soil that was not sampled or analyzed.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with our general agreement with PSE (Contract No. 4600001763) and with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

TABLE 1 SOIL CHEMICAL ANALYTICAL DATA¹ COVINGTON GATE STATION COVINGTON, WASHINGTON

PUGET SOUND ENERGY FILE NO. 0186-753-00

Sample Identification ²	Date Sampled	Sample Depth (feet bgs)	Total Lead ³ (mg/kg)	Total Mercury ³ (mg/kg)	PAHs ⁴ (mg/kg)	TCLP Mercury ⁵ (mg/L)
Soil Characterization	Samples					
HA-1-0.5	01/29/08	0.5		1.70	0.026	
HA-2-0.5 ^{6, 7}	01/29/08	0.5		46.0	0.860	<0.005
HA-2-1.0	01/29/08	1.0		<0.27	0.056	
HA-2-2.0 ⁶	01/29/08	2.0		<0.27	2.215	
HA-2-3.0 ⁶	02/21/08	3.0			0.140	
HA-2-4.0	02/21/08	4.0			0.081	
HA-3-0.5	01/29/08	0.5		0.58	0.005	
HA-4-0.5	01/29/08	0.5	<5.4	<0.27		
HA-5-0.5	01/29/08	0.5	7.1	<0.29		
HA-6-0.5	01/29/08	0.5	11	<0.30		
HA-7-0.5	01/29/08	0.5	38	<0.29		
HA-12-0.5	01/29/08	0.5		<0.31		
HA-13-0.5	01/29/08	0.5	<5.5	<0.27	0.006	
HA-14-0.5	01/29/08	0.5		<0.28		
HA-15-0.5	01/29/08	0.5		<0.28		
HA-16-2.0 ⁶	02/21/08	2.0			0.297	
HA-16-4.0	08/20/08	4.0			0.039	
HA-17-2.0	02/21/08	2.0			0.005	
HA-18-0.5	02/21/08	0.5		0.40		
HA-18-2.0	02/29/08	2.0			0.090	
HA-19-0.5 ⁶	02/29/08	0.5		3.4		
HA-19-1.0	05/12/08	1.0		1.1		
HA-19-2.0	02/21/08	2.0			0.006	
HA-20-0.5 ⁶	02/29/08	0.5		5		
MTCA Method A Clear	up Level		250	2	0.1	0.2



Sample Identification ²	Date Sampled	Sample Depth (feet bgs)	Total Lead ³ (mg/kg)	Total Mercury ³ (mg/kg)	PAHs ⁴ (mg/kg)	TCLP Mercury ⁵ (mg/L)
HA-20-1.0	05/12/08	1.0		1.1	-	
HA-20-2.0	02/21/08	2.0		1	0.006	
HA-21-0.5 ⁶	02/29/08	0.5		10	1	
HA-21-1.0	07/07/08	1.0		<0.26		
HA-21-2.0	02/29/08	2.0		<0.26	<0.007	
HA-21-3.0	07/07/08	3.0		<0.26	1	
HA-22-0.5 ⁶	02/29/08	0.5		8.3		
HA-22-1.0	07/07/08	1.0		<0.26	1	
HA-22-2.0	02/29/08	2.0		<0.27	<0.007	
HA-22-3.0	07/07/08	3.0		<0.26		
HA-23-1.0	03/18/08	1.0		1.3		
HA-24-1.0 ⁶	03/18/08	1.0		15		
HA-24-2.0 ⁶	03/18/08	2.0		7.4		
HA-24-3.0	03/24/08	3.0		1.6		
HA-24-4.0	03/24/08	4.0		<0.28		
HA-25-0.5 ⁶	04/02/08	0.5		17		
HA-25-2.0	05/12/08	2.0		<0.28		
HA-26-0.5	04/02/08	0.5		<0.27		
HA-27-0.5	05/12/08	0.5		<0.27		
HA-28-0.5	05/12/08	0.5		0.76		
HA-29-0.5	05/12/08	0.5		<0.27		
HA-30-0.5	05/12/08	0.5		0.78		
HA-31-1.0	05/12/08	1.0		0.51		
HA-32-0.5 ⁶	05/12/08	0.5		2.9	1	
HA-32-1.0	07/07/08	1.0		<0.27	1	
HA-32-2.0	07/07/08	2.0		<0.27		
HA-33-0.5	05/12/08	0.5		1.5		
HA-34-1.0	05/12/08	1.0		0.44		
HA-35-1.0	07/08/08	1.0		<0.26	-1	
HA-36-1.0	07/08/08	1.0		<0.27		
HA-37-1.0	07/08/08	1.0		<0.26		
HA-38-1.0	07/08/08	1.0		<0.26		
HA-39-0.5	07/08/08	0.5		<0.27	-	
MTCA Method A Clean	up Level		250	2	0.1	0.2

Sample Identification ²	Date Sampled	Sample Depth (feet bgs)	Total Lead ³ (mg/kg)	Total Mercury ³ (mg/kg)	PAHs ⁴ (mg/kg)	TCLP Mercury ⁵ (mg/L)
HA-40-0.5 ⁶	07/08/08	0.5		2.2		
HA-40-1.0	07/09/08	1.0		<0.27	-	
HA-41-0.5	07/09/08	0.5		<0.27		
HA-42-2.0	07/09/08	2.0		<0.28		
HA-43-2.0	08/20/08	2.0		<0.26	0.086	
HA-44-0.5	08/20/08	0.5		<0.28		
HA-45-0.5	08/20/08	0.5		<0.27		
HA-46-0.5	08/20/08	0.5		<0.28		
HA-47-1.0	07/09/08	1.0		<0.26		
MTCA Method A Clean	up Level		250	2	0.1	0.2

Notes:

bgs = below ground surface

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

TCLP = Toxicity Characteristic Leaching Procedure

MTCA = Model Toxics Control Act

Shading indicates a concentration that exceeds the MTCA Method A cleanup level

P:\0\0186753\00\Working\0186-753-00, Table.xls



¹ Chemical analyses by OnSite Environmental, Inc. in Redmond, Washington.

² Approximate sample locations are shown in Figure 3.

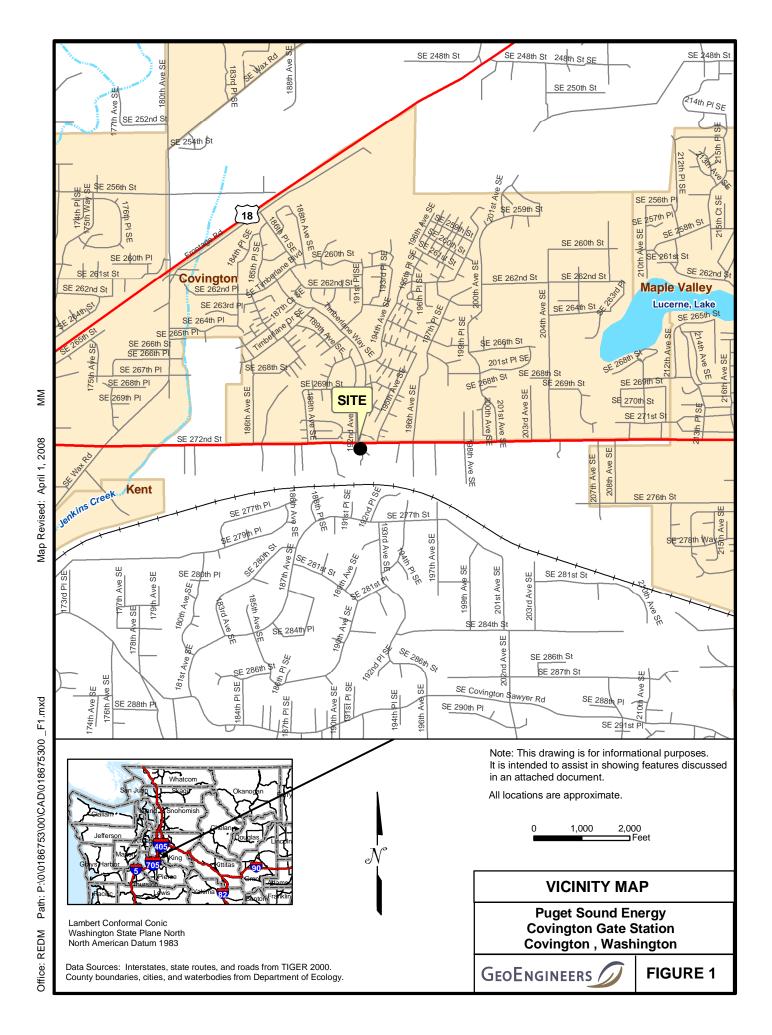
³ Total metals by EPA Method 6000/7000 series.

⁴ Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270D SIM.

⁵ Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311/7470A.

⁶ Soil represented by this sample was subsequently overexcavated and removed from the site for permitted disposal.

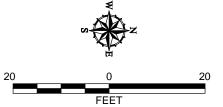
⁷ This sample was used to characterize excavated soil for disposal through Allied Waste of Seattle, Washington.



Notes

- The locations of all features shown are approximate.
 This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Drawing provided by PSE.

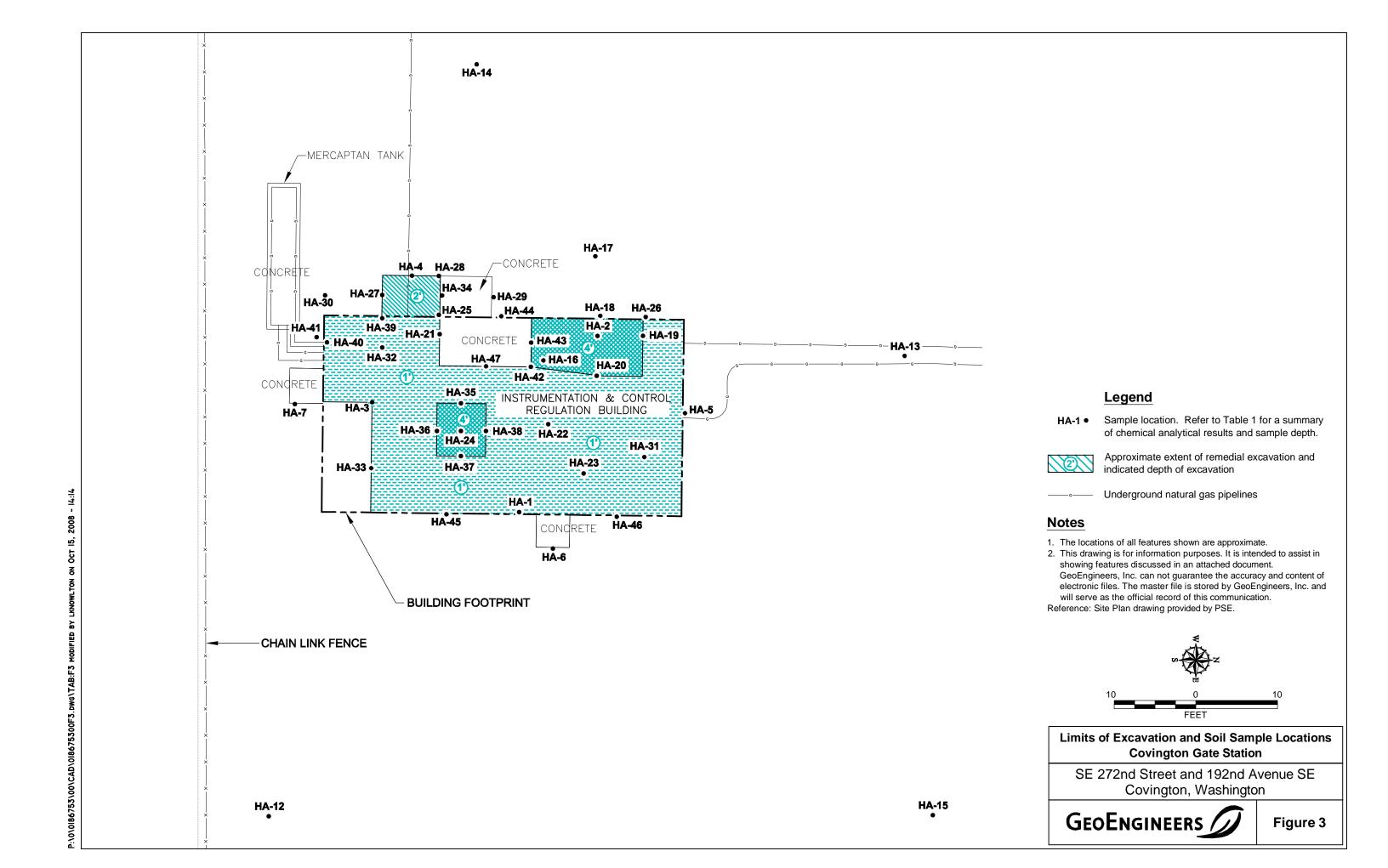


Covington Gate Station

SE 272nd Street and 192nd Avenue SE Covington, Washington



Figure 2





APPENDIX A FIELD EXPLORATIONS

APPENDIX A FIELD EXPLORATIONS

GENERAL

Field exploration activities were conducted at the site to evaluate site conditions by obtaining discrete soil samples from hand auger explorations. Samples were obtained using a stainless-steel hand auger as described below.

SOIL SAMPLING PROCEDURE

Hand auger explorations were completed to depths ranging between about 0.5 feet and 4.0 feet bgs using hand tools for the purposes of obtained the soil samples. Equipment used to collect soil samples from the borings was decontaminated with a Simple GreenTM-water solution and a distilled water rinse prior to obtaining each sample.

Soil samples obtained from the hand augers were placed into labeled 4-ounce glass jars provided by the testing laboratory. The glass jars were completely filled to minimize head space. The samples were stored in a cooler containing blue ice pending delivery to the laboratory. Chain-of-custody procedures were followed from the time the samples were collected until they were delivered to laboratory.



APPENDIX B CHEMICAL ANALYTICAL PROGRAM

APPENDIX B CHEMICAL ANALYTICAL PROGRAM

ANALYTICAL METHODS

Chain-of-custody procedures were followed from the time the samples were collected until they were delivered to OnSite Environmental, Inc. laboratory in Redmond, Washington. The soil samples were held in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference and laboratory quality control records are included in this appendix. The analytical results are also summarized in the text and table in this report.

ANALYTICAL DATA REVIEW

The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Data quality exceptions documented by the laboratory in the laboratory reports are reviewed by GeoEngineers.

ANALYTICAL DATA REVIEW SUMMARY

There were no data quality exceptions in the laboratory report or during our review of the chemical analytical data. Based on our data quality review, it is in our opinion that the analytical data are of acceptable quality for their intended use in this study.



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 6, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington (CGS)

Laboratory Reference No. 0801-168

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on January 29, 2008.

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

Project: 0186-753-00; PSE-Covington (CGS)

Case Narrative

Samples were collected on January 29, 2008 and received by the laboratory on January 29, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Total Metals EPA 6010B/7471A Analysis

Due to the high concentration of Mercury in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 99%.

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.

Project: 0186-753-00; PSE-Covington (CGS)

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
HA-1-0.5	01-168-01	Soil	1-29-08	1-29-08	
HA-2-0.5	01-168-04	Soil	1-29-08	1-29-08	
HA-3-0.5	01-168-07	Soil	1-29-08	1-29-08	
HA-4-0.5	01-168-10	Soil	1-29-08	1-29-08	
HA-5-0.5	01-168-11	Soil	1-29-08	1-29-08	
HA-6-05	01-168-12	Soil	1-29-08	1-29-08	
HA-7-0.5	01-168-13	Soil	1-29-08	1-29-08	
HA-12-0.5	01-168-18	Soil	1-29-08	1-29-08	
HA-13-0.5	01-168-19	Soil	1-29-08	1-29-08	
HA-14-0.5	01-168-20	Soil	1-29-08	1-29-08	
HA-15-0.5	01-168-21	Soil	1-29-08	1-29-08	

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM

Date Extracted: 1-31-08
Date Analyzed: 2-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-01

Client ID: HA-1-0.5

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0068
2-Methylnaphthalene	ND		0.0068
1-Methylnaphthalene	ND		0.0068
Acenaphthylene	ND		0.0068
Acenaphthene	ND		0.0068
Fluorene	ND		0.0068
Phenanthrene	0.039		0.0068
Anthracene	0.0070		0.0068
Fluoranthene	0.057		0.0068
Pyrene	0.051		0.0068
Benzo[a]anthracene	0.022		0.0068
Chrysene	0.029		0.0068
Benzo[b]fluoranthene	0.026		0.0068
Benzo[k]fluoranthene	0.0097		0.0068
Benzo[a]pyrene	0.019		0.0068
Indeno(1,2,3-c,d)pyrene	0.0071		0.0068
Dibenz[a,h]anthracene	ND		0.0068
Benzo[g,h,i]perylene	0.0068		0.0068

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	71	44 - 115
2-Fluorobiphenyl	78	52 - 100
Terphenyl-d14	92	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM

Date Extracted: 1-31-08
Date Analyzed: 2-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-04 **Client ID: HA-2-0.5**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0070
2-Methylnaphthalene	ND		0.0070
1-Methylnaphthalene	ND		0.0070
Acenaphthylene	ND		0.0070
Acenaphthene	0.038		0.0070
Fluorene	0.030		0.0070
Phenanthrene	0.71		0.0070
Anthracene	0.22		0.0070
Fluoranthene	3.3		0.035
Pyrene	2.6		0.035
Benzo[a]anthracene	0.96		0.035
Chrysene	0.97		0.035
Benzo[b]fluoranthene	0.93		0.035
Benzo[k]fluoranthene	0.23		0.0070
Benzo[a]pyrene	0.60		0.0070
Indeno(1,2,3-c,d)pyrene	0.27		0.0070
Dibenz[a,h]anthracene	0.11		0.0070
Benzo[g,h,i]perylene	0.25		0.0070

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	74	44 - 115
2-Fluorobiphenyl	79	52 - 100
Terphenyl-d14	91	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM

Date Extracted: 1-31-08
Date Analyzed: 2-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-07 **Client ID: HA-3-0.5**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0068
2-Methylnaphthalene	ND		0.0068
1-Methylnaphthalene	ND		0.0068
Acenaphthylene	ND		0.0068
Acenaphthene	ND		0.0068
Fluorene	ND		0.0068
Phenanthrene	ND		0.0068
Anthracene	ND		0.0068
Fluoranthene	ND		0.0068
Pyrene	ND		0.0068
Benzo[a]anthracene	ND		0.0068
Chrysene	ND		0.0068
Benzo[b]fluoranthene	ND		0.0068
Benzo[k]fluoranthene	ND		0.0068
Benzo[a]pyrene	ND		0.0068
Indeno(1,2,3-c,d)pyrene	ND		0.0068
Dibenz[a,h]anthracene	ND		0.0068
Benzo[g,h,i]perylene	ND		0.0068

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	71	44 - 115
2-Fluorobiphenyl	75	52 - 100
Terphenyl-d14	90	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM

Date Extracted: 1-31-08
Date Analyzed: 2-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-19
Client ID: HA-13-0.5

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0073
2-Methylnaphthalene	ND		0.0073
1-Methylnaphthalene	ND		0.0073
Acenaphthylene	ND		0.0073
Acenaphthene	ND		0.0073
Fluorene	ND		0.0073
Phenanthrene	ND		0.0073
Anthracene	ND		0.0073
Fluoranthene	ND		0.0073
Pyrene	ND		0.0073
Benzo[a]anthracene	ND		0.0073
Chrysene	ND		0.0073
Benzo[b]fluoranthene	ND		0.0073
Benzo[k]fluoranthene	ND		0.0073
Benzo[a]pyrene	ND		0.0073
Indeno(1,2,3-c,d)pyrene	ND		0.0073
Dibenz[a,h]anthracene	ND		0.0073
Benzo[g,h,i]perylene	ND		0.0073

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	67	44 - 115
2-Fluorobiphenyl	73	52 - 100
Terphenyl-d14	88	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM METHOD BLANK QUALITY CONTROL

Date Extracted: 1-31-08
Date Analyzed: 2-1-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0131S1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0067
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067
Acenaphthylene	ND		0.0067
Acenaphthene	ND		0.0067
Fluorene	ND		0.0067
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Fluoranthene	ND		0.0067
Pyrene	ND		0.0067
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno(1,2,3-c,d)pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	52	44 - 115
2-Fluorobiphenyl	65	52 - 100
Terphenyl-d14	97	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM MS/MSD QUALITY CONTROL

Date Extracted: 1-31-08 Date Analyzed: 2-1-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-178-12

	Sample	Spike		Percent		Percent	Recovery	
Compound:	Amount	A mount	MS	Recovery	MSD	Recovery	Limits	Flags
Naphthalene	ND	0.0833	0.0588	71	0.0613	74	45-101	
Acenaphthylene	ND	0.0833	0.0665	80	0.0674	81	50-109	
Acenaphthene	ND	0.0833	0.0673	81	0.0675	81	52-103	
Fluorene	ND	0.0833	0.0707	85	0.0703	84	56-107	
Phenanthrene	ND	0.0833	0.0730	88	0.0716	86	52-109	
Anthracene	ND	0.0833	0.0678	81	0.0646	78	58-107	
Fluoranthene	0.00937	0.0833	0.0819	87	0.0790	84	42-128	
Pyrene	0.0110	0.0833	0.0818	85	0.0789	81	51-121	
Benzo[a]anthracene	0.00687	0.0833	0.0755	82	0.0721	78	60-121	
Chrysene	0.00825	0.0833	0.0817	88	0.0794	85	42-147	
Benzo[b]fluoranthene	0.00970	0.0833	0.0838	89	0.0804	85	50-123	
Benzo[k]fluoranthene	ND	0.0833	0.0752	90	0.0749	90	58-117	
Benzo[a]pyrene	ND	0.0833	0.0664	80	0.0622	75	54-115	
Indeno(1,2,3-c,d)pyrene	ND	0.0833	0.0769	92	0.0746	90	54-117	
Dibenz[a,h]anthracene	ND	0.0833	0.0769	92	0.0746	89	48-145	
Benzo[g,h,i]perylene	ND	0.0833	0.0744	89	0.0709	85	52-115	

		RPD	
	RPD	Limit	Flags
Naphthalene	4	24	
Acenaphthylene	1	25	
Acenaphthene	0	21	
Fluorene	0	19	
Phenanthrene	2	17	
Anthracene	5	14	
Fluoranthene	4	27	
Pyrene	4	27	
Benzo[a]anthracene	5	18	
Chrysene	3	19	
Benzo[b]fluoranthene	4	26	
Benzo[k]fluoranthene	0	17	
Benzo[a]pyrene	7	18	
Indeno(1,2,3-c,d)pyrene	3	20	
Dibenz[a,h]anthracene	3	15	
Benzo[g,h,i]perylene	5	21	

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 6010B/7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	01-168-01					
Client ID:	HA-1-0.5					
Mercury	1.7	1.3	7471A	1-30-08	1-30-08	
Lab ID:	01-168-04					
Client ID:	HA-2-0.5					
Mercury	46	26	7471A	1-30-08	1-30-08	
Lab ID:	01-168-07					
Client ID:	HA-3-0.5					
Mercury	0.58	0.26	7471A	1-30-08	1-30-08	
Lab ID:	01-168-10					
Client ID:	HA-4-0.5					
Lead	ND	5.4	6010B	1-31-08	2-4-08	
Mercury	ND	0.27	7471A	1-30-08	1-30-08	
Lab ID:	01-168-11					
Client ID:	HA-5-0.5					
Lead	7.1	5.8	6010B	1-31-08	2-4-08	
Mercury	ND	0.29	7471A	1-30-08	1-30-08	
Lab ID:	01-168-12					
Client ID:	HA-6-0.5					
Lead	11	6.0	6010B	1-31-08	2-4-08	
Mercury	ND	0.30	7471A	1-30-08	1-30-08	

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 6010B/7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	01-168-13					
Client ID:	HA-7-0.5					
Lead	38	5.8	6010B	1-31-08	2-4-08	
Mercury	ND	0.29	7471A	1-30-08	1-30-08	
Lab ID:	01-168-18					
Client ID:	HA-12-0.5					
Mercury	ND	0.31	7471A	1-30-08	1-30-08	
Lab ID:	01-168-19					
Client ID:	HA-13-0.5					
Lead	ND	5.5	6010B	1-31-08	2-4-08	
Mercury	ND	0.27	7471A	1-30-08	1-30-08	
Lab ID:	01-168-20					
Client ID:	HA-14-0.5					
Mercury	ND	0.28	7471A	1-30-08	1-30-08	
Lab ID:	01-168-21					
Client ID:	HA-15-0.5					
Mercury	ND	0.28	7471A	1-30-08	1-30-08	

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 6010B METHOD BLANK QUALITY CONTROL

Date Extracted: 1-31-08
Date Analyzed: 2-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0131S1

Analyte Method Result PQL
Lead 6010B **ND** 5.0

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 1-30-08
Date Analyzed: 1-30-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0130S2

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 6010B DUPLICATE QUALITY CONTROL

Date Extracted: 1-31-08 Date Analyzed: 2-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-19

Sample Duplicate

Analyte Result RPD PQL Flags

Lead ND ND NA 5.0

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 1-30-08 Date Analyzed: 1-30-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-04

Sample Duplicate
Analyte Result Result RPD PQL Flags

Mercury 44.1 42.5 4 0.25

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 6010B MS/MSD QUALITY CONTROL

Date Extracted: 1-31-08 Date Analyzed: 2-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-19

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Lead	250	234	93	234	94	0	

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL METALS EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 1-30-08 Date Analyzed: 1-30-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-04

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	43.7	0	47.0	588	7	Α

Project: 0186-753-00; PSE-Covington (CGS)

% MOISTURE

Date Analyzed: 1-30-08

Client ID	Lab ID	% Moisture
HA-1-0.5	01-168-01	2
HA-2-0.5	01-168-04	5
HA-3-0.5	01-168-07	2
HA-4-0.5	01-168-10	7
HA-5-0.5	01-168-11	14
HA-6-05	01-168-12	16
HA-7-0.5	01-168-13	14
HA-12-0.5	01-168-18	20
HA-13-0.5	01-168-19	9
HA-14-0.5	01-168-20	10
HA-15-0.5	01-168-21	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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

OnSite Environmental Inc.

Chain of Custody

01 - 168

Laboratory Number:

Turnaround Request (in working days)

91 Mereury × Chromatograms with final report \square Requested Analysis HEM by 1664 beto de TCLP Metals (8) ARJA Metals (8) Atčt8 vd sebicides Pesticides by 8081A Comm X MIS \ G07S8 vd sHA9 Semivolatiles by 8270D Time Halogenated Volatiles by 8260B 89/52/ Volatiles by 8260B **UMTPH-GX/BTEX UMTPH-HCID** □ 1 Day (TPH analysis 5 working days) Standard (7 working days) Reviewed by/Date (Check One) (other) から 0830 0840 2480 0280 5880 Company 0830 0480 5280 0180 0080 8/62/1 Same Day Date Sampled Project Name: DSE-Covington (CGS Andrew Johnson Phone: (425) 883-3881 • Fax: (425) 885-4603 Project Manager: Paul (raid Project Number: 753-00 HA-1-0,5 HA-1-1.0 HA-1-2,0 0.1-7-F0-2-4H HA-3-0.5 HA-3-2,0 4A-4-0,5 HA-3-1.0 Reviewed by/Date Relinquished by HA Relinquished by Relinquished by H H Received by Received by Received by Sampled by: Company: 8 2 7 2

OnSite Environmental Inc.

Chain of Custody

 $\overline{\times}$ $\frac{\times}{\times}$ \times Chromatograms with final report Comments/Special Instructions: **Requested Analysis** HEM by 1664 **TCLP Metals** Laboratory Number: 01-168 Jays J (8) ARJA Metals (8) Atčt8 yd sebicidee A 1808 yd sebicitee9 CBs by 8082 1/29/08 1550 MIS \ G07S8 vd eHA9 G07S8 yd selitelovimed 4alogenated Volatiles by 8260B Volatiles by 8260B **XQ-H9TWN** NWTPH-Gx/BTEX **UNTPH-HCID** (TPH analysis 5 working days) 3 Dау 1 Day # of Cont. N \rightarrow X Standard (7 working days) Turnaround Request (in working days) Matrix Reviewed by/Date (Check One) (other) 0580 10460 80/52/1 0560 0750 2090 2530 5260 0630 5160 0160 Same Day □ 2 Day \rightarrow Andrew Johnson Phone: (425) 883-3881 • Fax: (425) 885-4603 Project Manager Oavi Crais Project Name: Project Number: 753-00 Signature HA-14-0.5 -9-0,5 HA-13-0.5 HA-5-0.5 HA-10-0,5 411-11-0.5 HA -12-0,5 HA-8-0.5 HA-6-0,5 HA-7-0,5 Company: CEI Reviewed by/Date Relinquished by Relinquished by Relinquished by HA Received by Received by Received by Sampled by: \overline{g} مل ب 3

OnSite Environmental Inc.

Chain of Custody

Environmental Inc.	Turnaround Request (in working days)	Laboratory Number:	01-168	
	(Check One)		Requested Analysis	
Company GET	Same Day 1 Day			
C) $86-753-00$		80928		
roject Paris = Covinaton	Standard (7 working days)	Q02	(8)	
Project Manager: Craid	(TPH analysis 5 working days)	BTEX S260B Volatill	v 8081, 1318 y Metals	
Sampled by Ayora Johnson	(other)	H-Gx/ H-Dx se by 8 seated	ides bi ADS Metala Metala	
ah ID Samule Identification	Date Time # of Sampled Sampled Matrix Cont.	VVIPP Volatile Haloge	Herbio TCLP HEM to	
- 4 H	1 5 5260 \$			V
				1
Signature	Company	Date Time	Comments/Special Instructions:	
Relinquished by	5115	X _ 1		
Received by	SEC.	1PA108 1355		
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date	Reviewed by/Date		Chromatograms with final report	



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 12, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington (CGS)

Laboratory Reference No. 0801-168B

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on January 29, 2008.

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

Project: 0186-753-00; PSE-Covington (CGS)

Case Narrative

Samples were collected on January 29, 2008 and received by the laboratory on January 29, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Project: 0186-753-00; PSE-Covington (CGS)

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes	
HA-2-0.5	01-168-04	Soil	1-29-08	1-29-08		
HA-2-1.0	01-168-05	Soil	1-29-08	1-29-08		
HA-2-2.0	01-168-06	Soil	1-29-08	1-29-08		

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM

Date Extracted: 2-8-08
Date Analyzed: 2-11-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-05
Client ID: HA-2-1.0

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0072
2-Methylnaphthalene	ND		0.0072
1-Methylnaphthalene	ND		0.0072
Acenaphthylene	ND		0.0072
Acenaphthene	ND		0.0072
Fluorene	ND		0.0072
Phenanthrene	0.037		0.0072
Anthracene	0.0098		0.0072
Fluoranthene	0.12		0.0072
Pyrene	0.11		0.0072
Benzo[a]anthracene	0.050		0.0072
Chrysene	0.058		0.0072
Benzo[b]fluoranthene	0.059		0.0072
Benzo[k]fluoranthene	0.020		0.0072
Benzo[a]pyrene	0.040		0.0072
Indeno(1,2,3-c,d)pyrene	0.019		0.0072
Dibenz[a,h]anthracene	0.0080		0.0072
Benzo[g,h,i]perylene	0.020		0.0072

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	81	44 - 115
2-Fluorobiphenyl	73	52 - 100
Terphenyl-d14	77	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM

Date Extracted: 2-8-08
Date Analyzed: 2-11-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 01-168-06
Client ID: HA-2-2.0

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0072
2-Methylnaphthalene	0.023		0.0072
1-Methylnaphthalene	0.075		0.0072
Acenaphthylene	ND		0.0072
Acenaphthene	0.33		0.0072
Fluorene	0.13		0.0072
Phenanthrene	2.9		0.36
Anthracene	0.81		0.0072
Fluoranthene	12		0.36
Pyrene	9.2		0.36
Benzo[a]anthracene	2.8		0.36
Chrysene	2.8		0.36
Benzo[b]fluoranthene	2.3		0.36
Benzo[k]fluoranthene	0.88		0.36
Benzo[a]pyrene	1.5		0.36
Indeno(1,2,3-c,d)pyrene	0.64		0.0072
Dibenz[a,h]anthracene	0.25		0.0072
Benzo[g,h,i]perylene	0.61		0.0072

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	85	44 - 115
2-Fluorobiphenyl	78	52 - 100
Terphenyl-d14	80	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM METHOD BLANK QUALITY CONTROL

Date Extracted: 2-8-08
Date Analyzed: 2-8-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0208S1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0067
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067
Acenaphthylene	ND		0.0067
Acenaphthene	ND		0.0067
Fluorene	ND		0.0067
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Fluoranthene	ND		0.0067
Pyrene	ND		0.0067
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno(1,2,3-c,d)pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	68	44 - 115
2-Fluorobiphenyl	72	52 - 100
Terphenyl-d14	92	66 - 123

Project: 0186-753-00; PSE-Covington (CGS)

PAHs by EPA 8270D/SIM SB/SBD QUALITY CONTROL

Date Extracted: 2-8-08 Date Analyzed: 2-8-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: SB0208S1

	Spike		Percent		Percent	Recovery	
Compound:	Amount	SB	Recovery	SBD	Recovery	Limits	Flags
Naphthalene	0.0833	0.0518	62	0.0425	51	44-111	
Acenaphthylene	0.0833	0.0607	73	0.0555	67	53-114	
Acenaphthene	0.0833	0.0604	73	0.0561	67	54-114	
Fluorene	0.0833	0.0628	75	0.0599	72	53-123	
Phenanthrene	0.0833	0.0635	76	0.0626	75	58-115	
Anthracene	0.0833	0.0600	72	0.0580	70	58-113	
Fluoranthene	0.0833	0.0692	83	0.0684	82	69-115	
Pyrene	0.0833	0.0688	83	0.0680	82	72-114	
Benzo[a]anthracene	0.0833	0.0621	75	0.0613	74	66-126	
Chrysene	0.0833	0.0662	79	0.0658	79	63-130	
Benzo[b]fluoranthene	0.0833	0.0687	82	0.0660	79	66-124	
Benzo[k]fluoranthene	0.0833	0.0658	79	0.0657	79	63-128	
Benzo[a]pyrene	0.0833	0.0616	74	0.0593	71	56-116	
Indeno(1,2,3-c,d)pyrene	0.0833	0.0639	77	0.0628	75	66-127	
Dibenz[a,h]anthracene	0.0833	0.0643	77	0.0631	76	64-130	
Benzo[g,h,i]perylene	0.0833	0.0634	76	0.0613	74	65-119	

		RPD	
	RPD	Limit	Flags
Naphthalene	20	28	
Acenaphthylene	9	27	
Acenaphthene	8	24	
Fluorene	5	22	
Phenanthrene	1	18	
Anthracene	3	18	
Fluoranthene	1	16	
Pyrene	1	16	
Benzo[a]anthracene	1	16	
Chrysene	1	16	
Benzo[b]fluoranthene	4	16	
Benzo[k]fluoranthene	0	17	
Benzo[a]pyrene	4	16	
Indeno(1,2,3-c,d)pyrene	2	16	
Dibenz[a,h]anthracene	2	16	
Benzo[g,h,i]perylene	3	17	

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	01-168-05 HA-2-1.0					
Mercury	ND	0.27	7471A	2-11-08	2-11-08	
Lab ID:	01-168-06 HA-2-2.0					
Mercury	ND	0.27	7471A	2-11-08	2-11-08	

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 2-11-08
Date Analyzed: 2-11-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0211S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 2-11-08
Date Analyzed: 2-11-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-050-05

Sample Duplicate

Analyte Result RPD PQL Flags

Mercury ND ND NA 0.25

Project: 0186-753-00; PSE-Covington (CGS)

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 2-11-08
Date Analyzed: 2-11-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-050-05

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	0.495	99	0.502	100	2	

Project: 0186-753-00; PSE-Covington (CGS)

TCLP MERCURY by EPA 1311/7470A

Date Prepared: 2-12-08 Date Extracted: 2-12-08 Date Analyzed: 2-12-08

Matrix: TCLP Extract Units: mg/L (ppm)

Lab ID: 01-168-04 Client ID: **HA-2-0.5**

Analyte Method Result PQL

Mercury 7470A **ND** 0.0050

Project: 0186-753-00; PSE-Covington (CGS)

TCLP MERCURY by EPA 1311/7470A METHOD BLANK QUALITY CONTROL

Date Prepared: 2-12-08

Date Extracted: 2-12-08

Date Analyzed: 2-12-08

Matrix: TCLP Extract Units: mg/L (ppm)

Lab ID: MB0212T1

Analyte Method Result PQL

Mercury 7470A **ND** 0.0050

Project: 0186-753-00; PSE-Covington (CGS)

TCLP MERCURY by EPA 1311/7470A DUPLICATE QUALITY CONTROL

Date Prepared: 2-12-08
Date Extracted: 2-12-08
Date Analyzed: 2-12-08

Matrix: TCLP Extract Units: mg/L (ppm)

Lab ID: 02-054-01

Sample Duplicate

Analyte Result RPD PQL Flags

Mercury ND ND NA 0.0050

Project: 0186-753-00; PSE-Covington (CGS)

TCLP MERCURY by EPA 1311/7470A MS/MSD QUALITY CONTROL

Date Prepared: 2-12-08
Date Extracted: 2-12-08
Date Analyzed: 2-12-08

Matrix: TCLP Extract Units: mg/L (ppm)

Lab ID: 02-054-01

Spike Percent Percent Analyte Level MS Recovery **MSD** Recovery **RPD** Flags Mercury 0.050 0.0485 97 0.0485 97 0

Project: 0186-753-00; PSE-Covington (CGS)

% MOISTURE

Date Analyzed: 2-8-08

Client ID	Lab ID	% Moisture
HA-2-1.0	01-168-05	7
HA-2-2.0	01-168-06	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.
- 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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

Page 1 of 3

Chain of Custody

	12 m					eture	ioM %	\times			X	8	8	X			X								
						PIC	H		X	X		X	X		\times	X									
			_								\sim								Q	A					
			b	4	4	1 ノ- 	<u> </u>				8								X) ACLAR 2 (S/US =	7 宋					
					7117	2007	<u> </u>	X			×	\otimes	(\mathcal{S})	×			×		Μ̈́	<u>م</u>					
																			80	K					port
								$\vdash \leftarrow$	 									us:	100	, ,				ļ	al re
	Vsis						HEW P	(6 5									ructio	ď	7					th fin
68	Requested Analysis			(0)			TCLP	-	q									Comments/Special Instructions:	0	! C(ay	<u>.</u>				Chromatograms with final report
1	ted				y 8151. Metals			1	H									Speci	Ž)					gran
1	lues		101 100		1808 /													rents/							matc
1-10) E						CB ² I	 										Comm	Č)					Shro
1				WI				- /			×	Θ	(2)	×	-					1					
be					. py 82							\vee								5					
Laboratory Number:			S60B		Volatile			1										Time		5					
2					8560B	8 yd se	Volatile												00	88					
ato						H-D×	ЧΤW	I											0	3	.				
bor					хэтв	H-GX/I	IGTW											Date	2	3					
La La					а	н-нсі	IGTWN	J																	
		1 VaC	3 Day	_	lays)	1	# of Cont		-								_								
est (-	. E	days)	sis 5 working days)					1															
Reque days	je)			king	wor	<u>5</u>	Matrix	λ		-	Chamber Parks (10)	garage conservation of the original states of		<u> </u>			3								//Date
und F	(Check One)			7 wor	sis 5	(other)	-			0,	0	7	10	0	2	0	7	ny.	\mathcal{L}	(2)					Reviewed by/Date
Turnaround Request (in working days)	ġ	Same Day	r 1	Standard (7 working days)	(TPH analy		Time	0080 3/52/1	0180	0280	480	2882	0830	083	083	180	180	Company	75						Revie
ĮĮ.		9	2 Day	tand	H. H.			0	9	0	0	Ö	0	0	0	0	0	•	$\stackrel{\smile}{-}$						
) (A	S >			Date Samuled	/52	_			Carrier and a second					-								
							- 5	_				-													
																			-						
_				5		_													25						
<u> </u>	Phone: (425) 883-3881 • Fax: (425) 885-4603			(95)		Johnson													W	3					
=	125) 88			<u> </u>		کے	Samula Identification												12	12					
Ħ	Fax: (0	Covington	2.00	10					E							alic	N		5				
Ĕ	-3881		9	7	73			7	0	2.0	N	0	0	N		0	2	Signature	ON.						
5 5	25) 883		753-00	\ \ \ \ \		8	Same			2-	20-	-	$ \mathcal{N} $	10.	0.7	1, ~			<u> </u>		ا				
Environmental	one: (42	1-1	12	9	2	Andrew		40 Property			2	17	-2-	\mathcal{V}	12	HA-3-	1								
	Ē	77		Ĭ.	i a	V		1 4 H	- HH			H A -	1	1	1		HA -4		d by		p q p		d by		//Date
		\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Project Number:	Project Name:	Project Manager: 12	d by:		二	- =	∀ □		工	HA	11A -	Z Z		#		Relinquished by	Received by	Relinquished by	Received by	Relinquished by	Received by	Reviewed by/Date
		Company:		Oject	oject	Sampled by:	4			(~	-	†	<u> </u>		~	8	5		Relinq	Receiv	Reling	Receiv	Reling	Receiv	Revie
		ပိ	Į,	ų.	Ę	Sa	3			2 4	72	V	2) '	<u></u>					Ι			<u></u>	<u> </u>	

Page 2 of 3

Chain of Custody

3 - 00	(Check One)				Requested Analysis	reie			
753-00 Svington						2			
753-00 Gvington]								
Covington			82608						
	dard (7 working days)		****	A			/		
Tall Crain	(TPH analysis 5 working days)		litsloV l S8 yd s S \ G07	32 8081	y 8151 Metals	* !	<i>(</i>) ()	/	
۔	(other)	H-D× H-@×\I	səlitsic	by 808	ARO	991 YG	2) A d	11	erure
Date Sampled	Time # of Sampled Matrix Conf.	IGTWV IGTWV IGTWV	ovimaS	PCBs I		HEW P	V	OH.	
89/52/1	S						X		X
5.0.5	1 5050						×		
HA-7-0,5	0880						×		\rightarrow
8-0.5	2530							×	_
-9-0,5	5/60				:			×	
5,0-01-	0360							×	
HA-11-0.5	0/60							×	
	0350			3	ر م. رور رور کی م		×		X
	2 5280		_	No.	C		×		
HA-14-0.5	0630)			× —		→
Signature	Company	Date	Time 1550		Comments/Special Instructions:	uctions:			
Received by	2013		` `						
Relinquished by									
Received by									
Relinquished by									
Received by									
Reviewed by/Date	Reviewed by/Date			Chromato	grams witl	Chromatograms with final report	_ _		

Chain of Custody

	% Moisture		
01 - 1 68 Requested Analysis	Pesticides by 8081A Herbicides by 8151A TCLP Metals HEM by 1664	nts/Special Instruc	Chromatograms with final report □
	PCBs by 8082 PAHs by 8270D / SIM		5
Laboratory Number:	Halogenated Volatiles by 8260B Semivolatiles by 8270D		
ory N	Boass yd aelitelol betegeelel		
orato	NWTPH-Gx/BTEX		
Lab	MWTPH-HCID		
Turnaround Request (in working days) (Check One)	The Day and ar PH ar The ar Say	S 5280 Amedimos	Reviewed by/Date
	Same C Day C TPH a C	80/s 2/	
Environmental Inc. Phone: (425) 883-3881 • Fax: (425) 885-4603	Manage:	Relinquished by Received by	Reviewed by/Date



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 22, 2008

Puget Sound Energy c/o Cindy Bartlett GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate Station

Laboratory Reference No. 0802-140

Dear Cindy:

Enclosed are the analytical results and associated quality control data for samples submitted on February 21, 2008.

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

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

Case Narrative

Samples were collected on February 21, 2008 and received by the laboratory on February 21, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
HA-2-3.0	02-140-01	Soil	2-21-08	2-21-08	
HA-2-4.0	02-140-02	Soil	2-21-08	2-21-08	
HA-16-2.0	02-140-03	Soil	2-21-08	2-21-08	
HA-17-2.0	02-140-04	Soil	2-21-08	2-21-08	
HA-18-0.5	02-140-05	Soil	2-21-08	2-21-08	
HA-19-2.0	02-140-06	Soil	2-21-08	2-21-08	
HA-20-2.0	02-140-07	Soil	2-21-08	2-21-08	

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-21-08
Date Analyzed: 2-21-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-140-01 Client ID: HA-2-3.0

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0072
2-Methylnaphthalene	ND		0.0072
1-Methylnaphthalene	ND		0.0072
Acenaphthylene	ND		0.0072
Acenaphthene	ND		0.0072
Fluorene	ND		0.0072
Phenanthrene	0.095		0.0072
Anthracene	0.027		0.0072
Fluoranthene	0.54		0.0072
Pyrene	0.42		0.0072
Benzo[a]anthracene	0.17		0.0072
Chrysene	0.15		0.0072
Benzo[b]fluoranthene	0.15		0.0072
Benzo[k]fluoranthene	0.043		0.0072
Benzo[a]pyrene	0.097		0.0072
Indeno(1,2,3-c,d)pyrene	0.038		0.0072
Dibenz[a,h]anthracene	0.015		0.0072
Benzo[g,h,i]perylene	0.038		0.0072

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	73	44 - 115
2-Fluorobiphenyl	70	52 - 100
Terphenyl-d14	81	66 - 123

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-21-08
Date Analyzed: 2-21-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-140-02 **Client ID: HA-2-4.0**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0070
2-Methylnaphthalene	ND		0.0070
1-Methylnaphthalene	ND		0.0070
Acenaphthylene	ND		0.0070
Acenaphthene	ND		0.0070
Fluorene	ND		0.0070
Phenanthrene	0.050		0.0070
Anthracene	0.012		0.0070
Fluoranthene	0.38		0.0070
Pyrene	0.29		0.0070
Benzo[a]anthracene	0.11		0.0070
Chrysene	0.092		0.0070
Benzo[b]fluoranthene	0.090		0.0070
Benzo[k]fluoranthene	0.028		0.0070
Benzo[a]pyrene	0.054		0.0070
Indeno(1,2,3-c,d)pyrene	0.021		0.0070
Dibenz[a,h]anthracene	0.0082		0.0070
Benzo[g,h,i]perylene	0.020		0.0070

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	62	44 - 115
2-Fluorobiphenyl	61	52 - 100
Terphenyl-d14	85	66 - 123

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-21-08
Date Analyzed: 2-21-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-140-03 **Client ID: HA-16-2.0**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0069
2-Methylnaphthalene	ND		0.0069
1-Methylnaphthalene	ND		0.0069
Acenaphthylene	ND		0.0069
Acenaphthene	0.014		0.0069
Fluorene	0.016		0.0069
Phenanthrene	0.37		0.0069
Anthracene	0.13		0.0069
Fluoranthene	0.84		0.0069
Pyrene	0.72		0.0069
Benzo[a]anthracene	0.33		0.0069
Chrysene	0.34		0.0069
Benzo[b]fluoranthene	0.29		0.0069
Benzo[k]fluoranthene	0.10		0.0069
Benzo[a]pyrene	0.21		0.0069
Indeno(1,2,3-c,d)pyrene	0.084		0.0069
Dibenz[a,h]anthracene	0.035		0.0069
Benzo[g,h,i]perylene	0.081		0.0069

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	56	44 - 115
2-Fluorobiphenyl	58	52 - 100
Terphenyl-d14	72	66 - 123

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-21-08
Date Analyzed: 2-21-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-140-04 **Client ID: HA-17-2.0**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0071
2-Methylnaphthalene	ND		0.0071
1-Methylnaphthalene	ND		0.0071
Acenaphthylene	ND		0.0071
Acenaphthene	ND		0.0071
Fluorene	ND		0.0071
Phenanthrene	ND		0.0071
Anthracene	ND		0.0071
Fluoranthene	0.0078		0.0071
Pyrene	0.0075		0.0071
Benzo[a]anthracene	ND		0.0071
Chrysene	ND		0.0071
Benzo[b]fluoranthene	ND		0.0071
Benzo[k]fluoranthene	ND		0.0071
Benzo[a]pyrene	ND		0.0071
Indeno(1,2,3-c,d)pyrene	ND		0.0071
Dibenz[a,h]anthracene	ND		0.0071
Benzo[g,h,i]perylene	ND		0.0071

Surrogate :	Percent	Control	
	Recovery	Limits	
Nitrobenzene-d5	63	44 - 115	
2-Fluorobiphenyl	64	52 - 100	
Terphenyl-d14	83	66 - 123	

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-21-08
Date Analyzed: 2-21-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-140-06
Client ID: HA-19-2.0

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0069
2-Methylnaphthalene	ND		0.0069
1-Methylnaphthalene	ND		0.0069
Acenaphthylene	ND		0.0069
Acenaphthene	ND		0.0069
Fluorene	ND		0.0069
Phenanthrene	ND		0.0069
Anthracene	ND		0.0069
Fluoranthene	0.018		0.0069
Pyrene	0.015		0.0069
Benzo[a]anthracene	0.0082		0.0069
Chrysene	0.0073		0.0069
Benzo[b]fluoranthene	0.0075		0.0069
Benzo[k]fluoranthene	ND		0.0069
Benzo[a]pyrene	ND		0.0069
Indeno(1,2,3-c,d)pyrene	ND		0.0069
Dibenz[a,h]anthracene	ND		0.0069
Benzo[g,h,i]perylene	ND		0.0069

Surrogate :	Percent	Control	
	Recovery	Limits	
Nitrobenzene-d5	68	44 - 115	
2-Fluorobiphenyl	67	52 - 100	
Terphenyl-d14	81	66 - 123	

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-21-08
Date Analyzed: 2-21-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-140-07 **Client ID: HA-20-2.0**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0068
2-Methylnaphthalene	ND		0.0068
1-Methylnaphthalene	ND		0.0068
Acenaphthylene	ND		0.0068
Acenaphthene	ND		0.0068
Fluorene	ND		0.0068
Phenanthrene	ND		0.0068
Anthracene	ND		0.0068
Fluoranthene	0.030		0.0068
Pyrene	0.023		0.0068
Benzo[a]anthracene	0.0096		0.0068
Chrysene	0.0075		0.0068
Benzo[b]fluoranthene	0.0078		0.0068
Benzo[k]fluoranthene	ND		0.0068
Benzo[a]pyrene	ND		0.0068
Indeno(1,2,3-c,d)pyrene	ND		0.0068
Dibenz[a,h]anthracene	ND		0.0068
Benzo[g,h,i]perylene	ND		0.0068

Surrogate :	Percent	Control	
	Recovery	Limits	
Nitrobenzene-d5	61	44 - 115	
2-Fluorobiphenyl	64	52 - 100	
Terphenyl-d14	80	66 - 123	

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM METHOD BLANK QUALITY CONTROL

Date Extracted: 2-21-08 2-21-08 Date Analyzed:

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0221S1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0067
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067
Acenaphthylene	ND		0.0067
Acenaphthene	ND		0.0067
Fluorene	ND		0.0067
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Fluoranthene	ND		0.0067
Pyrene	ND		0.0067
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno(1,2,3-c,d)pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent	Control	
	Recovery	Limits	
Nitrobenzene-d5	60	44 - 115	
2-Fluorobiphenyl	60	52 - 100	
Terphenyl-d14	84	66 - 123	

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM MS/MSD QUALITY CONTROL

Date Extracted: 2-21-08 Date Analyzed: 2-21-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-068-03

	Sample	Spike		Percent		Percent	Recovery	
Compound:	Amount	Amount	MS	Recovery	MSD	Recovery	Limits	Flags
Naphthalene	ND	0.0833	0.0381	46	0.0392	47	45-101	
Acenaphthylene	ND	0.0833	0.0461	55	0.0481	58	50-109	
Acenaphthene	ND	0.0833	0.0436	52	0.0457	55	52-103	
Fluorene	ND	0.0833	0.0504	60	0.0523	63	56-107	
Phenanthrene	ND	0.0833	0.0563	68	0.0570	68	52-109	
Anthracene	ND	0.0833	0.0508	61	0.0548	66	58-107	
Fluoranthene	ND	0.0833	0.0638	77	0.0641	77	42-128	
Pyrene	ND	0.0833	0.0616	74	0.0621	74	51-121	
Benzo[a]anthracene	ND	0.0833	0.0628	75	0.0638	77	60-121	
Chrysene	ND	0.0833	0.0568	68	0.0573	69	42-147	
Benzo[b]fluoranthene	ND	0.0833	0.0642	77	0.0656	79	50-123	
Benzo[k]fluoranthene	ND	0.0833	0.0658	79	0.0652	78	58-117	
Benzo[a]pyrene	ND	0.0833	0.0559	67	0.0602	72	54-115	
Indeno(1,2,3-c,d)pyrene	ND	0.0833	0.0581	70	0.0583	70	54-117	
Dibenz[a,h]anthracene	ND	0.0833	0.0582	70	0.0587	70	48-145	
Benzo[g,h,i]perylene	ND	0.0833	0.0573	69	0.0575	69	52-115	

		RPD	
	RPD	Limit	Flags
Naphthalene	3	24	
Acenaphthylene	4	25	
Acenaphthene	5	21	
Fluorene	4	19	
Phenanthrene	1	17	
Anthracene	8	14	
Fluoranthene	0	27	
Pyrene	1	27	
Benzo[a]anthracene	2	18	
Chrysene	1	19	
Benzo[b]fluoranthene	2	26	
Benzo[k]fluoranthene	1	17	
Benzo[a]pyrene	7	18	
Indeno(1,2,3-c,d)pyrene	0	20	
Dibenz[a,h]anthracene	1	15	
Benzo[g,h,i]perylene	0	21	

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Soil Matrix:

mg/kg (ppm) Units:

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	02-140-05					
Client ID:	HA-18-0.5					
Mercury	0.40	0.14	7471A	2-22-08	2-22-08	

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 2-22-08 Date Analyzed: 2-22-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0222S1

PQL Analyte Method Result

Mercury 7471A ND 0.13 Date of Report: February 22, 2008 Samples Submitted: February 21, 2008

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 2-22-08 Date Analyzed: 2-22-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-136-02

> **Duplicate** Sample

Analyte Result Result **RPD PQL** Flags

Mercury ND ND NA 0.13 Date of Report: February 22, 2008 Samples Submitted: February 21, 2008

Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 2-22-08 Date Analyzed: 2-22-08

Matrix: Soil

mg/kg (ppm) Units:

Lab ID: 02-136-02

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	0.500	100	0.507	101	1	

Date of Report: February 22, 2008 Samples Submitted: February 21, 2008 Laboratory Reference: 0802-140

Project: 0186-753-00; PSE-Covington Gate Station

% MOISTURE

Date Analyzed: 2-21-08

Client ID	Lab ID	% Moisture
HA-2-3.0	02-140-01	7
HA-2-4.0	02-140-02	5
HA-16-2.0	02-140-03	4
HA-17-2.0	02-140-04	6
HA-18-0.5	02-140-05	8
HA-19-2.0	02-140-06	4
HA-20-2.0	02-140-07	2



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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

CO
¥
君
u
d
_=
æ
盂

OnSite	Chain o	Chain of Custody	g.	Page
Environmental Inc. 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • Fax: (475) 885-4603	Turnaround Request (in working days)	Laboratory Number:	02-140	
Company	neck On		Requested Analysis	
Project Number:	Day Day			
	2 Day 3 Day	vy 8260		
1 0 V		X BB atiles b	A18	/
Sampled by: A Sartlett	(soft)	ix/BTE	by 808 by 819 als be4	<i>(</i>
indeed Johnson	(Other)	PH-C PH-C PH-C PH-C PH-C	by 8 by 8 by 8 by 8 by 8 by 16	
Lab ID Sample Identification	Date Time # of Sampled Sampled Matrix Cont.	HTWN HTWN HTWN Ilitalov PalogiaH	EM Postici otal Formation of the Postici otal Formation of the Postician o	• Mois
1 44-2-3.0	S		\ 	%
2 44-2-4.0	0735			
3 HA -16-12,0	0440		×	
4 HA-17-2.0	5420	×		
5 HA-18-0.5	0750			×
6 44-19-2.0	9510	×		
7 HA-20-2.0	1 0030 1	×		
Signature	Company	Date Time	Comments/Special Instructions:	
Relinquished by	GET	2/21/08 1325		
Received by The Character Relinquished by	88C	2/2/18/1375		
Received by				
Relinquished by				
Received by				
Reviewed by/Date	Reviewed by/Date		Chromatograms with final report	
	OISTBIBLITION I ECENIE. WILL CO. C.		סוווסוויומיסאומוווס אינור וווומו ובאסור [

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 3, 2008

Cindy Bartlett GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate Station

Laboratory Reference No. 0802-197

Dear Cindy:

Enclosed are the analytical results and associated quality control data for samples submitted on February 29, 2008.

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

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

Case Narrative

Samples were collected on February 29, 2008 and received by the laboratory on February 29, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled Date R	eceived Notes
HA-18-2.0	02-197-01	Soil	2-29-08 2-2	9-08
HA-21-0.5	02-197-02	Soil	2-29-08 2-2	9-08
HA-21-2.0	02-197-03	Soil	2-29-08 2-2	9-08
HA-22-0.5	02-197-04	Soil	2-29-08 2-2	9-08
HA-22-2.0	02-197-05	Soil	2-29-08 2-2	9-08
HA-20-0.5	02-197-06	Soil	2-29-08 2-2	9-08
HA-19-0.5	02-197-07	Soil	2-29-08 2-2	9-08

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-29-08
Date Analyzed: 3-3-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-197-01 **Client ID: HA-18-2.0**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0076
2-Methylnaphthalene	ND		0.0076
1-Methylnaphthalene	ND		0.0076
Acenaphthylene	ND		0.0076
Acenaphthene	ND		0.0076
Fluorene	ND		0.0076
Phenanthrene	0.074		0.0076
Anthracene	0.020		0.0076
Fluoranthene	0.24		0.0076
Pyrene	0.20		0.0076
Benzo[a]anthracene	0.088		0.0076
Chrysene	0.097		0.0076
Benzo[b]fluoranthene	0.093		0.0076
Benzo[k]fluoranthene	0.028		0.0076
Benzo[a]pyrene	0.064		0.0076
Indeno(1,2,3-c,d)pyrene	0.030		0.0076
Dibenz[a,h]anthracene	0.012		0.0076
Benzo[g,h,i]perylene	0.029		0.0076

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	77	44 - 115
2-Fluorobiphenyl	74	52 - 100
Terphenyl-d14	86	66 - 123

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-29-08
Date Analyzed: 3-3-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-197-03 **Client ID: HA-21-2.0**

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0070
2-Methylnaphthalene	ND		0.0070
1-Methylnaphthalene	ND		0.0070
Acenaphthylene	ND		0.0070
Acenaphthene	ND		0.0070
Fluorene	ND		0.0070
Phenanthrene	ND		0.0070
Anthracene	ND		0.0070
Fluoranthene	ND		0.0070
Pyrene	ND		0.0070
Benzo[a]anthracene	ND		0.0070
Chrysene	ND		0.0070
Benzo[b]fluoranthene	ND		0.0070
Benzo[k]fluoranthene	ND		0.0070
Benzo[a]pyrene	ND		0.0070
Indeno(1,2,3-c,d)pyrene	ND		0.0070
Dibenz[a,h]anthracene	ND		0.0070
Benzo[g,h,i]perylene	ND		0.0070

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	79	44 - 115
2-Fluorobiphenyl	77	52 - 100
Terphenyl-d14	90	66 - 123

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM

Date Extracted: 2-29-08
Date Analyzed: 3-3-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-197-05

Client ID: HA-22-2.0

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0068
2-Methylnaphthalene	ND		0.0068
1-Methylnaphthalene	ND		0.0068
Acenaphthylene	ND		0.0068
Acenaphthene	ND		0.0068
Fluorene	ND		0.0068
Phenanthrene	ND		0.0068
Anthracene	ND		0.0068
Fluoranthene	ND		0.0068
Pyrene	ND		0.0068
Benzo[a]anthracene	ND		0.0068
Chrysene	ND		0.0068
Benzo[b]fluoranthene	ND		0.0068
Benzo[k]fluoranthene	ND		0.0068
Benzo[a]pyrene	ND		0.0068
Indeno(1,2,3-c,d)pyrene	ND		0.0068
Dibenz[a,h]anthracene	ND		0.0068
Benzo[g,h,i]perylene	ND		0.0068

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	65	44 - 115
2-Fluorobiphenyl	63	52 - 100
Terphenyl-d14	89	66 - 123

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM METHOD BLANK QUALITY CONTROL

Date Extracted: 2-29-08
Date Analyzed: 2-29-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0229S1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0067
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067
Acenaphthylene	ND		0.0067
Acenaphthene	ND		0.0067
Fluorene	ND		0.0067
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Fluoranthene	ND		0.0067
Pyrene	ND		0.0067
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno(1,2,3-c,d)pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent	Control
	Recovery	Limits
Nitrobenzene-d5	65	44 - 115
2-Fluorobiphenyl	68	52 - 100
Terphenyl-d14	89	66 - 123

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

PAHs by EPA 8270D/SIM SB/SBD QUALITY CONTROL

Date Extracted: 2-29-08 Date Analyzed: 2-29-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: SB0229S1

	Spike		Percent		Percent	Recovery	
Compound:	Amount	SB	Recovery	SBD	Recovery	Limits	Flags
Naphthalene	0.0833	0.0508	61	0.0543	65	44-111	
Acenaphthylene	0.0833	0.0540	65	0.0598	72	53-114	
Acenaphthene	0.0833	0.0568	68	0.0559	67	54-114	
Fluorene	0.0833	0.0582	70	0.0591	71	53-123	
Phenanthrene	0.0833	0.0616	74	0.0605	73	58-115	
Anthracene	0.0833	0.0587	70	0.0590	71	58-113	
Fluoranthene	0.0833	0.0676	81	0.0676	81	69-115	
Pyrene	0.0833	0.0671	81	0.0690	83	72-114	
Benzo[a]anthracene	0.0833	0.0596	71	0.0607	73	66-126	
Chrysene	0.0833	0.0666	80	0.0674	81	63-130	
Benzo[b]fluoranthene	0.0833	0.0651	78	0.0662	79	66-124	
Benzo[k]fluoranthene	0.0833	0.0704	84	0.0678	81	63-128	
Benzo[a]pyrene	0.0833	0.0576	69	0.0600	72	56-116	
Indeno(1,2,3-c,d)pyrene	0.0833	0.0678	81	0.0695	83	66-127	
Dibenz[a,h]anthracene	0.0833	0.0680	82	0.0701	84	64-130	
Benzo[g,h,i]perylene	0.0833	0.0662	79	0.0678	81	65-119	

		RPD	
	RPD	Limit	Flags
Naphthalene	7	28	
Acenaphthylene	10	27	
Acenaphthene	2	24	
Fluorene	2	22	
Phenanthrene	2	18	
Anthracene	1	18	
Fluoranthene	0	16	
Pyrene	3	16	
Benzo[a]anthracene	2	16	
Chrysene	1	16	
Benzo[b]fluoranthene	2	16	
Benzo[k]fluoranthene	4	17	
Benzo[a]pyrene	4	16	
Indeno(1,2,3-c,d)pyrene	3	16	
Dibenz[a,h]anthracene	3	16	
Benzo[g,h,i]perylene	2	17	

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix:

Soil

Units:

mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
	00.407.00					
Lab ID:	02-197-02					
Client ID:	HA-21-0.5					
Mercury	10	2.6	7471A	3-3-08	3-3-08	
Lab ID:	02-197-04					
Client ID:	HA-22-0.5					
Mercury	8.3	2.6	7471A	3-3-08	3-3-08	
Lab ID:	02-197-06					
Client ID:	HA-20-0.5					
Mercury	5.0	2.6	7471A	3-3-08	3-3-08	
Lab ID:	02-197-07					
Client ID:	HA-19-0.5					
Mercury	3.4	1.3	7471A	3-3-08	3-3-08	

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 3-3-08
Date Analyzed: 3-3-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0303S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 3-3-08 Date Analyzed: 3-3-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-188-03

Sample Duplicate

Analyte Result RPD PQL Flags

Mercury ND ND NA 0.25

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 3-3-08 Date Analyzed: 3-3-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 02-188-03

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	0.482	96	0.481	96	0	

Samples Submitted: February 29, 2008

Laboratory Reference: 0802-197

Project: 0186-753-00; PSE-Covington Gate Station

% MOISTURE

Date Analyzed: 2-29-08

Client ID	Lab ID	% Moisture
HA-18-2.0	02-197-01	12
HA-21-0.5	02-197-02	2
HA-21-2.0	02-197-03	5
HA-22-0.5	02-197-04	4
HA-22-2.0	02-197-05	2
HA-20-0.5	02-197-06	2
HA-19-0.5	02-197-07	4



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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

Chain of Custody

% Moisture Chromatograms with final report \times Requested Analysis HEM by 1664 **ICLP Metals** Laboratory Number: 02-197 Total RCRA Metals (8) Atčt8 yd sebicidee A1808 vd sebioitse SCBs by 8082 X MIS \ G07S8 vd sHA9 2018/180/86/C 2/29/07 1500 Semivolatiles by 8270D Halogenated Volatiles by 8260B Alatiles by 8260B **XQ-H9TWN** Date NWTPH-Gx/BTEX ИМТРН-НСІР (TPH analysis 5 working days) X 1 Day 3 Day Standard (7 working days) Turnaround Request (in working days) Reviewed by/Date (Check One) (other) 0805 0480 0755 0020 0740 2/29/880730 0160 Same Day □ 2 Day Project Name: Project Manager:
Sampled by: Andrew John Son L OnSite Environmental Inc. Phone: (425) 883-3881 • Fax: (425) 885-4603 Sample Identification Project Number: 0753-00 HA-18-2.0 HA-22-2.0 HA-21-0.5 114-22-05 HA-20-05 4A-19-Company: Relinquished by Relinquished by Relinquished by Received by Received by Received by ab ID

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Reviewed by/Date



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 21, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate Station

Laboratory Reference No. 0803-115

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on March 18, 2008.

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

Project: 0186-753-00; PSE-Covington Gate Station

Case Narrative

Samples were collected on March 18, 2008 and received by the laboratory on March 18, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Project: 0186-753-00; PSE-Covington Gate Station

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
HA-23-1.0	03-115-01	Soil	3-18-08	3-18-08	
HA-24-1.0	03-115-03	Soil	3-18-08	3-18-08	
HA-24-2.0	03-115-04	Soil	3-18-08	3-18-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	03-115-01					
Client ID:	HA-23-1.0					
Mercury	1.3	0.64	7471A	3-19-08	3-19-08	
Lab ID:	03-115-03					
Client ID:	HA-24-1.0					
Mercury	15	6.4	7471A	3-19-08	3-19-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 3-19-08
Date Analyzed: 3-19-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0319S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.13

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 3-19-08
Date Analyzed: 3-19-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-114-04

Sample Duplicate

Analyte Result RPD PQL Flags

Mercury ND ND NA 0.13

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 3-19-08 Date Analyzed: 3-19-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-114-04

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	0.507	101	0.521	104	3	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Date Extracted: 3-20-08 Date Analyzed: 3-20-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-115-04
Client ID: HA-24-2.0

Analyte Method Result PQL

Mercury 7471A 7.4 1.3

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0320S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 3-20-08 Date Analyzed: 3-20-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-135-02

Sample Duplicate
Analyte Result Result RPD PQL Flags

Mercury 0.517 0.629 20 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 3-20-08 Date Analyzed: 3-20-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-135-02

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	0.973	91	1.13	122	15	

Project: 0186-753-00; PSE-Covington Gate Station

% MOISTURE

Date Analyzed: 3-18&20-08

Client ID	Lab ID	% Moisture	
HA-23-1.0	03-115-01	2	
HA-24-1.0	03-115-03	2	
HA-24-2.0	03-115-04	4	



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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

g
to
Cus
5
5
三 .
ai
듑

Environmental Inc. 14648 NE 95th Street - Redmond, WA 98052	Turnaround Request (in working days)	Laboratory Number:	1	03-115	15					
Phone: (425) 883-3881 • Fax: (425) 885-4603	(Check One)			Requested Analysis	d Ana	lysis				
FOENCH NEERS	☐ Same Day 💢 1 Day									
Project Number:			80928							
Covinator Gate Station	Standard (7 working days)		O07		(8)					
Jan /	(TPH analysis 5 working days)	8260B	l Volatil S by 82	85 y 8081, y 8151	Metals			h		
tre	(other)	H-Gx\	eelitsle	(q səp				גקוו	Pl	sture
Sample Identification	Date Time # of Sampled Sampled Matrix Cont.		ovime2		Total F	нем Р	КРН ТРН		PA	ioM %
M-23-10	S 04:41							×		
HA- 23 -30	1 S 54: t								X	
1 77	1 505:4							×		
1A-24 -3.0	1 2 55:7							8	¥	8
					,					
Signature	Company	, te		Comments/Special Instructions:	ecial Inst	ructions:				
Relinquished by	1 Geographer	3/18	<u>8</u> 5	Ø	PT/	S 103	1/4/	08.D	X /2	NG 51.
Received by	240	3/1808	1515		}	7	. ; . 5	(Jou 19T)	ئ)	
Relinquished by					_) - ,	_			
Received by										
Relinquished by										
Received by										
Reviewed by/Date	Reviewed by/Date			Chromatograms with final report	ams wit	h final ı	report			
>	DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy	Yellow - Report Copy	Pink - Client Co	8		,				

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 8, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate Station

Laboratory Reference No. 0804-041

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on April 4, 2008.

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: April 8, 2008 Samples Submitted: April 4, 2008 Laboratory Reference: 0804-041

Project: 0186-753-00; PSE-Covington Gate Station

Case Narrative

Samples were collected on April 2, 2008 and received by the laboratory on April 4, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Project: 0186-753-00; PSE-Covington Gate Station

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
HA-2-1.0	04-041-01	Soil	4-2-08	4-4-08	
HA-25-0.5	04-041-02	Soil	4-2-08	4-4-08	
HA-26-0.5	04-041-03	Soil	4-2-08	4-4-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	04-041-02					
Client ID:	HA-25-0.5					
Mercury	17	5.5	7471A	4-4-08	4-4-08	
Lab ID:	04-041-03					
Client ID:	HA-26-0.5					
Mercury	ND	0.27	7471A	4-4-08	4-4-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 4-4-08
Date Analyzed: 4-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0404S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.05

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 4-4-08 Date Analyzed: 4-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-266-01

Sample Duplicate

Analyte Result Repl PQL Flags

Mercury ND ND NA 0.05

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 4-4-08 Date Analyzed: 4-4-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 03-266-01

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	0.504	101	0.583	117	15	

Project: 0186-753-00; PSE-Covington Gate Station

PCBs by EPA 8082 SAMPLE SUMMARY

Date Extracted: 4-7-08 Date Analyzed: 4-7-08

Matrix: Soil

Units: mg/Kg (ppm)

 Lab ID
 Client ID
 Results
 PCB Type
 % Recovery
 PQL
 Flags

 04-041-01
 HA-2-1.0
 ND
 --- 70
 0.054

Project: 0186-753-00; PSE-Covington Gate Station

PCBs by EPA 8082 QUALITY CONTROL

Matrix: Soil

Units: mg/Kg (ppm)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0407S1					
Aroclor 1016	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1221	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1232	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1242	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1248	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1254	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1260	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1262	ND	0.050	EPA 8082	4-7-08	4-7-08	
Aroclor 1268	ND	0.050	EPA 8082	4-7-08	4-7-08	
Currogotor	Doroont Doooyon	Control Limita			•	•

Surrogate: Percent Recovery Control Limits DCB 89 39-118

Analyte	Re	sult	Spike	Level	Source Result		rcent covery	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	04-0	41-01									
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	0.383	0.412	0.500	0.500	ND	77	82	35-120	7	17	
Surrogate:											
DCB						81	86	39-118			

Project: 0186-753-00; PSE-Covington Gate Station

% MOISTURE

Date Analyzed: 4-4-08

Client ID	Lab ID	% Moisture
HA-2-1.0	04-041-01	8
HA-25-0.5	04-041-02	9
HA-26-0.5	04-041-03	9



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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

CHAIN OF CUSTODY RECORD GEOENGINEERS 8410 154TH AVENUE N.E. GEOENGINEERS, INC.

REDMOND, WASHINGTON 98052

DATE 4-4-08 LAB NO. 04-0 PAGE **8**8

(425) 861-6000

		1		10110	ANAI VOIS BEOLIIBED		NOTES/COMMENTS
PROJECT NAME/LOCATION PS 12 - COVING TON	SE-CO/129	るのである。	(100)	`_		4	
PROJECT NUMBER 0/86-753-00	0186-753-	000	74	!+/		dn	(Preserved, intered, etc.)
PROJECT MANAGER	Paul	rang	101	1		LSI	
SAMPLED BY	PAUL C	CARIG) £	h		a	
SAMPLE IDENTIFICATION	SAMPLE COLLECTION	CTION # OF	//	90		19	
	DATE TIME	MATRIX JARS	9			6	
	0411 80-2-4	<i>)</i> S	X	Λ ×		×	
7 44-25-0,5	150	/	X	<u>×</u>		X	
2 14-26-0.5	002)	/ S	X	<u>ک</u>		X	
}-							
BELINOUISHED BY.	FIRM COT	RELINQUISHED BY		FIRM	RELINQUISHED BY	λ{	FIRM
1	1	SIGNATURE			SIGNATURE		
PRINTED NAME DR C		PRINTED NAME			PRINTED NAME		
40-7	TIME 0845	DATE	TIME		DATE		TIME
/ED 63/	FIRM	RECEIVED BY		FIRM	RECEIVED BY		FIRM
		SIGNATURE			SIGNATURE		
BRINTED NAME DOWNERS PO	is te	PRINTED NAME			PRINTED NAME		
80/	TIME 0845	DATE	TIME		DATE		TIME
ENTS:							



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 20, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate Station

Laboratory Reference No. 0805-096

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on May 12, 2008.

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

Project: 0186-753-00; PSE-Covington Gate Station

Case Narrative

Samples were collected on May 12, 2008 and received by the laboratory on May 12, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Project: 0186-753-00; PSE-Covington Gate Station

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled I	Date Received	Notes
HA-29-0.5	05-096-01	Soil	5-12-08	5-12-08	
HA-30-0.5	05-096-02	Soil	5-12-08	5-12-08	
HA-27-0.5	05-096-03	Soil	5-12-08	5-12-08	
HA-25-2.0	05-096-04	Soil	5-12-08	5-12-08	
HA-34-1.0	05-096-05	Soil	5-12-08	5-12-08	
HA-28-0.5	05-096-06	Soil	5-12-08	5-12-08	
HA-31-1.0	05-096-07	Soil	5-12-08	5-12-08	
HA-33-0.5	05-096-08	Soil	5-12-08	5-12-08	
HA-32-0.5	05-096-09	Soil	5-12-08	5-12-08	
HA-19-1.0	05-096-10	Soil	5-12-08	5-12-08	
HA-20-1.0	05-096-11	Soil	5-12-08	5-12-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

	5 5 (T)			Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lak ID.	05 000 04					
Lab ID: Client ID:	05-096-01 HA-29-0.5					
Mercury	ND	0.27	7471A	5-14-08	5-14-08	
Lab ID:	05-096-02					
Client ID:	HA-30-0.5					
Mercury	0.78	0.27	7471A	5-14-08	5-14-08	
Lab ID:	05-096-03					
Client ID:	HA-27-0.5					
Mercury	ND	0.27	7471A	5-14-08	5-14-08	
Lab ID:	05-096-04					
Client ID:	HA-25-2.0					
Mercury	ND	0.28	7471A	5-14-08	5-14-08	
Lab ID:	05-096-05					
Client ID:	HA-34-1.0					
Mercury	0.44	0.27	7471A	5-14-08	5-14-08	
Lab ID:	05-096-06					
Client ID:	HA-28-0.5					
Mercury	0.76	0.27	7471A	5-14-08	5-14-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	05-096-07					
Client ID:	HA-31-1.0					
Mercury	0.51	0.27	7471A	5-14-08	5-14-08	
Lab ID:	05-096-08					
Client ID:	HA-33-0.5					
Mercury	1.5	1.3	7471A	5-14-08	5-14-08	
Lab ID:	05-096-09					
Client ID:	HA-32-0.5					
Mercury	2.9	1.3	7471A	5-14-08	5-14-08	
Lab ID:	05-096-10					
Client ID:	HA-19-1.0					
Mercury	1.1	0.52	7471A	5-14-08	5-14-08	
Lab ID:	05-096-11					
Client ID:	HA-20-1.0					
Mercury	1.1	0.27	7471A	5-14-08	5-14-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 5-14-08
Date Analyzed: 5-14-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0514S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 5-14-08
Date Analyzed: 5-14-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 05-109-01

Sample Duplicate

Analyte Result Repl PQL Flags

Mercury ND ND NA 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 5-14-08
Date Analyzed: 5-14-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 05-109-01

	Spike		Percent		Percent		
Analyte	Level	MS	Recovery	MSD	Recovery	RPD	Flags
Mercury	0.50	0.510	102	0.506	101	1	

Project: 0186-753-00; PSE-Covington Gate Station

% MOISTURE

Date Analyzed: 5-14-08

Client ID	Lab ID	% Moisture
HA-29-0.5	05-096-01	9
HA-30-0.5	05-096-02	9
HA-27-0.5	05-096-03	7
HA-25-2.0	05-096-04	11
HA-34-1.0	05-096-05	9
HA-28-0.5	05-096-06	8
HA-31-1.0	05-096-07	6
HA-33-0.5	05-096-08	4
HA-32-0.5	05-096-09	3
HA-19-1.0	05-096-10	4
HA-20-1.0	05-096-11	6



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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

OnSite Environmental Inc.

Chain of Custody

7

₽

Page .

% Moisture Mercury ᡒ Requested Analysis HEM by 1664 05 - 096**CCLP Metals** (8) ARORI Metals (8) Herbicides by 8151A A1808 yd sebioitse^C PCBs by 8082 Laboratory Number: MIS / G07S8 vd eHAG 0041/88/11/S 188 Q0728 vd selitslovime lalogenated Volatiles by 8260B 5/12/08 Volatiles by 8260B **XQ-H9TWN** VWTPH-Gx/BTEX имтрн-нсір (TPH analysis 5 working days) □ 3 Day ☐ 1 Day Cont of XStandard (7 working days) Turnaround Request (in working days) (Check One) (other) Company GET 550 0830 0855 0835 0830 5480 0880 0905 0900 0160 2160 Same Day 🗌 2 Day 21/9 Date Sampled Boject Name: 156 - Covington Gate Slation Sampled by: Andrew Johnson Phone: (425) 883-3881 • Fax: (425) 885-4603 Sample Identification 4A-29-0,5 4H-25-2.0 753-00 0186-753-00 HA-30-0.5 HA-27-0.5 44-33-0,5 (S) (S) HA-31-10 414-32-0,5 114-28-0.5 Signature HA-34-1,0 HA-19-110 Project Manager: Relinquished by Relinquished by Relinquished by Received by Received by Received by Company: Lab ID N 9/ 4 σ

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report

Laboratory Number: 05-096 **Chain of Custody** Turnaround Request (in working days) OnSite Environmental Inc.



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 9, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate Station

Laboratory Reference No. 0807-044

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on July 8, 2008.

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

Project: 0186-753-00; PSE-Covington Gate Station

Case Narrative

Samples were collected on July 7, 2008 and received by the laboratory on July 8, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Project: 0186-753-00; PSE-Covington Gate Station

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
HA-22-1.0	07-044-01	Soil	7-7-08	7-8-08	
HA-22-2.0	07-044-02	Soil	7-7-08	7-8-08	
HA-22-3.0	07-044-03	Soil	7-7-08	7-8-08	
HA-21-1.0	07-044-04	Soil	7-7-08	7-8-08	
HA-21-2.0	07-044-05	Soil	7-7-08	7-8-08	
HA-21-3.0	07-044-06	Soil	7-7-08	7-8-08	
HA-32-1.0	07-044-07	Soil	7-7-08	7-8-08	
HA-32-2.0	07-044-08	Soil	7-7-08	7-8-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	07-044-01					
Client ID:	HA-22-1.0					
Mercury	ND	0.26	7471A	7-8-08	7-8-08	
Lab ID:	07-044-02					
Client ID:	HA-22-2.0					
Mercury	ND	0.27	7471A	7-8-08	7-8-08	
Lab ID: Client ID:	07-044-03 HA-22-3.0					
Mercury	ND	0.26	7471A	7-8-08	7-8-08	
Lab ID:	07-044-04					
Client ID:	HA-21-1.0					
Mercury	ND	0.26	7471A	7-8-08	7-8-08	
Lab ID:	07-044-05					
Client ID:	HA-21-2.0					
Mercury	ND	0.26	7471A	7-8-08	7-8-08	
Lab ID:	07-044-06					
Client ID:	HA-21-3.0					
Mercury	ND	0.26	7471A	7-8-08	7-8-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	07-044-07					
Client ID:	HA-32-1.0					
Mercury	ND	0.27	7471A	7-8-08	7-8-08	
Lab ID:	07-044-08					
Client ID:	HA-32-2.0					
Mercury	ND	0.27	7471A	7-8-08	7-8-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 7-8-08
Date Analyzed: 7-8-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0708S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 7-8-08 Date Analyzed: 7-8-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-045-01

Sample Duplicate

Analyte Result RPD PQL Flags

Mercury ND ND NA 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 7-8-08 Date Analyzed: 7-8-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-045-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.50	0.506	101	0.534	107	5	

Project: 0186-753-00; PSE-Covington Gate Station

% MOISTURE

Date Analyzed: 7-8-08

Client ID	Lab ID	% Moisture
HA-22-1.0	07-044-01	2
HA-22-2.0	07-044-02	6
HA-22-3.0	07-044-03	3
HA-21-1.0	07-044-04	4
HA-21-2.0	07-044-05	3
HA-21-3.0	07-044-06	5
HA-32-1.0	07-044-07	9
HA-32-2.0	07-044-08	9



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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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 _____.
- $\mbox{\bf U}$ 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

Chain of Custody

Please contact Andre Johnson (206) 455-5238 J % Moisture Mercury Prelim Results HEW by 1664 TCLP Metals Laboratory Number: 07 - 044 Total RCRA Metals (8) Herbicides by 8151A Pesticides by 8081A PCBs by 8082 MIS \ GOYS8 vd aHA9 Semivolatiles by 8270D Halogenated Volatiles by 8260B Volatiles by 8260B **XG-H9TWN** NWTPH-GX/BTEX **MWTPH-HCID** (TPH analysis 5 working days) 3 Day 1 Day Standard (7 working days) (Check One) (other) 203 1808 8/1 008 394/2 7181 806 0181 508 X Same Day 2 Day RSE-Covington Gate Station A OnSite Environmental Inc. Phone: (425) 883-3881 • Fax: (425) 885-4603 0 0 2 Project Number: 0186-753-00 HA-22-1.0 0-2-22-44 HA-22-30 HA-21-1.0 Project Manager: O Crain Sampled by: Angre 32 Company GET Relinquished by Relinquished by Relinquished by HA HA Received by Received by Received by 9

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 10, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate Station

Laboratory Reference No. 0807-053

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on July 9, 2008.

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

Project: 0186-753-00; PSE-Covington Gate Station

Case Narrative

Samples were collected on July 8, 2008 and received by the laboratory on July 9, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Project: 0186-753-00; PSE-Covington Gate Station

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled D	ate Received	Notes
HA-35-1.0	07-053-01	Soil	7-8-08	7-9-08	
HA-36-1.0	07-053-02	Soil	7-8-08	7-9-08	
HA-37-1.0	07-053-03	Soil	7-8-08	7-9-08	
HA-38-1.0	07-053-04	Soil	7-8-08	7-9-08	
HA-39-0.5	07-053-05	Soil	7-8-08	7-9-08	
HA-40-0.5	07-053-06	Soil	7-8-08	7-9-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	07-053-01					
Client ID:	HA-35-1.0					
Mercury	ND	0.26	7471A	7-9-08	7-9-08	
Lab ID:	07-053-02					
Client ID:	HA-36-1.0					
Mercury	ND	0.27	7471A	7-9-08	7-9-08	
Lab ID:	07-053-03					
Client ID:	HA-37-1.0					
Mercury	ND	0.26	7471A	7-9-08	7-9-08	
Lab ID:	07-053-04					
Client ID:	HA-38-1.0					
Mercury	ND	0.26	7471A	7-9-08	7-9-08	
Lab ID:	07-053-05					
Client ID:	HA-39-0.5					
Mercury	ND	0.27	7471A	7-9-08	7-9-08	
Lab ID:	07-053-06					
Client ID:	HA-40-0.5					
Mercury	2.2	1.4	7471A	7-9-08	7-9-08	

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 7-9-08
Date Analyzed: 7-9-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0709S2

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 7-9-08 Date Analyzed: 7-9-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-053-01

Sample Duplicate

Analyte Result RPD PQL Flags

Mercury ND ND NA 0.25

Project: 0186-753-00; PSE-Covington Gate Station

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 7-9-08 Date Analyzed: 7-9-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-053-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.50	0.498	100	0.517	103	4	

Project: 0186-753-00; PSE-Covington Gate Station

% MOISTURE

Date Analyzed: 7-9-08

Client ID	Lab ID	% Moisture
HA-35-1.0	07-053-01	3
HA-36-1.0	07-053-02	6
HA-37-1.0	07-053-03	2
HA-38-1.0	07-053-04	2
HA-39-0.5	07-053-05	7
HA-40-0.5	07-053-06	8



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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

Chain of Custody

Finite of the same		10					eture	sioM %	1	_		-												
TOTAL CONTROLL Proposed Proposed Control of						Lsn			×					>				1	5238	Q				to
The company of the contract of		ysis				t	Þ991 √	нЕМ Р										é)	3			Committee of
The company of the contract of	53	Anal	H		(0)	-12-232					-					-		მ	7	_	0			delian
The company of the contract of	0	ted ,	\vdash					11111							-		- 6	3) /	7	0			
The company of the contract of	7-	Ines	H										-			-		7.07		9 -	2			
The company of the contract of	0	%															- 1	0	- 6	7	2			-
Turnound Request (in working days) Turnound Request (in working days) The contest of the conte	Ľ.				N												1	V	١.					
Same Day Check Che) Same Day Check Che) Same Day Check Che) Same Day 1 Day Crais Same Day 1 Day (TPH analysis 5 working days) Crais Sampled Sampled Marit Conf. Sampled M	nbe				d 02	728 \d	səlitsle	ovimaS									THE PARTY OF	Ž	3					
Same Day Check One) Crais Bed Sall - Fax (125) Bed - Leon (125) Bed Sall - Fax (125) Bed - Leon (125) Bed -	Ž			3560E	8 yd s	Volatile	paten	egoleH									1	0	0					
Same Day Check One) Crais 665-3881 - Fare (425) 665-4600 Crais 625-600 Crais 6	ory					8092	8 yd s	elitsloV										2	2					
Same Day Check One) Created the sample the sample that the content of the conten	rate		_					-			-							00	36					
Same Day Check One) Created Standard (Tworking days) Created Standard (Tworking days) Created Sampled Sampl	apo		-									-		-	-	-	2	1	-1					
invironmental Inc. The (45) 863-3861 - Fax (45) 865-4603 The control of the string of the sample identification and read and a			_	540			H-HCII	IdTWN			-			-	-	-								
Anny Sample Identification Sample Sample Identification Sample Ide			Day) Day	s)	days		# of Cont.	-	-	-			>							,			
Anny Sample Identification Sample Sample Identification Sample Ide	quest iys)	•			g day	orking		ž.	10					>					10					2
Avironmental Inc. To 153-00 To 155-00 To 155-00 To 155-00 To 155-00 To 155-00 To 155-00 To 150-00 To	d Rec	k One			vorkin	5 5 W	ther)	Ma	V										2					Par Charle
invironmental Inc. The (45) 863-3861 - Fax (45) 865-4603 The control of the second of the sample identification of the sample iden	aroun	(Chec	ay		d (7 v	alysi	0	me	00	50	O	5	20	52				F	D					- Commence
invironmental Inc. The (45) 863-3861 - Fax (45) 865-4603 The control of the string of the sample identification and read and a	眶		me D)ay	ındar	Наг		San	80	w	100	100	100	-										0
Sample 148 35-1 35-1 35-1 35-1 35-1 35-1		Т	Sa	120	Ste	Ë 		Date Sampled					_	>					1					
Phone (425) Phone (425) Project Number: Poject Number: Poject Name: PSE—Coving A HA — 3 A HA — 4 A HA	onmental Inc.) 883-3881 • Fax: (425) 885-4603		53-00		40.	7	emple Identification	5-1.0	0,7	7-1.0)	1				¥		,			1	
Refind Refind Refind	Envir	-	775	1	Name:	0 2	V	Ss	4	HA-36		1	1)				ushed by	ed by	uished by	ed by	vished by	ed by	
10 III IO III I		compar		paloi	PSE	Project	Sample	ab ID	_	a	10	13	- 15	0				Reling	Receiv	Refind	Recei	Reling	Receiv	

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 11, 2008

Paul Craig GeoEngineers, Inc. 8410 154th Avenue NE Redmond, WA 98052

Re: Analytical Data for Project 0186-753-00; PSE-Covington Gate

Laboratory Reference No. 0807-070

Dear Paul:

Enclosed are the analytical results and associated quality control data for samples submitted on July 9, 2008.

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

Project: 0186-753-00; PSE-Covington Gate

Case Narrative

Samples were collected on July 9, 2008 and received by the laboratory on July 9, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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.

Project: 0186-753-00; PSE-Covington Gate

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes	
HA-40-1.0	07-070-01	Soil	7-9-08	7-9-08		
HA-41-0.5	07-070-02	Soil	7-9-08	7-9-08		
HA-42-2.0	07-070-03	Soil	7-9-08	7-9-08		

Project: 0186-753-00; PSE-Covington Gate

TOTAL MERCURY EPA 7471A

Matrix: Soil

Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	07-070-01					
Client ID:	HA-40-1.0					
Mercury	ND	0.27	7471A	7-10-08	7-10-08	
Lab ID:	07-070-02					
Client ID:	HA-41-0.5					
Mercury	ND	0.27	7471A	7-10-08	7-10-08	
Lab ID:	07-070-03					
Client ID:	HA-42-2.0					
Mercury	ND	0.28	7471A	7-10-08	7-10-08	

Project: 0186-753-00; PSE-Covington Gate

TOTAL MERCURY EPA 7471A METHOD BLANK QUALITY CONTROL

Date Extracted: 7-10-08
Date Analyzed: 7-10-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0710S1

Analyte Method Result PQL

Mercury 7471A **ND** 0.25

Project: 0186-753-00; PSE-Covington Gate

TOTAL MERCURY EPA 7471A DUPLICATE QUALITY CONTROL

Date Extracted: 7-10-08
Date Analyzed: 7-10-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-070-03

Sample Duplicate

Analyte Result RPD PQL Flags

Mercury ND ND NA 0.25

Project: 0186-753-00; PSE-Covington Gate

TOTAL MERCURY EPA 7471A MS/MSD QUALITY CONTROL

Date Extracted: 7-10-08
Date Analyzed: 7-10-08

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-070-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.50	0.497	99	0.499	100	0	

Project: 0186-753-00; PSE-Covington Gate

% MOISTURE

Date Analyzed: 7-10-08

Client ID	Lab ID	% Moisture
HA-40-1.0	07-070-01	6
HA-41-0.5	07-070-02	7
HA-42-2.0	07-070-03	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-napthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- 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 _____
- $\mbox{\bf U}$ 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

- ND Not Detected at PQL
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference

Chain of Custody

Sample Identification	Environmental Inc.	Turnaround Request (in working days)	quest ays)	Laboratory Number:	ator	Nu	mbe		7	07-070	7 0				
1 Day 1 Da	1	(Check On	(e)				319	No.	Redn	estec	Ans	llysis			
1		X Same Day	1 Day			H			-		r				H
Sandard (7 working days) The United Sandard (7 working days) The United Sandard (7 working days) Sandard (7 working days) Sandard (7 working days) Sandard (8 morking days) The Sandard (9 working days) The United Sandard (9 working days) The Sandard (9 working days) The United Sandard (9 working	R	2 Day	3 Day			8092									
Sample standing days)	Colposiva		ng days)			g yd se	1.70	M	,	4	(8)				
And the Local Sample transferring and the sample and the sample transferring and the s	orpaul C	(TPH analysis 5 w	orking days)		80908	2000-000				41518 y			Lon		
Simple identification Simple	Indes	(other)							141	iq səp			1210		eiure
3 1410 5 1 1 1405 5 1 1 1405 5 1 1 1405 5 1 1 1405 5 1 1 1405 5 1 1 1405 5 1 1 1405 5 1 1 1405 5 1 1 1405 5 1 1	D Samole Identification	Time					-			lerbici			W		sioM %
1405 1405 1405 1410	UA-40-1.0	6/	-							1			×		1
Signature Company Company Onto Time Commentational Interview Wy The 1800 Call Hickory Wy The 1800 Call Hickory Wy The 1800 Call Hickory Wy The 206 455-5238	-14-	11405	<u> </u>			-			-						-
Signatury Company The 1800 That Andrew W The 1800 That Andrew W The 1800 That Andrew W	-2h	V 1410	7			H			-				>		-
Signature Company Onto Time Commental Special Instructions: 71908 1800 CM Hodrew W															
Significant Commental/Special Instructions: The Commental I															
Free 1800 206 455-5238 Reviewed by/Date Chromatograms with final report	Signature adjusted by	Company		Date			800	ŏ	L	rs/Spec	al Ins	mettons:			
Reviewed by/Date	wheel by	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		7	8/18		5	0)	7		NON	3	7	Ē
Reviewed by/Date	inquished by	0		1				[V	90		rv ,	5238	11		
Reviewed by/Date	eived by														
Reviewed by/Date	nquished by														
Reviewed by/Date	eived by														
	iewed by/Date	Reviewed by/Da	ile					Ö	roma	togran	W SU	h final re	poort		

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy



APPENDIX C
WEIGHT TICKETS

SITE TICKET OF4.1'73 SRD AND LANDER SPO AND LANDER WEIGHMASTER IMOOOSS LEATHER M SEATTLE, WA TMEIN 11.#552 won DATEIN 23 June 2008 012189 - 0002FINET SOUND ENERGY TIME/OUT 18:02 pm iradgs June 2008 SE St/192nd Ave SE; Ordered: Faul Hellows, WA 98004 ROLL OFF Contract: 08-1217 SOHL REFERENCE ORIGIN COVEND TONZKENG 54g440,00 lb 096 WRS 00 Oross Wwight 26,920,00 lb Tare Weight 27,520.00 lb 13.76 TN Nest Wesicant DESCRIPTION EXTENSION UNIT TAX TOTAL EMPOUNT SUIL #(38), OO 4522 86 <u>\$0,,00</u> 4522.88 1.3. TN Marri fæst i NEW WORLD TENDÉRED 🗢 CHANGE SAFETY MEMOS: CHECK NO · Hard hats MUST be worn. High Visibility vests MUST be worn.

- Passengers MUST remain in vehicle at all times. SIGNATURE.

T0941.74 ORD AND LANDER SED AND LANDER WEIGHMASTER HMOOORS HEATHER M SEATTLE, WA TIME,IM DATEIN SOOD - PRISIO 29 June 2008 ma ACREE PUCET SCIND ENERGY TIME OUT 272 SE St/192nd Avo SE; Ordorods Faul Cřáigs June 2008 12:09 pm Bellevuc, WA 98004 ROLL OFF Contract: 08-1217 SOH. REFERENCE ORIGIN CONTINUITAD KIND 00 Gross Weight 559,540,00 Hb 895 VOLVO Tare Weight 26,560.00 lb Nest Westernt 26,980,00 lb 19,49 TN DESCRIPTION EXTENSION TOTAL UNIT RATE TAX SW-CONY SOYL **\$38.00** 事与12,62 \$0.00 \$512,62 113, 45 ΊN Marri feest : · 阿里罗伊姆亚亚尔 TENDÉRÉS, CO CHANGE SAFETY MEMOS: CHECK NO. · Hard hats MUST be worn. · High Visibility vests MUST be worn. Passengers MUST remain in vehicle at all times. SIGNATURE

TICKET 094 1 75 ORD AND LANDER SECOND LANDER WEIGHMASTER HMOOO28 HEATHER M SEATTLE, WA iless en ecos corril es 012189 - 0002 тме очт 12 в 09 грт PUGET SOUND ENERGY TUO STAG Uralga June 2008 SE St/192nd Ave SE; Ondered: Faul Bellowic, WA 98004 ROLL OFF VEHICLE 90.H. Contract: 08-1217 REFERENCE ORIGIN CONTINUION/KING 097 WRS 00 Oross Weight 60,140,00 Ib 25,420.00 Hb Tare Weight 94,720.00 lb 17.96 TN Net Weight TOTAL EXTENSION T.A.X DESCRIPTION RATE UNIT \$659.68 438 W \$659.68 \$0,00 TN SW-CINI SIII. 1.7.36 Mand fests CONTRACTOR tendêrêd, ÖÖ CHANGE SAFETY MEMOS: CHECK NO · Hard hats MUST be worn. High Visibility vests MUST be worn. · Passengers MUST remain in vehicle at all times. SIGNATURE

GRID . 094198 SECURAL COMA CORE SRD AND LANDER WEIGHMASTER HMOCOPS HEATHER M SEATTLE, WA BOOS correct 633 TIME IN 12:34 pm 012189 -,0002 PUGET SOUND ENERGY TIME OUT 12: 13:55 pwn Gradias June 2008 SE St/192nd Ave SEg ()nderwds Paul Bellevue, WA ROLL OFF vericle SOLL Contract: 09 1217 REFERENCE ORIGIN CXWLNGT(BU/KENG Of Gross Weight 53,380.00 lb 1895 Tare Wedght 26,660.00 Ib Nest Weight 26,720.00 lb 19.36 IN DESCRIPTION SWITTER EXTENSION BATE \$507.88 \$0,00 **\$507.68** \$BB.00 Man: f@st:094066 10**3**[24](0][0], 242 TENDÉRÉS, OO CHANGE SAFETY MEMOS: CHECK NO. Hard hats MUST be worn. High Visibility vests MUST be worn. Passengers MUST remain in vehicle at all times. SIGNATURE

GRID 094203 SPO AND LANDER WEIGHMASTER SRED AND LANDER HMOCORS HEATHER M TIME IN BOOS central ESS SEATHE, WA 12:39 cm 012189 - 0002 TIME OUT PLICET SOUND ENERGY DATE OUT 12:38 pm Gradia June 2008 SE St/192nd Avc SE; Undered: Faul ROLL OFF Bellevue, WA 980090868 VEHICLE SOLL Contracts 08-1217 REFERENCE ORIGIN COUINGTON/KING 096 WKS 57,160,00 lb 00 Gross Weight 26,980.00 lb Tare Weight 30,180,00 lb 15.09 TN Net Weight TOTAL EXTENSION DESCRIPTION 報門23.14至 \$0.00 UNIT \$573,42 <u> \$38.00</u> SWILLING SOLL M Manifest:094065 nagarouni ace TENDÉRED, ÖÖ CHANGE SAFETY MEMOS: CHECK NO Kandy Cl · Hard hats MUST be worn. High Visibility vests MUST be worn. · Passengers MUST remain in vehicle at all times.

TICKET 61994 094206 SRD AND LANDER WEIGHMASTER (3RD) AND LANDER HMOOORS LEATHER M oaten 23 June 2008 SEATTLE, WA 12:49 pm 012189 -, 0002 TUO SMIT DATEOUT Cracias June 2008 PUBET SOUND ENERGY 12:43 pm SE St/192nd Ave SE; Ordered: Faut ROLL OFF VEHICLE SO III Bollevue, WA 980090868 Contract: 09 1217 ORIGIN REFERENCE A SEATTLE/KING WROP'7 55,300.00 lb 00 Gross Weight 225,480.00 lb Tarm Weight 29,820.00 lb 14.91 TN Nest Westernt TOTAL EXTENSION STATE DESCRIPTION \$566.50 16766. BB 事()。()()() UNIT 事(39), (20) QTY. SW-CINI SITE 34.4 Manifest:094201 Karayoran era TENDĖKĖD. 🖰 CHANGE Kandy a CHECK NO SAFETY MEMOS: · Hard hats MUST be worn. High Visibility vests MUST be worn. Passengers MUST remain in vehicle at all times.

GRID 094266 ORD AND LANDER HMOOORS HEATHER M SED AND LANDER DATE N 23 June 2008 ma Eosk SEATTLE, WA 012189 - 10002 TIME OUT DATE OUT Praige June 2008 2:11 pm FIRET SOUND ENERGY SE St/192nd Ave SEq Ordered: Faul ROLL OFF VEHICLE Bellevuo, WA 980090968 9011 Contract: 08 1217 ORIGIN ASFERENCE COVINGTON/KING 096 WRS 52,360.00 lb 00 Oross Weight 25,900.00 lb Tare Weight 26,460.00 lb 19.29 TN Not Weight HITEMSION RATE 報5022。24 事()。()() DESCRIPTION #502. 24· <u>\$33.00</u> UNIT SU-TINI SOIL 10 20 Marri fest I TENDÊKÊb. 💢 CHANGE CHECK NO SAFETY MEMOS: · Hard hats MUST be worn. · High Visibility vests MUST be worn. · Passengers MUST remain in vehicle at all times. SIGNATURE