SoundEarth Strategies, Inc. 2811 Fairview Avenue East, Suite 2000 Seattle, Washington 98102

June 7, 2011

Mr. John D. Perine, Jr. Perine Property LLC 2995 Woodside Road, Suite 400 Woodside, California 94062

SUBJECT:

PHASE II SUBSURFACE INVESTIGATION

**Perine Property** 

820 South Adams Street, Seattle, Washington

Job Number: 0783-001-02

Dear Mr. Perine:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this letter report to present the results of the Phase II subsurface investigation conducted at the property located at 820 South Adams Street in Seattle, Washington (hereinafter referred to as the Property). The Property is shown on Figure 1. The purpose of the subsurface investigation was to perform a preliminary assessment of the potential risk for subsurface environmental impacts at the Property that may have resulted from the recognized environmental conditions (RECs) identified by SoundEarth in the Phase I Environmental Site Assessment, Perine Company Property, 820 South Adams Street, Seattle, Washington, prepared by SoundEarth and dated January 27, 2011 (Phase I). These RECs included the presence of a 1,000-gallon underground gasoline storage tank on the Property, the current and former use of the Property for industrial purposes, and the confirmed presence of impacts to soil and groundwater beneath the north- and south-adjacent properties.

The Phase II subsurface investigation was conducted in general accordance with the Scope of Work and Cost Estimate, Phase II Subsurface Investigation, Perine Property, 820 South Adams Street, Seattle, Washington, prepared by SoundEarth and dated March 3, 2011 (the Proposal). This letter report presents a brief discussion of the Property history, the field activities and results of the Phase II subsurface investigation, and SoundEarth's conclusions regarding the nature and extent of soil and groundwater impacts beneath the Property.

# **BACKGROUND**

The Property contains a 1957-vintage warehouse building and an addition that was constructed in 1996 (Figure 2). The Property is currently zoned General Industrial 2 (City of Seattle Zoning Code IG2 U/85), which allows for general and heavy manufacturing, commercial uses (subject to some limits), high impact uses as a conditional use, institutional uses in existing buildings, entertainment uses (other than adult), transportation and utility services, and salvage and recycling uses.

As described in the Phase I report, the Property has been used as a winery, a beverage distribution company, a warehouse and machining shop, and an emergency response refurbishing operation. In

addition, several residences with suspected heating oil use and storage were historically located on the Property. According to documents gathered from the Seattle Department of Planning and Development, a 1,000-gallon underground storage tank (UST) was installed at the Property in 1957. The current owner and managers of the Property had no knowledge of its presence prior to the Phase I investigation. Upon inspection, the UST was discovered to be nearly filled with water and contained what appeared to be weathered gasoline. The UST was not in operation and had not been decommissioned.

According to reverse phone directories and archived tax records, Northwest Plating, an electroplating facility, operated on the north-adjoining property from the 1950s through the 1990s. A review of records at the Washington State Department of Ecology (Ecology) indicated that at least two subsurface investigations have been conducted on the Northwest Plating property. The available information included groundwater analytical data from four monitoring wells that were installed on the north, east, and west perimeters of that property. Chlorinated solvents and metals were detected at concentrations above the applicable Washington State Model Toxics Control Act (MTCA) Method A and/or B cleanup levels in groundwater collected from all four monitoring wells. Ecology documents indicated that the building's concrete floors were cracked, a possible source of direct contamination of soil. Additional potential sources of the contamination include two closed-in-place USTs found on the Property. According to water level measurements collected during the 1989 investigation by others, the Northwest Plating property is located in a crossgradient hydrologic position relative to the Property; however, considering the proximity to the Property, the confirmed impacts to soil and groundwater beneath the Northwest Plating property represent a potential issue of environmental concern to the Property.

According to subsurface investigations completed by the City of Seattle in 2009, widespread impacts to soil and groundwater from chlorinated solvents and petroleum hydrocarbons are present beneath the Former Sunny Jim property to the south of the Property. No definitive sources of solvent impacts were identified. Diesel-range petroleum hydrocarbon (DRPH) impacts beneath the Former Sunny Jim property appear to be the result of a leak originating from a former 4,000-gallon heating oil tank.

A subsurface investigation conducted by others in December 2010 at the Former Sunny Jim property included the collection of sub-slab soil samples, samples of manufactured materials, and soil samples collected from between floor cracks. Samples were analyzed for petroleum hydrocarbons, metals, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and/or semi-volatile compounds. Analytical results indicated that concentrations of lead exceeded the MTCA Method A cleanup level in one sub-slab soil sample and one floor crack soil sample. A building material sample also contained an elevated concentration of lead. Oil-range petroleum hydrocarbons (ORPH) were detected in one floor crack soil sample at a concentration that exceeded the MTCA Method A cleanup level. PCBs were detected in manufactured building material samples. The remaining analytes were not detected at concentrations that exceed the laboratory reporting limits and/or the applicable MTCA Method A or B cleanup levels.

# **FIELD ACTIVITIES**

SoundEarth conducted field activities at the Property on March 16 and 17 and April 12, 2011. Field activities included advancing seven direct-push borings at the Property, collecting soil and/or reconnaissance groundwater samples from the borings, analyzing the samples for chemicals of concern

(COCs), and conducting a UST site assessment. Prior to conducting the field activities, private and public utility locate services were used to identify the location of underground utilities and a ground-penetrating radar (GPR) survey was performed to locate the 1,000-gallon UST on the Property. Following receipt of the soil and groundwater laboratory results, the UST was closed in place. A detailed discussion of field activities is presented below.

# Soil and Reconnaissance Groundwater Sampling

Field activities conducted during the Phase II subsurface investigation included collecting soil and/or reconnaissance groundwater samples from seven direct-push borings (P01 through P07) advanced at the Property (Figure 2). The locations of the borings were selected in an effort to address the following conditions:

- Borings P01 through P03 were advanced proximate to the UST to assess soil and groundwater quality in the vicinity of the UST and to comply with regulatory requirements associated with the in-place closure of the UST. Borings P01 through P03 were also used to evaluate potential impacts groundwater quality to the Property from the release of solvents and/or metals from the adjoining property to the north.
- Boring P04 was advanced near the northern Property boundary to evaluate potential impacts to soil and groundwater beneath the Property from releases of solvents and metals from the adjoining property to the north.
- Boring P05 was advanced in the metal cutting room/former truck storage area to evaluate the potential impacts to soil and groundwater from the release of solvents, metals, and petroleum hydrocarbons from historical operations in this area of the Property.
- Boring P06 was advanced on the southern exterior of the Property building to evaluate potential impacts to groundwater quality at the Property from releases of petroleum hydrocarbons and solvents from the property located to the south.
- Borings P07 was advanced in the central portion of the Property to evaluate the potential impacts to soil and groundwater from the release of solvents and petroleum hydrocarbons originating from historical operations at the Property and/or the north-adjacent property.

The Proposal also included advancing a boring in the northwest portion of the Property to evaluate the potential impacts to soil and groundwater originating from historical operations at the Property and/or the north-adjacent property; however, SoundEarth was unable to gain access to this portion of the Property at the time of field activities.

Prior to drilling, SoundEarth contacted the public utility location service and contracted with Underground Detection Services (UDS) of Seattle, Washington (a private utility location service) to clear the planned boring locations. SoundEarth also coordinated with UDS to perform a GPR survey to confirm the location and orientation of the UST prior to conducting subsurface activates in the area of the UST.

ESN Northwest, under the direction of SoundEarth, advanced the borings to a maximum depth of 15 feet below ground surface (bgs). Soil samples were collected from each boring at 4-foot sample depth intervals. One soil sample was collected from each 4-foot sample depth interval for chemical analysis. Soil textures were logged by a SoundEarth geologist in accordance with the Unified Soil Classification

System. Soil samples were also monitored for volatile organic vapor content using a photoionization detector (PID) and observed for evidence of contamination (e.g., odor, sheen, staining). A SoundEarth geologist recorded the soil and groundwater conditions encountered during drilling on the boring log forms.

At the time the borings were advanced, groundwater was encountered at an approximate depth of 13 feet bgs. Reconnaissance groundwater samples were collected from a 4-foot long polyvinyl chloride screen inserted in the annular space of the boring. Reconnaissance groundwater samples were collected from the approximate midpoint of the screened intervals using a peristaltic pump. After reconnaissance groundwater samples were collected, each boring was backfilled with bentonite chips and resurfaced to the original grade. Samples were labeled, placed on ice in a cooler, and transported to Friedman & Bruya, Inc., in Seattle, Washington (F&B), under standard chain-of-custody protocols for laboratory analysis.

Soil cuttings generated during the Phase II subsurface investigation were placed in a labeled 35-gallon drum. The analytical results of the soil samples will be used to develop a waste profile to evaluate the most cost-effective disposal alternatives for the wastes generated. SoundEarth will coordinate disposal of soil cuttings at the client's request. The drum is temporarily stored on the Property and should be removed within 90 days of the date of generation.

# **UST Closure**

To locate the UST, a GPR survey was performed by UDS on March 16, 2011. The GRP survey identified the presence of the UST, its location, and its orientation. Prior to closing the UST in place, Borings P01 through P03 were advanced proximate to the UST and soil and reconnaissance groundwater samples were collected from the borings as part of the regulatory requirement for the in-place closure of the UST. SoundEarth completed the UST Closure and Site Assessment Notice and UST Site Assessment Checklist for closure of the UST in accordance with the *Guidance for Site Checks and Site Assessment for Underground Storage Tanks* prepared by Ecology and dated February 1991, revised May 30, 2003, Publication No. 90-52 (Ecology Guidance 2003).

Prior to closing the UST in place, SoundEarth submitted a 30-Day Notice to Ecology as required under the Washington State Underground Storage Tank Regulations as established in Section 386, of Chapter 360 of Title 173 of the Washington Administrative Code. On April 12, 2011, Spooner Contracting LLC, under the direction of SoundEarth, removed the fluids from the UST, triple rinsed the UST, and filled the UST with controlled density fill (CDF). In-place closure of the UST was inspected by the City of Seattle Fire Department. A marine chemist with Sound Testing, Inc., confirmed the UST was rendered inert prior to filling with CDF. Documentation associated with closure of the UST is presented in Attachment A.

# Soil and Reconnaissance Groundwater Sample Laboratory Analyses

One soil and one reconnaissance groundwater sample collected from each boring were submitted for laboratory analyses, with the exception of Boring P06 where only a reconnaissance groundwater sample was collected and analyzed for COCs. The soil sample submitted for chemical analysis from each boring was selected based on field observations, field screening readings, depth to groundwater measurement, and/or the location of the boring relative to the potential source of impacts. Chemical analyses for soil and reconnaissance groundwater samples collected from each boring were as follows:

Soil samples collected from Borings P01 through P03 were analyzed for gasoline-range petroleum hydrocarbons (GRPH) using Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Gx, for DRPH and ORPH using Method NWTPH-Dx, and for VOCs (including benzene, toluene, ethylbenzene, and total xylenes [BTEX]) using the U.S. Environmental Protection Agency (EPA) Method 8260C. In addition, reconnaissance groundwater samples collected from Borings P01 through P03 were analyzed for Resource Conservation and Recovery Act (RCRA) 8 Metals by EPA Method 200.8/1621E.

The Proposal called for the analysis of reconnaissance groundwater samples collected from Borings P01 through P03 for GRPH using Method NWTPH-Gx and DRPH and ORPH using Method NWTPH-Dx. However, based on guidance presented in Ecology Guidance 2003, SoundEarth did not analyze reconnaissance groundwater samples collected from Borings P01 through P03 for GRPH, DRPH, or ORPH because the lowest point of the UST was not located in contact with groundwater; field screening did not indicate the presence of contamination; there are no existing monitoring wells at the Property available for sampling; physical conditions did not prevent the collection of soil samples; and conditions associated with the site check did not suggest that immediate assessment of the groundwater conditions was necessary to protect human health.

- Soil and reconnaissance groundwater samples collected from Boring P04 were analyzed for VOCs using EPA Method 8260C and RCRA 8 Metals by EPA Method 200.8/1621E.
- Soil and reconnaissance groundwater samples collected from Boring P05 were analyzed for GRPH using Method NWTPH-Gx, DRPH and ORPH using Method NWTPH-Dx, VOCs using EPA Method 8260C, and RCRA 8 Metals by EPA Method 200.8/1621E.
- A reconnaissance groundwater sample collected from Boring P06 was analyzed for GRPH using Method NWTPH-Gx, DRPH and ORPH using Method NWTPH-Dx, and VOCs using EPA Method 8260C.
- Soil and reconnaissance groundwater samples collected from Boring P07 were analyzed for GRPH using Method NWTPH-Gx, DRPH and ORPH using Method NWTPH-Dx, and VOCs using EPA Method 8260C.

# SUBSURFACE CONDITIONS AND ANALYTICAL RESULTS

General soil conditions at the Property consist of fill material composed of damp, fine to medium sand with trace silt from the near surface to depths of 7 to 9 feet bgs. From 9 to 15 feet bgs, the soil consists of damp to wet, fine to medium sand with trace silt. PID readings from soil samples were generally less than 10 parts per million per volume (ppmv) and ranged from 0.0 to 31.3 ppmv. The highest PID reading was detected in the soil sample collected from Boring PO4 at a depth of 8 feet bgs. Boring logs are presented in Attachment B.

At the time of drilling, groundwater in the borings was encountered at a depth of approximately 13 feet bgs. The groundwater flow direction at the Property could not be established due to the absence of monitoring wells at the Property; however, based on groundwater elevations measured in March 1989 at monitoring wells installed at the former Northwest Plating facility located on the north-adjoining property, the groundwater flow direction in the vicinity of the Property is to the northwest.

Analytical results for soil and reconnaissance groundwater samples are discussed below. Soil and reconnaissance groundwater analytical results are presented in Tables 1 through 6. Analytical results for petroleum hydrocarbons and for selected VOCs are shown on Figures 2 and 3.

- Concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) exceeded the applicable MTCA Methods A cleanup levels in a soil sample collected from Boring B04 at a depth of 8 feet bgs. Boring B04 was advanced near the northern Property boundary (Figure 3, Table 1).
- A concentration of TCE exceeded the MTCA Method A cleanup level in a soil sample collected from Boring B07 at a depth of 9 feet bgs. Boring B07 was advanced in the central portion of the Property (Figure 3, Table 1).
- Concentrations of petroleum hydrocarbons, RCRA 8 metals, and/or VOCs in all remaining soil samples collected at the Property, with the exception of concentrations of PCE and TCE in soil samples collected from Borings B04 and B07, did not exceed their respective laboratory lower reporting limits and/or the applicable MTCA Method A and/or B cleanup levels (Tables 1, 3, and 5).
- Concentrations of methylene chloride in reconnaissance groundwater samples collected from Borings P01, P02, P05, and P07 slightly exceeded the MTCA Method B cleanup level. However, according to F&B, the presence of methylene chloride in the samples can be attributed to laboratory contamination (Table 2) and is not representative of actual groundwater conditions.
- Concentrations of GRPH, DRPH, ORPH, VOCs, and/or RCRA 8 metals in reconnaissance groundwater samples did not exceed their respective laboratory lower reporting limits and/or the applicable MTCA Methods A or B cleanup levels (Figure 2; Tables 2, 4, and 6).

Laboratory reports are presented in Attachment C.

# **UST CLOSURE**

As part of the regulatory closure of the UST, SoundEarth conducted a UST site assessment to evaluate whether a release of petroleum hydrocarbons had occurred from the UST installed at the Property. The site assessment was conducted in accordance with Ecology Guidance 2003 by advancing Borings P01 through P03 proximate to the UST and collecting soil and reconnaissance groundwater samples from each boring.

Analytical results from the UST site assessment indicated that none of the soil or reconnaissance groundwater samples collected from Borings P01 through P03 contained concentrations of petroleum hydrocarbons or associated BTEX constituents that exceeded their respective laboratory lower reporting limits (Figures 2 and 3, Tables 3 and 4). Laboratory reports are presented in Attachment C. Additional regulatory information required for the UST closure and site assessment are documented in the UST Closure and Site Assessment Notice and UST Site Assessment Checklist presented in Attachment D.

### CONCLUSIONS

The results of the Phase II subsurface investigation conducted at the Property indicate that soil samples collected from Borings PO4 and PO7, located beneath the north-central portion of the Property, contained concentrations of PCE and/or TCE that exceed the applicable MTCA Method A cleanup levels. None of the soil or groundwater samples collected from borings advanced at other locations on the Property contained elevated concentrations of petroleum hydrocarbons, solvents, or metals. The concentrations of PCE and TCE detected in soil beneath the Property decrease with distance from the north-adjoining property, which has been contaminated by releases of solvents and metals from a former plating facility that operated on that property. As such, the soil contamination encountered beneath the Property appears to be the result of impacts that have migrated from the north-adjoining property.

## LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with Perine Property LLC. This report is solely for the use of Perine Property LLC unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Findings and conclusions contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others or the use of segregated portions of this report.

## CLOSING

SoundEarth appreciates this opportunity to provide Perine Property LLC with environmental consulting services. Please call either of the undersigned at (206) 306-1900 if you have any questions or comments regarding the content of this report

Respectfully,

SoundEarth Strategies, Inc.

Thomas Cammarata 18 1815 196

Senior Geoche

Ryan Bixby, LG #1691

**Environmental Division President** 

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Attachments: Figure 1, Property Location Map

Figure 2, Groundwater Analytical Results

Figure 3, Soil Analytical Results

Table 1, Summary of Soil Analytical Data, Chlorinated Volatile Organic Compounds Table 2, Summary of Reconnaissance Groundwater Analytical Data, Chlorinated Volatile

**Organic Compounds** 

Table 3, Summary of Soil Analytical Data, Total Petroleum Hydrocarbons

Table 4, Summary of Reconnaissance Groundwater Analytical Data, Total Petroleum

**Hydrocarbons** 

Table 5, Summary of Soil Analytical Data, RCRA 8 Metals

Table 6, Summary of Reconnaissance Groundwater Analytical Data, RCRA 8 Metals

Attachment A, UST Closure Documentation

Attachment B, Boring Logs

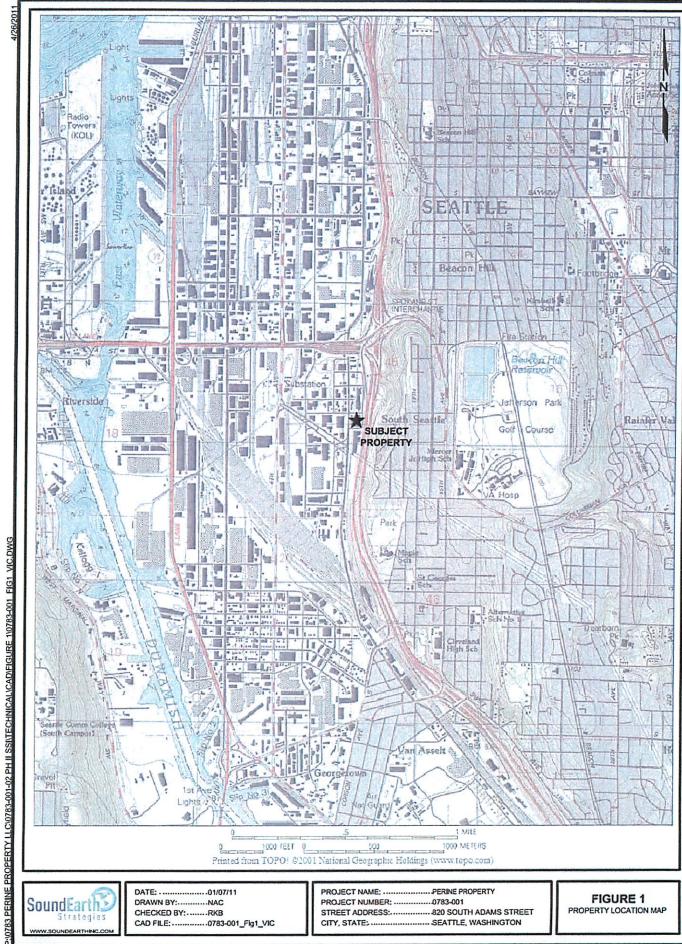
**Attachment C, Laboratory Analytical Reports** 

Friedman & Bruya, Inc. #103196 Friedman & Bruya, Inc. #103218

Attachment D, UST Closure and Site Assessment Notice and UST Site Assessment Checklist

TJC:dnm/syh

# **FIGURES**

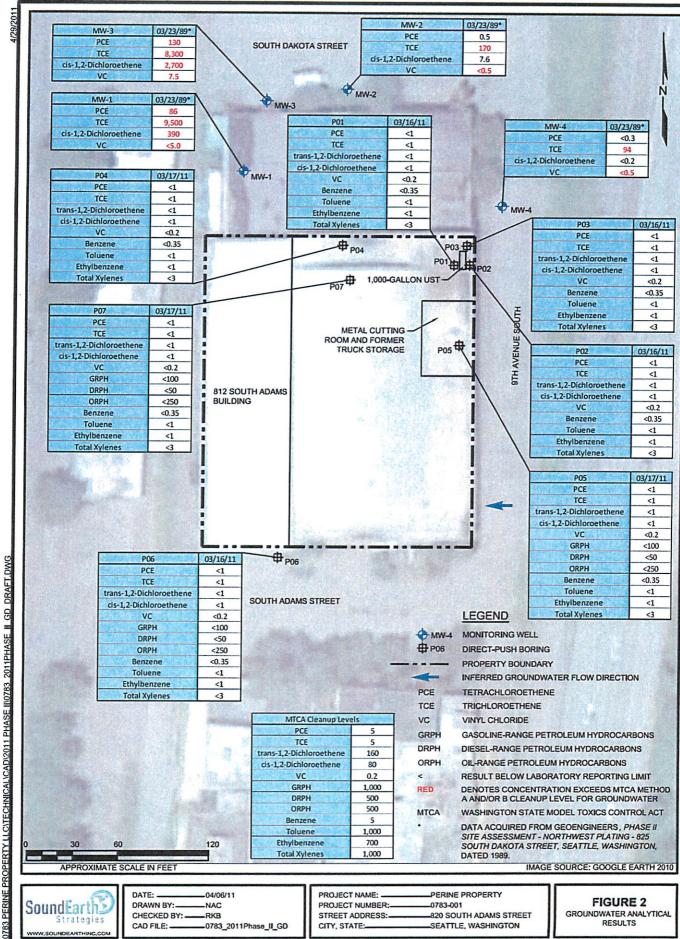


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FIGURE 1 PROPERTY LOCATION MAP

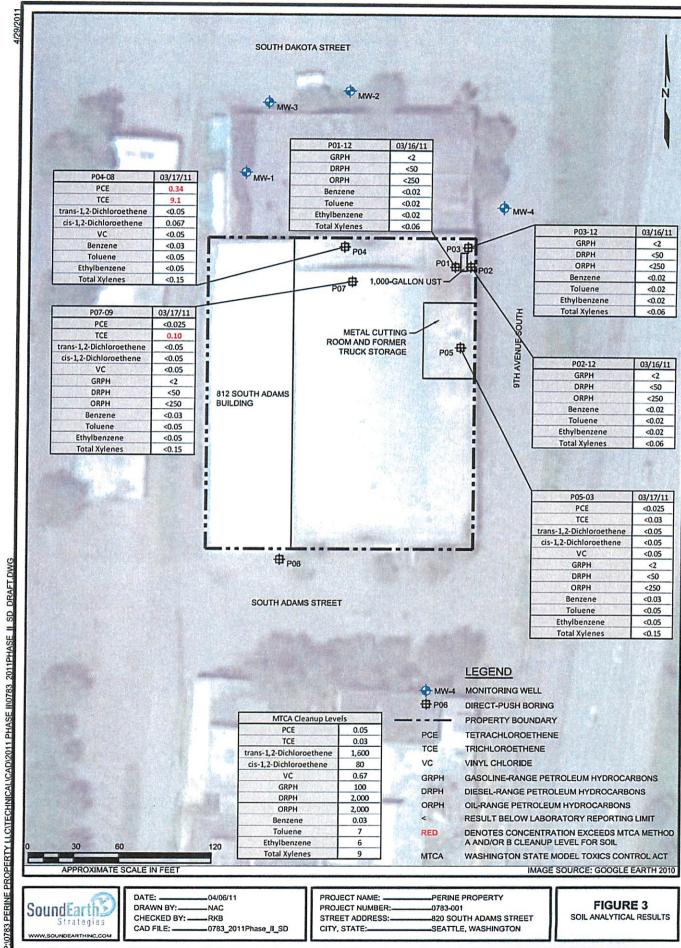


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820 SOUTH ADAMS STREET STREET ADDRESS: CITY. STATE: SEATTLE, WASHINGTON

GROUNDWATER ANALYTICAL RESULTS



SoundEarth 2 Strategies

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SOIL ANALYTICAL RESULTS

# **TABLES**



# Table 1 Summary of Soil Analytical Data Chlorinated Volatile Organic Compounds Perine Property 820 South Adams Street Seattle, Washington

		I -					Ana	ytical Results <sup>1</sup> (m	nilligrams per kilo	gram)				
Sample ID	Sample Date	Sample Depth (feet)	retrachloroethene	richloroethene	trans-1,2- Dichloroethene	is-1,2- Dichloroethene	inyl Chloride	hloroethane	1-Dichloroethene	ethylene Chloride	1-Dichloroethane	2-Dichloroethane	,1- Trichloroethane	-Dichloropropane
P04-08	03/17/11	8	0.34	9.1	<0.05	0.067	>	0	ri -	2	-,	-	7	7
P05-03	03/17/11	1 3					<0.05	<0.5	<0.05	<0.5	<0.05	<0.05	< 0.05	< 0.05
		3	<0.025	<0.03	<0.05	<0.05	<0.05	<0.5	< 0.05	<0.5	<0.05	<0.05	<0.05	<0.05
P07-09	03/17/11	9	<0.025	0.10	<0.05	<0.05	< 0.05	<0.5	< 0.05	<0.5	<0.05	<0.05		
CA Cleanup Level			0.05*	0.034	1,600 <sup>b</sup>	80 <sup>b</sup>	0.67 <sup>b</sup>	350 <sup>b</sup>	NE	0.02	8,000°	11 <sup>b</sup>	<0.05	<0.05

### NOTES:

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington, and by Analytical Resources, Incorporated and/or Onsite Environmental, Inc. of Redmond, Washington.

<sup>1</sup>Analyzed by EPA Method 82608.

\*MTCA Method A Groundwater Soil Cleanup Level, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

<sup>b</sup>CLARC Soil MTCA Method B Carcinogenic and Non-carcinogenic Standard Formula, Unrestricted Land Use.

<sup>c</sup>EPA and State of Washington Maximum Contaminant Level.

< = not detected at concentrations exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

EPA = U.S. Environmental Protection Agency
MTCA = Washington State Model Toxics Control Act

NE = not established



# Summary of Reconnaissance Groundwater Analytical Data Chlorinated Volatile Organic Compounds 820 South Adams Street Seattle, Washington Perine Property Table 2

MICA Cleanup Level	Z011031/-P0/	201101101	20110316-006	20110317-P05	2011031/-PU4	20110313-203	20110316 003	20110316-002	20110316-P01	Sample ID	
	11//1/50	11/01/60	02/16/11	03/17/11	03/17/11	03/16/11	11/01/00	02/16/11	03/16/11	Sample Date	
5	1	.   4	1	4	4	4		2	Δ	Tetrachloroethene	
5	1	1	2	<1	4	41	4	3	^	Trichloroethene	
160"	Δ	15		<1	4	1	1		2	trans-1,2- Dichloroethene	
80"	Δ	۵		-	<1	4	4	ا	61	cis-1,2- Dichloroethene	
0.2"	<0.2	<0.2	20.2	×0.3	<0.2	<0.2	<0.2	20.2	20.3	Vinyl Chloride	
15°	Δ	Δ	4	2	Δ	Δ	Δ	4	4	Chloroethane &	the state of the s
400 <sup>b</sup>	Δ	Δ	4	4	Δ	Δ	Δ	1	4	Chloroethane  Chloroethane  Incomparison of the control of the con	
5*	5.9 <sup>ca,k</sup>	S	0.3	F 764, K	٥ <sub>٤</sub>	S	5.1"	5.8	r ok	Methylene Chloride	
1,600 <sup>b</sup>	41	Δ	4		4	<1	41	1		1,1-Dichloroethane	
5.	Δ	Δ	Δ		4	4	4	Δ		1,2-Dichloroethane	
200°	4	4	Δ	1	^1	4	Δ	Δ		.,1,1- Trichloroethane	
5,	4	Δ	4	1	2	Δ	Δ	41	1	,2-Dichloropropane	

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

Analyzed by EPA Method 8260C.

\*MTCA Method A Groundwater Cleanup Level, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code,

MTCA = Washington State Model Toxics Control Act EPA = U.S. Environmental Protection Agency CLARC = Cleanup Levels and Risk Calculations

< = not detected at concentrations exceeding the laboratory reporting limit

revised November 2007.

<sup>a</sup>CLARC Groundwater MTCA Method B Carcinogenic and Non-carcinogenic Standard Formula, Unrestricted Land Use.

'EPA and State of Washington Maximum Contaminant Level.

# Laboratory Notes:

<sup>ca</sup>The calibration results on this range fell outisde of acceptance criteria. The value reported is an estimate.

"The presence of the compound indicated is likely due to laboratory contamination.



# Table 3 Summary of Soil Analytical Data Total Petroleum Hydrocarbons Perine Property 820 South Adams Street Seattle, Washington

			Analytical Results (milligrams per kilogram)									
Sample ID	Sample Date	Sample Depth (feet)	GRPH¹	DRPH <sup>2</sup>	ОКРН²	Benzene	Toluene³	Ethylbenzene ³	Total Xylenes³			
P01-12	03/16/11	12	<2	<50	<250	<0.02	<0.02	<0.02	<0.06			
P02-12	03/16/11	12	<2	<50	<250	<0.02	<0.02	<0.02	<0.06			
P03-12	03/16/11	12	<2	<50	<250	<0.02	<0.02	<0.02	<0.06			
P04-08	03/17/11	8	-		-	<0.03	<0.05	<0.05	<0.15			
P05-03	03/17/11	3	<2	<50	<250	<0.03	<0.05	<0.05	<0.15			
P07-09	03/17/11	9	<2	<50	<250	<0.03	<0.05	<0.05	<0.15			
TCA Cleanup Level	4		100	2,000	2,000	0.03	7	6	9			

### NOTES:

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Samples analyzed by Friedman & Bruya, Inc., of Seattle, Washington.

<sup>5</sup>MTCA Method A Soil Cleanup Level, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

< = not detected at concentrations exceeding the laboratory reporting limit

- -= not analyzed

DRPH = diesel-range petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

ORPH = oil-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbons

<sup>&</sup>lt;sup>1</sup>Analyzed by Northwest Method NWTPH-Gx.

<sup>&</sup>lt;sup>2</sup>Analyzed by Northwest Method NWTPH-Dx.

 $<sup>^3\</sup>mbox{\sc Analyzed}$  by EPA Method 8260C or EPA Method 8021B.



# Table 4 Summary of Reconnaissance Groundwater Analytical Data Total Petroleum Hydrocarbons

Perine Property 820 South Adams Street Seattle, Washington

				Analytical	Results (microgra	ms per liter)		
Sample ID	Sample Date	Скен	Окрн²	Окрн²	Benzene	Toluene <sup>2</sup>	Ethylbenzene <sup>3</sup>	Total Xylenes <sup>3</sup>
20110316-P01	03/16/11	-			<0.35	<1	<1	<3
20110316-P02	03/16/11		-		<0.35	<1	<1	<3
20110316-P03	03/16/11	-	-	-	<0.35	<1	<1	<3
20110317-P04	03/17/11	-			< 0.35	<1	<1	<3
20110317-P05	03/17/11	<100	<50	<250	<0.35	<1	<1	<3
20110316-P06	03/16/11	<100	<50	<250	<0.35	<1	<1	<3
20110317-P07	03/17/11	<100	<50	<250	<0.35	<1	<1	<3
ATCA Cleanup Level	4	1,000	500	500	5	1,000	700	1,000

# NOTES:

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

<sup>4</sup>MTCA Method A Groundwater Cleanup Level, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007. < = not detected at concentrations exceeding the laboratory reporting limit

- = not analyzed

DRPH = diesel-range petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

ORPH = oil-range petroleum hydrocarbons

<sup>&</sup>lt;sup>1</sup>Analyzed by Northwest Method NWTPH-Gx.

<sup>&</sup>lt;sup>2</sup>Analyzed by Northwest Method NWTPH-Dx.

<sup>&</sup>lt;sup>3</sup>Analyzed by EPA Method 8260C.



# Table 5 Summary of Soil Analytical Data RCRA 8 Metals Perine Property 820 South Adams Street Seattle, Washington

					Ana	llytical Results (m	illigrams per kild	ogram)		
Sample ID	Sample Date	Sample Depth (feet)	Chromium <sup>1</sup>	Arsenic <sup>1</sup>	Selenium¹	Silver <sup>3</sup>	Cadmium¹	Barium <sup>1</sup>	Lead <sup>3</sup>	Mercury <sup>2</sup>
P04-08	03/17/11	8	12.6	7.86	<1	<1	<1	94.3	98.7	<0.2
P05-03	03/17/11	3	16.7	2.84	<1	<1	<1	56.8	3.21	<0.2
TCA Cleanup Leve	el		2,000°	20°	400 <sup>b</sup>	400 <sup>b</sup>	2*	16,000 <sup>b</sup>	250°	2*

# NOTES:

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

<sup>1</sup>Analyzed by EPA Method 200.8.

<sup>2</sup>Analyzed by EPA Method 1631E.

\*MTCA Method A Soil Cleanup Level, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

<sup>b</sup>CLARC Soil MTCA Method B Carcinogenic and Non-carcinogenic Standard Formula, Unrestricted Land Use.

< = not detected at concentrations exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

EPA = U.S. Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

RCRA - Resource Conservation and Recovery Act



# Table 6 Summary of Reconnaissance Groundwater Analytical Data RCRA 8 Metals Perine Property

820 South Adams Street Seattle, Washington

			Analytical Results (micrograms per liter)											
Sample ID	Sample Date	Chromium <sup>1</sup>	Arsenic <sup>1</sup>	Selenium <sup>3</sup>	Silver	Cadmium <sup>3</sup>	Barlum <sup>1</sup>	peer <sub>1</sub>	Mercury²					
20110316-P01	03/16/11	<1	<1	1.56	<1	<1	42.6	<1	<0.2					
20110316-P02	03/16/11	<1	<1	1.31	<1	<1	46.8	<1	<0.2					
20110316-P03	03/16/11	<1	<1	1.11	<1	<1	48.1	<1	<0.2					
20110317-P04	03/17/11	2.92	<1	<1	<1	2.32	23.4	<1	<0.2					
20110317-P05	03/17/11	<1	1.24	<1	<1	<1	26.4	<1	<0.2					
MTCA Cleanup Level		50°	5*	80 <sup>b</sup>	80 <sup>b</sup>	5*	3,200 <sup>b</sup>	15°	2ª					

### NOTES

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

<sup>1</sup>Analyzed by EPA Method 200.8.

<sup>2</sup>Analyzed by EPA Method 1631E.

\*MTCA Method A Groundwater Cleanup Level, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

<sup>b</sup>CLARC Groundwater MTCA Method B Carcinogenic and Non-carcinogenic Standard Formula, Unrestricted Land Use.

< = not detected at concentrations exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

EPA = U.S. Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

# **ATTACHMENT A UST Closure Documentation** SoundEarth Strategies, Inc.



# UNDERGROUND STORAGE TANK

# **30 DAY NOTICE**

See back of form for instructions

Please The Appropriate box: Intent Intent Both to Install to Close

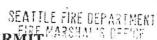
FOR OFFICE	USE ONLY
Site ID #:	
FS ID #:	-
VALID MAK 17	ATED

• -	to Install to Close			, 2011	
MAR 17 2011					•
MAR 11 2	e Information		Owner Info	rmation	
UBI Rughestop Progr	arri/A		form will be return	ed to this addres	§) C 0
UBI Numbernup Proyl	774	UST Owner/Open	ator The Ver	he omo	Prope
Site/Business Name	he Perihe/Danforth Co.	Mailing Address		Printe Propo	on with
	South Adams treet	walling Address	2110	Street	C 120 SU
Site Address 820	SOUTH ADVINS STEEL			P.O. Box	
City/State Seattle	e, WA	City/State Wat	odside, C	Р.О. вох <b>Д</b>	
Zip Code 98108	Telephone (206) 482-97.	SSZip Code 940		phone (6 50)	504-692
				(233)	
Tank Installation (	Company (if known). Fill out this se	ection ONLY if tanks	are being insta	illed.	
	· · · · · · · · · · · · · · · · · · ·			ME-EL	
Address					
Street		P.O. Box		,	
City	State	Zip Code	Telephon	e ()	
Tank Permanent C	losure Company (if known). Fill	out this section ONL	Y if tanks are t	peing closed.	,
Service Company So	und Earth Strategie	S Contact Name	Tam Ca	mmar	ata
Address Z&II F	Fairview AIR E	sute 2000	10.00		
Street 110		98107 P.O. Box			
City	State	2ip Code	Telephone	(206) 306 -	1900
	Tank Closure Informati	on			stallation mation
	Fill out this section ONLY if tanks are bein	g closed.		Fill out this s	ection ONLY if
		Is There		tanks are be	eing installed.
Projected Closure	Take the same of t	Product In Tank the Tank	If No, Date Tank Was		Approx.
Tank ID Date	Capacity Stored Last	Head (Vac/No)	Pumped	Tank ID	Install Date
1 1 1 1 1 1 1 1 1	1,000-991 gasoline 191	od Jes			4 <del></del>
					-
CY 020-95 (Rev. 01-06)					

TUE 04/12/11 10AM SX

-Your Seattle

Fire Department





SEATILE FIRE DEPARTMENT MAR 16 2011 APPLICATION FOR TEMPORARY PERMIT MARSHAL'S DEFICE

MAR LO ZUII	
Code 7908 FERMIT SEC Commercial	Tank Removal/Decommissioning
Permit Fee: \$208.00	Date Issued: 4/12/11
TO BE COMPLETED BY PERMIT APPLICANT (PLEAS	Tank(s) must be removed from site same day as permit issued!
FIRM NAME SOUNT GAPTH STO	itegies Inc.
MAILING ADDRESS 28 [ Fair Vi	ew Avenue fast suite 2000
city Seattle	STATE WA ZIP 08/10/2
OPERATION ADDRESS 820 Soul	In Dalota Street Ceatile WA
CONTACT PERSON TOM CAMMO	arata PHONE NUMBER (206) 306-1900 (ext 140)
Number of Tank(s): Tank Siz	
Product(s) Previously Contained: Q & So	he Underground tank
Removal (Marine Chemist inspection and cer	rtificate required for all tanks regardless of size or contents)
Abandonment-in-Place (Marine Chemist certification and unknowns)	icate required for tanks previously containing Class I flammable
Hot work being conducted?: No	☐ Yes (If yes, a separate hot work permit is required)
Please include a check made pa	yable to the CITY OF SEATTLE with this application.
Permit applications may be submitted in person we Seattle Fire Department  Fire Marshal's Office—Permits	veekdays from 8:00 a.m. to 4:30 p.m., or mailed to:
220 Third Avenue South, Second Floor Seattle, WA 98104-2608	Permit processing: (206) 386-1450 www.seattle.gov/fire
Call 386-1450, at least 24 hours prior	to needed inspection time to arrange for an appointment.
	MISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
	system prior to issuance of this Fire Department permit!
local regulations. THIS PERMIT IS NULL AND	ommission the tank(s) identified in this permit in accordance with the and all applicable provisions of the Seattle Fire Code, federal, state and VOID IF PERMIT CONDITIONS ARE NOT ATTACHED
15 - 10:211:01	APPROVED BY
c 1/22 cm	Name of Marine Chemist DON SU 598 Certificate # 45688
C)2-r(3	Name of Marine Chemist DON SLY S73 Certificate # 45636

# SOUND TESTING, INC P.O. BOX 16204 SEATTLE, WA 98116 (206) 932-0206 FAX (206) 937-3848

# MARINE CHEMIST CERTIFICATE SERIAL Nº2 45588

Last Three (3) Loadings / Tosts Performed	Specific Location of Time Survey Com
ast Three (3) Loadings / Tests Performed	25.
	Time Survey Com
	Time <sup>s</sup> Survey Com
UNDERGROUND +1,000-GAL GASOLINE THY	6 - WAY BE SAFFIN
	FILLED WITH
	"COE"
	"CONTROLLED
	DENSITY
	FILL
	- FREE OF LIQUID
	PEDBUCT
	- AIRBORNE COMPLIST
	GAS LESS THAN
	10% OF EXCLUSIVE
	MIXTURE
In the event of any physical or atmospheric changes adversely affectin	g the gas-free condition of the
above spaces, or if in any doubt, immediately stop all work and contact ti	he undersigned Marine Chemist.
LIFICATIONS: Transfer of ballast or manipulation of valves or closure equipment tending to alter condition ect to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorser	ment or release of Cartificate for the annual and
ited. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "no	ot safe" unless otherwise specifically designated.
STANDARD SAFETY DESIGNATIONS	osphere is at least 19.5 percent by volume, and that (b) toyin
AFE FOR WORKERS. Means that in the compartment or space so designated (a) the expression tent of the atmospherical states and the expression of the expressi	ing toxic materials under existing atmospheric conditions while
SAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of produci	
SAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of product tained as directed on the Marine Chemist's Certificate  NOT SAFE FOR WORKERS. Means that in the compartment or space so designated, the requirements of Safe for	Workers has not been met.
SAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of product tained as directed on the Marine Chemist's Certificate (ACT SAFE FOR WORKERS. Means that in the compartment or space so designated, the requirements of Safe for SAFE FOR HOT WORK. Means that in the compartment so designated: (a) oxygen content of the atmosphere is a set or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atm	at least 19.5 percent by volume, with the exception of inerted
SAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of product tained as directed on the Marine Chemist's Certificate  NOT SAFE FOR WORKERS. Means that in the compartment or space so designated, the requirements of Safe for SAFE FOR HOT WORK. Means that in the compartment so designated: (a) oxygen content of the atmosphere is a set or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atm se residues are not capable of producing a higher concentration than permitted by (b) above under existing atmosphere to on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces have been cleaned sufficiently to	at least 19.5 percent by volume, with the exception of inerted nosphere is below 10 percent of the lower flammable limit; and that otheric conditions in the presence of fire, and while maintained as prevent the spread of fire, or are satisfactorily inerted, or, in the
EAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmostials in the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of product tained as directed on the Marine Chemist's Certificate (DOT SAFE FOR WORKERS. Means that in the compartment or space so designated, the requirements of Safe for AFE FOR HOT WORK. Means that in the compartment so designated: (a) oxygen content of the atmosphere is a set or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is a creation of the materials of the producing a higher concentration than permitted by (b) above under existing atmosphere on the Marine Chemist's Certificate, and further, that, (d) all adjacent spaces have been cleaned sufficiently to of fuel tanks, or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine OT SAFE FOR HOT WORK. Means that in the compartment so designated, the requirements of Safe for Hot Wor	at least 19.5 percent by volume, with the exception of inerted tosphere is below 10 percent of the lower flammable limit; and that otheric conditions in the presence of fire, and while maintained as prevent the spread of fire, or are satisfactorily inerted, or, in the te Chemist's requirements.
SAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of product tained as directed on the Marine Chemist's Certificate (NOT SAFE FOR WORKERS). Means that in the compartment or space so designated, the requirements of Safe for SAFE FOR HOT WORK. Means that in the compartment so designated: (a) oxygen content of the atmosphere is a set or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is a residues are not capable of producing a higher concentration than permitted by (b) above under existing atmosphere on the Marine Chemist's Certificate, and further, that, (d) all adjacent spaces have been cleaned sufficiently to of fuel tanks, or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marin IOT SAFE FOR HOT WORK Means that in the compartment so designated, the requirements of Safe for Hot Worth Hemist's Endonsement This is to certify that I have personally determined that all spaces in the foregoing list	at least 19.5 percent by volume, with the exception of inerted tosphere is below 10 percent of the lower flammable limit; and that pheric conditions in the presence of fire, and while maintained as prevent the spread of fire, or are satisfactorily inerted, or, in the te Chemist's requirements.
SAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of product tained as directed on the Marine Chemist's Certificate (a) Concentration of the Marine Chemist's Certificate (b) TSAFE FOR WORKERS. Means that in the compartment or space so designated, the requirements of Safe for AFE FOR HOT WORK. Means that in the compartment so designated: (a) oxygen content of the atmosphere is a set or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atm is eresidues are not capable of producing a higher concentration than permitted by (b) above under existing atmosphere on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces have been cleaned sufficiently to of fuel tanks, or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marin IOT SAFE FOR HOT WORK. Means that in the compartment so designated, the requirements of Safe for Hot Worth HEMIST'S ENDORSEMENT This is to certify that I have personally determined that all spaces in the foregoing list is and have found the condition of each to be in accordance with its assigned designation.  Independent of this Certificate under Section 2-6 of NEPA 306 and  This Certificate is based on the strange of th	at least 19.5 percent by volume, with the exception of inerted nosphere is below 10 percent of the lower flammable limit; and that observe conditions in the presence of fire, and while maintained as prevent the spread of fire, or are satisfactorily inerted, or, in the echemist's requirements.  The chamist's requirements is the time the inspection herein set forth was completed in conditions existing at the time the inspection herein set forth was completed.
SAFE FOR WORKERS. Means that in the compartment or space so designated (a) the oxygen content of the atmostrals in the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of product tained as directed on the Marine Chemist's Certificate (10T-SAFE FOR WORKERS). Means that in the compartment or space so designated, the requirements of Safe for IAFE FOR HOT WORK. Means that in the compartment so designated: (a) oxygen content of the atmosphere is a set or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atm is eresidues are not capable of producing a higher concentration than permitted by (b) above under existing atmosphere on the Marine Chemist's Certificate, and further, that, (d) all adjacent spaces have been cleaned sufficiently to of fuel tanks, or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marin OT SAFE FOR HOT WORK. Means that in the compartment so designated, the requirements of Safe for Hot Wor HEMIST'S ENDORSEMENT This is to certify that I have personally determined that all spaces in the foregoing list is and have found the condition of each to be in accordance with its assigned designation.  This Certificate is based on the producing at the strength of the strength of the space of	at least 19.5 percent by volume, with the exception of inerted nosphere is below 10 percent of the lower flammable limit; and that otheric conditions in the presence of fire, and while maintained as prevent the spread of fire, or are satisfactorily inerted, or, in the ne Chemist's requirements. It have not been met at are in accordance with NFPA 306 Control of Gas Hazards on

# **ATTACHMENT B**

**Boring Logs** 



Project: Perine Property Project Number: 0783-001-02

Logged by: RAH Date Started: 3/16/2011

**Surface Conditions:** Concrete Well Location N/S: 19' S of NE Corner of Building Well Location E/W: 8.3' W of NE Corner of Building

Reviewed by: TJC

Water Depth At Time of Drilling: feet bgs Date Completed: Water Depth After Completion: 3/16/2011 feet bgs

BORING | P01

LOG | --

Site Address: 820 South Adams Street

Seattle, Washington

				Da	ite Complet	.ea: 3,	/16/2011	Water Depth After Completion: feet bgs
	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	le USCS Class	Graphic	Lithologic Description Well Construction Detail
5—			20	0.3	P01-04	SP (FILL)		Concrete (2.5") at surface.  Damp, loose, fine SAND with trace silt, brown, no hydrocarbon odor (FILL).
-			10	0.3		SP (FILL)		Slough, no recovery, fill material.  Damp, loose, fine SAND with trace silt and subrounded gravel, brown, no hydrocarbon odor (FILL).
15	V V		80	3.4 4.0 4.1	P01-12	SP		Damp, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.  Moist, loose, fine to medium SAND, dark brown, no hydrocarbon odor.  Wet, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.
Drilling Co./Driller: ESN/Noel Drilling Equipment: Direct Push Sampler Type: Push-Probe Hammer Type/Weight: Ibs Total Boring Depth: 15 feet bgs Total Well Depth: feet bgs State Well ID No.:				Sos Fieet bgs Seet bgs A	/ell/Auger Dia /ell Screened creen Slot Si ilter Pack Usa urface Seal: nnular Seal:	l Interval: ze: ed:	inches feet bgs inches Concrete Bentonite Backfill Page: 1 of 1	



State Well ID No.:

Project:

Perine Property

**Project Number:** 

Logged by:

0783-001-02

RAH Date Started:

3/16/2011

Surface Conditions: Well Location N/S: Well Location E/W:

Concrete 14' S of NE Corner of Building

Reviewed by: Date Completed: 20' W of NE Corner of Building TJC

3/16/2011

Water Depth At Time of Drilling:

Water Depth After Completion:

BORING |

Site Address: 820 South Adams Street Seattle, Washington

P02

13 feet bgs feet bgs

1 of 1

Interval % Recovery **Blow Count** Graphic Well Sample USCS PID (ppmv) Lithologic Description ID Construction Class Detail Concrete (5") at surface. SP (FILL) 1.3 Damp, loose, fine to medium SAND, trace subrounded gravel, brown, no hydrocarbon odor 5 (FILL). SP (FILL) 0.0 Damp, loose, fine to medium SAND with trace silt, brown, no hydrocarbon odor (FILL). 80 0.0 P02-08 SP 0.7 Damp, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. 10 90 Moist, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. 1.1 P02-12 SP 0.0 90 Wet, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. P02-14 0.0 ESN/Noel inches Notes/Comments: Drilling Co./Driller: Well/Auger Diameter: Direct Push Well Screened Interval: feet bgs **Drilling Equipment:** Push-Probe inches Sampler Type: Screen Slot Size: Hammer Type/Weight: lbs Filter Pack Used: 15 Total Boring Depth: feet bgs Surface Seal: Concrete Page: Total Well Depth: feet bgs Annular Seal: Bentonite Backfill

Monument Type:



Project: Perine Property
Project Number: 0783-001-02
Logged by: RAH

Date Started: 3/16/2011
Surface Conditions: Concrete

Well Location N/S: 8.3' S of NE Corner of Building Well Location E/W: 35' W of NE Corner of Building

Reviewed by: TJC Water Depth At Time of Drilling: 13
Date Completed: 3/16/2011 Water Depth After Completion: --

BORING | P03

LOG --

Site Address: 820 South Adams Street

Seattle, Washington

feet bgs

feet bgs

				D	ite compie	steu.	110/2011	water Deptir Arter G	ompletion:	leet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Samp ID		Graphic	Lithologic Descrip	tion	Well Construction Detail
-			20			SP (FILL)		Concrete at surface.  Damp, loose, fine to medium SAN silt, brown, no hydrocarbon odor	D with trace (FILL).	
5—				0.9	P03-04	SP (FILL)		Damp, loose, fine to medium SAN silt, brown, no hydrocarbon odor	D with trace (FILL).	
	V.			0.5			::::::			
	$\mathbb{A}$		80		P03-07	ML (FILL)		Damp, loose, SILT with fine sand a gravel, dark brown, no hydrocarbo	and trace on odor (FILL).	
				0.2		SP		Damp, loose, fine to medium SAN silt, dark brown, no hydrocarbon o		
10 —			90	0.0		SP		Damp, loose, fine to medium SANI silt, dark brown, no hydrocarbon o		
				0.0	P03-12	SP		Moist, loose, fine to medium SANE dark brown, no hydrocarbon odor. Wet, loose fine to medium SAND w	vith trace silt,	
15			90	0.2	P03-15			dark brown, no hydrocarbon odor.		
Drilling	Co	Driller	ES	N/Noel		Well/Auger Dia	ameter	inches Notes	s/Comments:	
Drilling				ect Push		Well Screened		feet bgs	acomments.	
Sample	r Typ	oe:	Pus	sh-Probe		Screen Slot Si	ize:	inches		
Hamme						Filter Pack Us	ed:			
Total B Total W			15			Surface Seal: Annular Seal:		Concrete Bentonite Backfill		Page:
State W				16		Annular Seal: Monument Tyl				1 of 1
· ·										1 01 1



State Well ID No.:

Project:

Surface Conditions:

Well Location N/S:

Well Location E/W:

Perine Property Project Number: 0783-001-02

Logged by: Date Started:

3/17/2011

RAH

Concrete

7.3' S of NE Corner of Building 79.5' W of NE Corner of Building

Reviewed by: Date Completed: 3/17/2011 Water Depth At Time of Drilling:

Water Depth After Completion:

BORING | P04

Site Address: 820 South Adams Street

Seattle, Washington

LOG

13 feet bgs

1 of 1

feet bas

**Blow Count** % Recovery Interval Graphic Well Sample **USCS** PID (ppmv) Lithologic Description Construction ID Class Detail SP Concrete (2.5") at surface. (FILL) 100 Damp, loose, fine to medium SAND with trace silt, light brown, no hydrocarbon odor (FILL). 4.1 SP (FILL) 5.8 P04-04 100 Damp, loose, fine to medium SAND with trace silt, light brown, no hydrocarbon odor (FILL). 3.7 SP Damp, loose, fine to medium SAND with trace (FILL) silt, light brown, no hydrocarbon odor (FILL). Damp, loose, silty fine SAND, dark brown, no SM (FILL) hydrocarbon odor (FILL). 100 31.3 P04-08 SP Damp, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. SP 0.3 Damp, loose, fine to medium SAND with trace 10 silt, dark brown, no hydrocarbon odor. 90 Moist, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. 4.1 P04-12 SP Wet, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. 100 Wet, loose, SILT with fine sand and shell ML fragments, gray, no hydrocarbon odor. 13.5 P04-15 ESN/Rod inches Notes/Comments: Drilling Co./Driller: Well/Auger Diameter: feet bgs **Drilling Equipment:** Direct Push Well Screened Interval: Push-Probe inches Screen Slot Size: Sampler Type: Hammer Type/Weight: lbs Filter Pack Used: **Total Boring Depth:** 15 feet bgs Surface Seal: Concrete Page: Total Well Depth: feet bgs Annular Seal: Bentonite Backfill

Monument Type:



Project: Perine Property
Project Number: 0783-001-02
Logged by: RAH

Logged by: RAH

Date Started: 3/17/2011

Surface Conditions: Concrete

BORING | P05 LOG | --

Site Address: 820 South Adams Street Seattle, Washington

Well Location N/S: 72' S of NE Corner of Building
Well Location E/W: 11.7' W of NE Corner of Building

Reviewed by: TJC Water Depth At Time of Drilling: 13 feet bgs
Date Completed: 3/17/2011 Water Depth After Completion: -- feet bgs

<u></u>				te Complete		71772011	water Depth After Completion:	leet bgs
Depth (feet bgs) Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class		Lithologic Description	Well Construction Detail
		90	2.2	P05-03	SP (FILL)		Concrete (2.5") at surface.  Damp, loose, fine to medium SAND with silt and trace gravel, light brown, no hydrocarbon odor (FILL).	
5-		100	4.3	P05-05	SP (FILL)		Damp, loose, fine to medium SAND with trace silt, light brown, no hydrocarbon odor (FILL).	
-\/		100	4.6		SP (FILL)		Damp, loose, fine to medium SAND with trace silt and gravel, light to dark brown, no hydrocarbon odor (FILL).	
10 —		100	3.5	P05-08	SP SP		Damp, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.  Damp, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.  Moist, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.  Wet, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.	
Drilling Co Drilling Equ Sampler Ty Hammer Ty Total Boring Total Well D State Well II	ipmen pe: pe/Wei g Depth epth:	t: Dir Pu: ght:	fe	Scos Filleet bgs Sueet bgs An	ell/Auger Dia ell Screened reen Slot Si ter Pack Us rface Seal: anular Seal:	d Interval: ize: ed:	inches feet bgs inches Concrete Bentonite Backfill	Page: <b>1 of 1</b>



Project:

Project Number:

Logged by:

Date Started: **Surface Conditions:** 

Well Location N/S: Well Location E/W: Reviewed by:

**Date Completed:** 

3/16/2011

0783-001-02

Perine Property

Concrete

46.6' E of SW Corner of Building

RAH

BORING | LOG | --

P06

Site Address: 820 South Adams Street

Seattle, Washington

22' S of SW Corner of Building

3/16/2011

Water Depth At Time of Drilling: Water Depth After Completion:

9 feet bgs feet bgs

					ite Completed	<b>J.</b> 3	10/2011	water depth After Completion feet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Well Construction Detail
-			80	0.0		ML (FILL)		Concrete (6") at surface.  Asphalt and concrete debris.  Damp, loose, SILT with fine sand, brown to dark brown, no hydrocarbon odor.
5—				0.0		SP (FILL) SP (FILL)		Damp, loose, fine to medium SAND with trace silt, brown, no hydrocarbon odor (FILL).
-			80	0.0				Damp, loose, fine to medium SAND with trace silt, brown, no hydrocarbon odor (FILL).
-				0.0		SP		Damp, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.
10-	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		80	0.0		SP		Wet, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor.
				0.0		ML		Wet, loose, SILT with fine sand and shell fragments, grayish brown, no hydrocarbon odor.
_	$\bigvee$		90	0.0		SP		Wet, loose, fine to medium SAND with trace silt and shell fragments, dark brown, no hydrocarbon odor.
15				0.9		ML		Wet, loose, SILT with fine sand and shell fragments, grayish brown, no hydrocarbon odor.
Drilling Co./Driller: ESN/Noel Well/Auger Diameter Drilling Equipment: Direct Push Well Screened Interv Sampler Type: Push-Probe Screen Slot Size: Hammer Type/Weight: Ibs Filter Pack Used:				We Scr bs Filt	l Interval: ze:	inches feet bgs inches Concrete		
Total Dolling Dopuli				eet bgs Anı	Annular Seal: Monument Type:		Bentonite Backfill Page: 1 of 1	



Project:

Perine Property

Project Number:

Logged by: Date Started: 0783-001-02

RAH

**Surface Conditions:** 

3/17/2011 Concrete

33' S of NE Corner of Building

Well Location N/S: Well Location E/W:

86.4' W of NE Corner of Building

Reviewed by:

TJC

Water Depth At Time of Drilling:

BORING |

LOG

Site Address: 820 South Adams Street

13

P07

Seattle, Washington

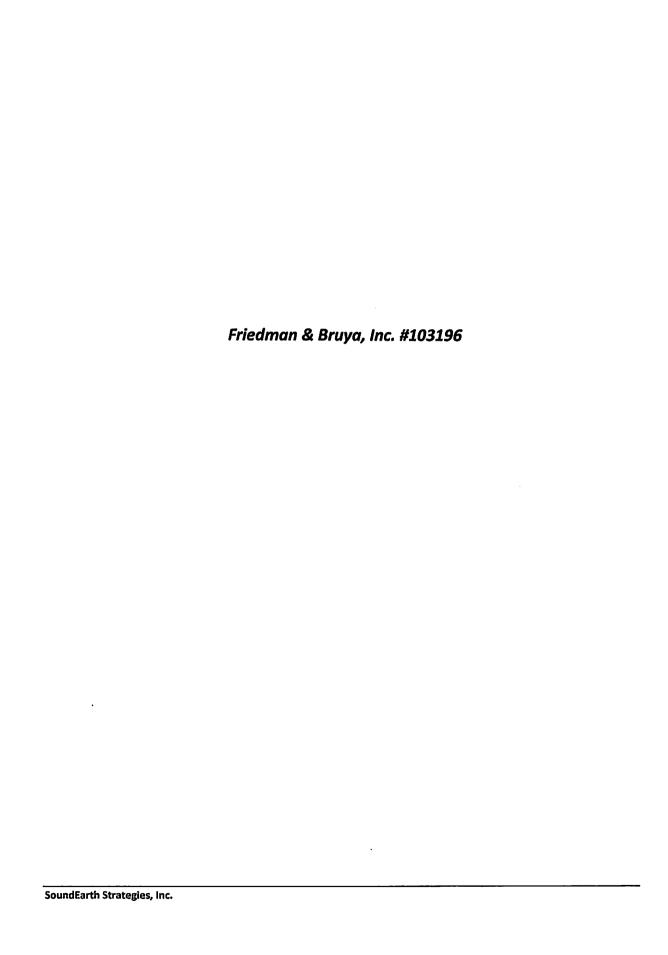
feet bgs

1 of 1

**Date Completed:** 3/17/2011 Water Depth After Completion: feet bgs Interval % Recovery **Blow Count** Graphic Sample USCS Well PID (ppmv) ID Lithologic Description Class Construction Detail SP Concrete (2.5") at surface. (FILL) 90 Damp, loose, fine SAND with silt and trace gravel, light brown, no hydrocarbon odor (FILL). 0.0 SP (FILL) 0.3 P07-04 90 Damp, loose, fine to medium SAND with trace silt 5 and gravel, light brown, no hydrocarbon odor. 0.0 SP (FILL) 0.0 90 Damp, loose, fine to medium SAND with trace silt, light brown, no hydrocarbon odor. 0.0 P07-09 SP 10 0.0 90 Damp, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. P07-11 0.9 SP Moist, loose, fine to medium SAND with trace silt, dark brown, no hydrocarbon odor. 0.0 Wet, loose, fine to coarse SAND with trace silt, dark brown, no hydrocarbon odor. 100 0.0 P07-15 Drilling Co./Driller: ESN/Rod Well/Auger Diameter: inches Notes/Comments: **Drilling Equipment:** Direct Push Well Screened Interval: -feet bgs Sampler Type: Push-Probe Screen Slot Size: inches Hammer Type/Weight: lbs Filter Pack Used: **Total Boring Depth:** 15 feet bgs Surface Seal: Concrete Page: **Total Well Depth:** feet bgs Annular Seal: Bentonite Backfill State Well ID No.:

Monument Type:

# **ATTACHMENT C Laboratory Analytical Reports** SoundEarth Strategies, Inc.



# FRIEDMAN & BRUYA, INC.

# **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Charlene Morrow, M.S. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

March 30, 2011

Tom Cammarata, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Cammarata:

Included are the results from the testing of material submitted on March 16, 2011 from the SOU\_0783\_20110316, F&BI 103196 project. There are 27 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

**Enclosures** 

c: Ryan Thompson, Ryan Bixby

SOU0330R.DOC

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

# **CASE NARRATIVE**

This case narrative encompasses samples received on March 16, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0783\_20110316, F&BI 103196 project. Samples were logged in under the laboratory ID's listed below.

SoundEarth Strategies P01-04
P01-12
P01-15 P02-08
P02-12
P02-14
P03-04
P03-07
P03-12
P03-15
20110316-P01
20110316-P02
20110316-P03
20110316-P06

Several 8260C compounds failed the calibration acceptance criteria. The data were flagged accordingly.

Methylene chloride was detected in several samples. The data were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

# FRIEDMAN & BRUYA, INC.

# **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

Date Extracted: 03/18/11 Date Analyzed: 03/18/11

# RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate ( <u>% Recovery)</u> (Limit 51-134)
20110316-P06 103196-14	<100	63
Method Blank	<100	65

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

Date Extracted: 03/17/11

Date Analyzed: 03/17/11 and 03/23/11

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
P01-12 103196-02	<0.02	<0.02	<0.02	<0.06	<2	83
P02-12 103196-05	<0.02	<0.02	<0.02	<0.06	<2	77
P03-12 103196-09	<0.02	<0.02	<0.02	<0.06	<2	82
Method Blank	<0.02	<0.02	<0.02	<0.06	<2	87

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

Date Extracted: 03/16/11 Date Analyzed: 03/17/11

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C <sub>10</sub> -C <sub>25</sub> )	Motor Oil Range (C <sub>25</sub> -C <sub>36</sub> )	Surrogate (% Recovery) (Limit 50-150)
P01-12 103196-02	<50	<250	109
P02-12 103196-05	<50	<250	105
P03-12 103196-09	<50	<250	109
Method Blank	<50	<250	104

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

Date Extracted: 03/16/11 Date Analyzed: 03/16/11

# RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C <sub>10</sub> -C <sub>25</sub> )	Motor Oil Range (C <sub>25</sub> -C <sub>36</sub> )	Surrogate (% Recovery) (Limit 50-150)
20110316-P06 103196-14	<50	<250	96
Method Blank	<50	<250	98

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Dissolved Metals By EPA Method 200.8

 Client ID:
 20110316-P01

 Date Received:
 03/16/11

 Date Extracted:
 03/17/11

 Date Analyzed:
 03/21/11

 Matrix:
 Water

 Units:
 ug/L (ppb)

Client: SoundEarth Strategies
Project: SOU\_0783\_20110316, F&BI 103196

Lab ID: 103196-11
Data File: 103196-11.062
Instrument: ICPMS1
Operator: AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	78	60	125
Indium	78	60	125
Holmium	84	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Arsenic	<1
Selenium	1.56
Silver	<1
Cadmium	<1
Barium	42.6
Lead	<1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Dissolved Metals By EPA Method 200.8

Client ID: 20110316-P02 Client: SoundEarth Strategies

 Date Received:
 03/16/11
 Project:
 SOU\_0783\_20110316, F&BI 103196

 Date Extracted:
 03/17/11
 Lab ID:
 103196-12

 Date Analyzed:
 03/21/11
 Data File:
 103196-12.066

Matrix: Water Instrument: ICPMS1
Units: ug/L (ppb) Operator: AP

Lower Upper Internal Standard: % Recovery: Limit: Limit: Germanium 79 60 125 Indium 76 60 125 Holmium 83 60 125

Analyte: Concentration ug/L (ppb)

 Chromium
 <1</td>

 Arsenic
 <1</td>

 Selenium
 1.31

 Silver
 <1</td>

 Cadmium
 <1</td>

 Barium
 46.8

 Lead
 <1</td>

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Dissolved Metals By EPA Method 200.8

 Client ID:
 20110316-P03

 Date Received:
 03/16/11

 Date Extracted:
 03/17/11

 Date Analyzed:
 03/21/11

 Matrix:
 Water

 Units:
 ug/L (ppb)

Client: SoundEarth Strategies

Project: SOU\_0783\_20110316, F&BI 103196

Lab ID: 103196-13

Data File: 103196-13.067
Instrument: ICPMS1
Operator: AP

	_	Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	81	60	125
Indium	79	60	125
Holmium	81	60	125

Concentration Analyte: ug/L (ppb) Chromium <1 Arsenic <1 Selenium 1.11 Silver <1 Cadmium <1 Barium 48.1 Lead <1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Dissolved Metals By EPA Method 200.8

Client ID: Method Blank
Date Received: NA
Date Extracted: 03/17/11
Date Analyzed: 03/21/11
Matrix: Water
Units: ug/L (ppb)

Client: SoundEarth Strategies
Project: SOU\_0783\_20110316, F&BI 103196
Lab ID: I1-188 mb

Data File: I1-188 mb.060
Instrument: ICPMS1
Operator: AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	84	60	125
Indium	83	60	125
Holmium	83	60	125

Concentration Analyte: ug/L (ppb) Chromium <1 Arsenic <1 Selenium <1 Silver <1 Cadmium <1 Barium <1 Lead <1

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

Date Extracted: 03/17/11 Date Analyzed: 03/18/11

#### RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Dissolved Mercury
20110316-P01 103196-11	<0.2
20110316-P02 103196-12	<0.2
20110316-P03 103196-13	<0.2
Method Blank	<0.2

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: 20110316-P01 Client: SoundEarth Strategies

Date Received: 03/16/11 Project: SOU\_0783\_20110316, F&BI 103196

 Date Extracted:
 03/22/11
 Lab ID:
 103196-11

 Date Analyzed:
 03/22/11
 Data File:
 032211.D

 Matrix:
 Water
 Instrument:
 GCMS4

 Units:
 ug/L (ppb)
 Operator:
 JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	99	60	133

	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<l< td=""><td>Ethylbenzene</td><td>&lt;1</td></l<>	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	5.8 lc	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	< 0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: 20110316-P02 Client: SoundEarth Strategies

Date Received: 03/16/11 Project: SOU\_0783\_20110316, F&BI 103196

Date Extracted:03/22/11Lab ID:103196-12Date Analyzed:03/22/11Data File:032214.DMatrix:WaterInstrument:GCMS4Units:ug/L (ppb)Operator:JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	· <1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	5.1 lc	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<l< td=""></l<>
Benzene	< 0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	< <b>i</b>
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<l< td=""></l<>
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: 20110316-P03 Client: SoundEarth Strategies

Date Received: 03/16/11 Project: SOU\_0783\_20110316, F&BI 103196 Date Extracted: 03/25/11 Lab ID: 103196-13

Date Analyzed: 03/25/11 Data File: 032511.D Matrix: Water Instrument: GCMS4

Units: ug/L (ppb) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	96	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	105	60	133
	Concentration		

4-Diomondolobenzene	103	155	
	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1 ca	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<l< td=""><td>1,3,5-Trimethylbenzene</td><td>&lt;1</td></l<>	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	< 0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	20110316-P06	Client:	SoundEarth Strategies
n . n . 1	00110111		

Date Received: 03/16/11 Project: SOU\_0783\_20110316, F&BI 103196
Date Extracted: 03/25/11 Lab ID: 103196-14

Date Extracted:03/25/11Lab ID:103196-14Date Analyzed:03/25/11Data File:032512.DMatrix:WaterInstrument:GCMS4Units:ug/L (ppb)Operator:JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	95	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	105	60	133

	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<l< td=""></l<>
Bromomethane	<1 ca	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	5.6	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	< 0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0783_20110316, F&BI 103196
Date Extracted:	03/22/11	Lab ID:	01-412 mb
Date Analyzed:	03/22/11	Data File:	032207.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

_		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	100	60	133

		100	
Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1 <1
Vinyl chloride	<0.2	Dibromochloromethane	<1 <1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1 <1
Chloroethane	<1	Chlorobenzene	<1 <1
Trichlorofluoromethane	<1	Ethylbenzene	<1 <1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1 <1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	< 0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<l< td=""><td>sec-Butylbenzene</td><td>&lt;1</td></l<>	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<l< td=""><td>1,2,4-Trichlorobenzene</td><td>&lt;1</td></l<>	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<l< td=""><td>Hexachlorobutadiene</td><td>&lt;1</td></l<>	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: NA Project: SOU\_0783\_20110316, F&BI 103196

Date Extracted: 03/25/11 Lab ID: 01-416 mb
Date Analyzed: 03/25/11 Data File: 032506.D
Matrix: Water Instrument: GCMS4
Units: ug/L (ppb) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration
Compounds.	ug/L (ppo)	Compounds:	ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1 ca	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<l< td=""></l<>
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<l< td=""><td>Isopropylbenzene</td><td>&lt;1</td></l<>	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<l< td=""><td>2-Chlorotoluene</td><td>&lt;1</td></l<>	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	< 0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<l< td=""></l<>
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

## FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

## QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 103230-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Analyte	Reporting	Spike	Recovery	Acceptance
	Units	Level	LCS	Criteria
Gasoline	ug/L (ppb)	1,000	91	69-134

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 103171-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	< 0.02	<0.02	nm
Toluene	mg/kg (ppm)	< 0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	< 0.02	< 0.02	nm
Xylenes	mg/kg (ppm)	< 0.06	< 0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	85	66-121
Toluene	mg/kg (ppm)	0.5	85	72-128
Ethylbenzene	mg/kg (ppm)	0.5	86	69-132
Xylenes	mg/kg (ppm)	1.5	87	69-131
Gasoline	mg/kg (ppm)	20	85	61-153

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103127-01 (Matrix Spike)

Analyte	Reporting Units	Spike		Percent Recovery MS	Percent Recovery	Acceptance	RPD
Allalyte	Units	Level	Result	IVIS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	105	108	63-146	3

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	107	79-144

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

## QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

	-	_	Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	106	110	63-142	4

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 103196-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	ug/L (ppb)	20	<1	107	108	67-132	1
Arsenic	ug/L (ppb)	10	<1	107	104	56-167	3
Selenium	ug/L (ppb)	5	1.56	102 b	97 b	54-170	5 b
Silver	ug/L (ppb)	5	<1	99	98	66-121	1
Cadmium	ug/L (ppb)	5	<1	102	102	86-118	0
Barium	ug/L (ppb)	50	42.6	111 b	114 b	63-133	3 b
Lead	ug/L (ppb)	10	<1	120	120	76-125	0

			Percent	
	Reporting	Spike	Recovery	Acceptance
_Analyte	Units	Level	LCS	Criteria
Chromium	ug/L (ppb)	20	108	66-135
Arsenic	ug/L (ppb)	10	100	55-128
Selenium	ug/L (ppb)	5	95	59-134
Silver	ug/L (ppb)	5	107	64-136
Cadmium	ug/L (ppb)	5	106	66-135
Barium	ug/L (ppb)	50	111	66-133
Lead	ug/L (ppb)	10	123	67-135

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Laboratory Code: 103196-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recover y MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	ug/L (ppb)	0.5	<0.2	101	102	48-160	1

Analyte	Reporting Units	Spike Level	Percent Recover y LCS	Acceptance Criteria
Mercury	ug/L (ppb)	0.5	103	79-126

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 103256-07 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Únits	Level	Result	MS	Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	88	10-172
Chloromethane	ug/L (ppb)	50	<10	93	25-166
Vinyi chloride	ug/L (ppb)	50	<0.2	99	36-166
Bromomethane	ug/L (ppb)	50	<1	81	47-169
Chloroethane	ug/L (ppb)	50	<1	93	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<l< td=""><td>90</td><td>44-165</td></l<>	90	44-165
Acetone	ug/L (ppb)	250	<10	103	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	95	60-136
Methylene chloride	ug/L (ppb)	50	<5	85	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	103	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	102	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	99	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<l< td=""><td>91</td><td>36-154</td></l<>	91	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<l< td=""><td>104</td><td>71-127</td></l<>	104	71-127
Chloroform	ug/L (ppb)	50	<1	99	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	96	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	94	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	98	60-146
1.1-Dichloropropene	ug/L (ppb)	50	<1	103	69-133
Carbon tetrachloride	ug/L (ppb)	50	<l< td=""><td>95</td><td>56-152</td></l<>	95	56-152
Benzene	ug/L (ppb)	50	<0.35	102	76-125
Trichloroethene	ug/L (ppb)	50	</td <td>96</td> <td>66-135</td>	96	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	106	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	105	61-150
Dibromomethane	ug/L (ppb)	50	<1	104	66-141
4-Methyl-2-pentanone	ug/L (pph)	250	<10	115	10-185
cis-1,3-Dichloropropene Toluene	ug/L (ppb)	50	<l< td=""><td>110</td><td>72-132</td></l<>	110	72-132
trans-1,3-Dichloropropene	ug/L (ppb)	50	<l< td=""><td>101</td><td>76-122</td></l<>	101	76-122
1.1.2-Trichloroethane	ug/L (ppb)	50 50	<1 <1	107 103	76-130 68-131
2-Hexanone	ug/L (ppb) ug/L (ppb)	250	<10	112	10-185
1.3-Dichloropropane	ug/L (ppb)	50 50	<1	103	71-128
Tetrachloroethene	սք/Լ (ppb) սք/Լ (ppb)	50 50	<1	105	73-129
Dibromochloromethane	ug/L (ppb)	50	</td <td>109</td> <td>70-139</td>	109	70-139
1.2-Dibromoethane (EDB)	ug/L (ppb)	50	</td <td>108</td> <td>69-134</td>	108	69-134
Chlorobenzene	ug/L (ppb)	50	</td <td>101</td> <td>77-122</td>	101	77-122
Ethylbenzene	ug/L (ppb)	50	</td <td>102</td> <td>69-135</td>	102	69-135
1.1.1.2-Tetrachloroethane	ug/L (ppb)	50	ςί	103	73-137
m,p-Xylene	ug/L (ppb)	100	<2	104	69-135
o-Xylene	ug/L (ppb)	50	<1	107	68-137
Styrene	ug/L (ppb)	50	<1	110	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	105	65-142
Bromoform	ug/L (ppb)	50	<1	iii	65-142
n-Propylbenzene	ug/L (ppb)	50	<li>&lt; i</li>	107	58-144
Bromobenzene	ug/L (ppb)	50	<l< td=""><td>107</td><td>75-124</td></l<>	107	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<li>&lt; l</li>	106	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<ĺ	108	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	105	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	105	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	106	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	105	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	106	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	104	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<l< td=""><td>106</td><td>65-141</td></l<>	106	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	1.5	103	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<l< td=""><td>99</td><td>69-126</td></l<>	99	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<l< td=""><td>103</td><td>69-128</td></l<>	103	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	112	32-164
1.2.4-Trichlorobenzene	ug/L (ppb)	50	<l< td=""><td>116</td><td>76-132</td></l<>	116	76-132
Hexachlorobutadiene	ug/L (ppb)	50	</td <td>100</td> <td>60-143</td>	100	60-143
Naphthalene	ug/L (ppb)	50	<1	124	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	116	69-148

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

	Reporting	Spike	Percent Recovery	Percent Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	98	99	25-158	l l
Chloromethane	ug/L (ppb)	50	95	97	45-156	2
Vinyl chloride	ug/L (ppb)	50	100	102	50-154	2
Bromomethane	ug/L (ppb)	50	90	89	55-143	1
Chloroethane Trichlorofluoromethane	ug/L (ppb)	50	93	99	58-146	6
Acetone	ug/L (ppb)	50	101	100	50-150	<u>t</u>
1,1-Dichloroethene	ug/L (ppb)	250	100	97	60-155	3
Methylene chloride	ug/L (ppb) ug/L (ppb)	50 50	97 85	98	67-136	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50 50	101	92 101	39-148	8 0
trans-1,2-Dichloroethene	ug/L (ppb)	50	101	101	64-147 68-128	0
1.1-Dichloroethane	ug/L (ppb)	50	98	99	79-121	ĭ
2,2-Dichloropropane	ug/L (ppb)	50	106	106	55-143	Ö
cis-1,2-Dichloroethene	ug/L (ppb)	50	101	102	80-123	ĭ
Chloroform	ug/L (ppb)	50	100	101	80-121	i
2-Butanone (MEK)	ug/L (ppb)	250	94	93	57-149	i
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	100	73-132	ī
1.1.1-Trichloroethane	ug/L (ppb)	50	91	102	83-130	11
1.1-Dichloropropene	ug/L (ppb)	50	103	103	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	103	105	75-158	2
Benzene	ug/Ĺ (ppb)	50	99	100	69-134	l
Trichloroethene	ug/L (ppb)	50	96	97	80-120	t
1,2-Dichloropropane	ug/L (ppb)	50	101	102	77-123	, 1
Bromodichloromethane	ug/L (ppb)	50	105	106	81-133	1
Dibromomethane	ug/L (ppb)	50	102	103	82-125	1
4-Methyl-2-pentanone cis-1,3-Dichloropropene	ug/L (ppb)	250	110	110	70-140	0
Toluene	ug/L (ppb)	50 50	108 99	109	82-132	1
trans-1,3-Dichloropropene	ug/L (ppb) ug/L (ppb)	50 50	99 109	100 109	72-122 80-136	ι 0
1.1.2-Trichloroethane	ug/L (ppb)	50	109	102	75-124	i
2-Hexanone	ug/L (ppb)	250	109	102	64-152	Ó
1,3-Dichloropropane	ug/L (ppb)	50	102	103	76-126	i
Tetrachloroethene	ug/L (ppb)	50	106	108	76-121	ž
Dibromochloromethane	ug/L (ppb)	50	106	108	84-133	ž
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	104	105	82-125	ī
Chlorobenzene	ug/L (ppb)	50	99	100	83-114	i
Ethylbenzene	ug/L (ppb)	50	102	103	77-124	t
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	103	104	84-127	l
m.p-Xylene	ug/L (ppb)	100	103	105	83-125	2
o-Xylene	ug/L (ppb)	50	105	107	86-121	2
Styrene	ug/L (ppb)	50	107	108	85-127	1
Lsopropyibenzene	ug/L (ppb)	50	106	107	87-122	1
Bromoform	ug/L (ppb)	50	109	110	74-136	!
n-Propylbenzene Bromobenzene	ug/L (ppb)	50 50	105	106	74-126	l O
1,3,5-Trimethylbenzene	ug/L (ppb)	50 50	103 105	103 106	80-121	l
1,1,2,2-Tetrachloroethane	ug/L (ppb) ug/L (ppb)	50 50	102	108	80-126 66-126	i I
1,2,3-Trichloropropane	ug/L (ppb)	50	101	101	67-124	Ö
2-Chlorotoluene	ug/L (ppb)	50	103	104	77-127	i
4-Chlorotoluene	ug/L (ppb)	50	104	105	78-128	i
tert-Butylbenzene	ug/L (ppb)	50	105	106	85-127	i
1,2,4-Trimethylbenzene	ug/L (ppb)	50	105	106	82-125	i
sec-Butylbenzene	ug/L (ppb)	50	104	106	80-125	2
p-Isopropyltoluene	ug/L (ppb)	50	106	108	82-127	2
1,3-Dichlorobenzene	ug/L (ppb)	50	101	103	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	100	101	84-121	1
1,2-Dichlorobenzene	ug/L (ppb)	50	101	102	85-116	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	108	108	57-141	0
1.2.4-Trichlorobenzene	ug/L (ppb)	50	110	112	72-130	2
Hexachlorobutadiene	ug/L (ppb)	50	106	108	53-141	2
Naphthalene	ug/L (ppb)	50	111	113	64-133	2 3
1.2.3-Trichlorobenzene	ug/L (ppb)	50	109	112	65-136	3

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 103291-01 (Matrix Spike)

					Percent			
	Reporting	Spike	Sample	Recovery	Acceptance			
Analyte	Units	Level	Result	MS	Criteria			
Dichlorodifluoromethane	ug/L (ppb)	50	<10	94	10-172			
Chloromethane	ug/L (ppb)	50	<10	99	25-166			
Vinyl chloride	ug/L (ppb)	50	<0.2	113	36-166			
Bromomethane	ug/L (ppb)	50	<1	99	47-169			
Chloroethane	ug/L (ppb)	50	<1	114	46-160			
Trichlorofluoromethane	ug/L (ppb)	50	<1	111	44-165			
Acetone	ug/L (ppb)	250	<10	114	10-182			
1.1-Dichloroethene	ug/L (ppb)	50	<1	111	60-136			
Methylene chloride Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<5	115	67-132			
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	74-127			
1.1-Dichloroethane	ug/L (ppb)	50	</td <td>105</td> <td>72-129</td>	105	72-129			
2.2-Dichloropropane	ug/L (ppb)	50 50	</td <td>104</td> <td>70-128</td>	104	70-128			
cis-1,2-Dichloroethene	ug/L (ppb)		<1	105	36-154			
Chloroform	ug/L (ppb)	50 50	<1	105	71-127			
2-Butanone (MEK)	ug/L (ppb)	250	<1 -10	106	65-132			
1,2-Dichloroethane (EDC)	ug/L (ppb)	50 50	<10	106	10-129			
1.1.1-Trichloroethane	ug/L (ppb) ug/L (ppb)	50 50	<br </td <td>108</td> <td>69-133</td>	108	69-133			
1,1-Dichloropropene	ug/L (ppb)	50 50	<1 <1	102 106	60-146			
Carbon tetrachloride	ug/L (ppb)	50 50	<1 <1	109	69-133			
Benzene	ug/L (ppb)	50 50	<0.35	104	56-152 76-125			
Trichloroethene	ug/L (ppb)	50	<0.33 <1	102	66-135			
1.2-Dichloropropane	ug/L (ppb)	50	<1	102	78-125			
Bromodichloromethane	ug/L (ppb)	50	</td <td>112</td> <td>61-150</td>	112	61-150			
Dibromomethane	ug/L (ppb)	50	<1 <1	108	66-141			
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	116	10-185			
cls-1,3-Dichloropropene	ug/L (ppb)	50	<1	110	72-132			
Toluene	ug/L (ppb)	50	<1	102	76-122			
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	111	76-130			
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	105	68-131			
2-Hexanone	ug/L (ppb)	250	<10	119	10-185			
1,3-Dichloropropane	ug/L (ppb)	50	<1	104	71-128			
Tetrachloroethene	ug/L (ppb)	50	<1	100	73-129			
Dibromochloromethane	ug/L (ppb)	50	<1	112	70-139			
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<l< td=""><td>107</td><td>69-134</td></l<>	107	69-134			
Chlorobenzene	ug/L (ppb)	50	</td <td>103</td> <td>77-122</td>	103	77-122			
Ethylbenzene	ug/L (ppb)	50	<1	106	69-135			
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	110	73-137			
m.p-Xylene	ug/L (ppb)	100	<2	106	69-135			
o-Xylene	ug/L (ppb)	50	< l	109	68-137			
Styrene	ug/L (ppb)	50	<l< td=""><td>110</td><td>71-133</td></l<>	110	71-133			
Isopropylbenzene	ug/L (ppb)	50	<1	111	65-142			
Bromoform	ug/L (ppb)	50	<l< td=""><td>117</td><td>65-142</td></l<>	117	65-142			
n-Propylbenzene	ug/L (ppb)	50	<1	109	58-144			
Bromobenzene	ug/L (ppb)	50	<l< td=""><td>108</td><td>75-124</td></l<>	108	75-124			
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	109	66-137			
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	109	51-154			
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	107	53-150			
2-Chlorotoluene 4-Chlorotoluene	ug/L (ppb)	50	<1	107	66-127			
tert-Butylbenzene	ug/L (ppb)	50 50	<1	109	65-130			
1.2.4-Trimethylbenzene	ug/L (ppb)	50 50	</td <td>111</td> <td>65-137</td>	111	65-137			
sec-Butylbenzene	ug/L (ppb)	50 50	<l< td=""><td>109</td><td>59-146</td></l<>	109	59-146			
p-Isopropyltoluene	ug/L (ppb) ug/L (ppb)	50 50	<1	109	64-140			
1.3-Dichlorobenzene	ug/L (ppb)	50 50	<1 <1	110 105	65-141 72-123			
1.4-Dichlorobenzene	ug/L (ppb)	50 50	<1 <1	103	69-126			
1.2-Dichlorobenzene	ug/L (ppb)	50	<1 <1	103	69-128			
1.2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	104	32-164			
1.2.4-Trichlorobenzene	ug/L (ppb)	50	<10	112	76-132			
Hexachlorobutadiene	ug/L (ppb)	50	<1	107	60-143			
Naphthalene	ug/L (ppb)	50	<li>&lt;1</li>	112	44-164			
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	112	69-148			
	-0 - (Ph-)							

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/16/11

Project: SOU\_0783\_20110316, F&BI 103196

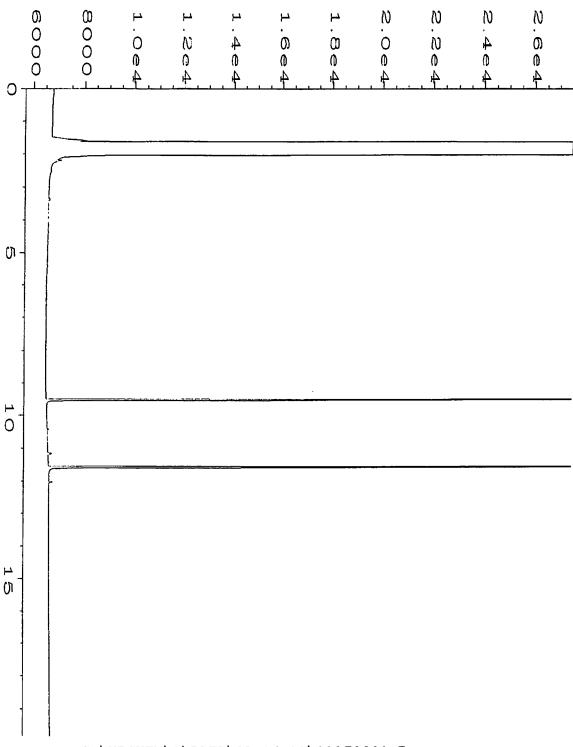
### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit_20)
Dichlorodifluoromethane	ug/L (ppb)	50	95	95	25-158	0
Chloromethane	ug/L (ppb)	50	98	93	45-156	5
Vinyl chloride	ug/L (ppb)	50	107	99	50-154	8
Bromomethane	ug/L (ppb)	50	94	91	55-143	3
Chloroethane	ug/L (ppb)	50	90	92	58-146	2
Trichlorofluoromethane	ug/L (ppb)	50	102	102	50-150	Ō
Acetone	ug/L (ppb)	250	108	110	60-155	2
1,1-Dichloroethene	ug/L (ppb)	50	104	106	67-136	2
Methylene chloride	ug/L (ppb)	50	100	104	39-148	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	104	106	64-147	2
trans-1,2-Dichloroethene	ug/L (pph)	50	107	106	68-128	1
1.1-Dichloroethane	ug/L (ppb)	50	104	104	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	119	130	55-143	9
cis-1,2-Dichloroethene	ug/L (ppb)	50	106	105	80-123	1
Chloroform	ug/L (ppb)	50	103	103	80-121	0
2-Butanone (MEK)	ug/L (ppb)	250	108	109	57-149	ı
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	101	73-132	ı
1,1,1-Trichloroethane	ug/L (ppb)	50	98	105	83-130	7
1.1-Dichloropropene	ug/L (ppb)	50	106	106	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	107	109	75-158	2
Benzene	ug/L (ppb)	50	103	104	69-134	1
Trichloroethene	ug/L (ppb)	50	100	100	80-120	0
1,2-Dichloropropane	ug/L (ppb)	50	106	107	77-123	ı
Bromodichloromethane	ug/L (ppb)	50	108	108	81-133	Ó
Dibromomethane	ug/L (ppb)	50	105	105	82-125	Ō
4-Methyl-2-pentanone	ug/L (ppb)	250	116	115	70-140	1
cis-1.3-Dichloropropene	ug/L (ppb)	50	115	115	82-132	0
Toluene	ug/L (ppb)	50	101	103	72-122	2 .
trans-1,3-Dichloropropene	ug/L (ppb)	50	115	116	80-136	i
1.1.2-Trichloroethane	ug/L (ppb)	50	104	105	75-124	1
2-Hexanone	ug/L (ppb)	250	120	120	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	105	107	76-126	2
Tetrachloroethene	ug/L (ppb)	50	101	102	76-121	t
Dibromochloromethane	ug/L (ppb)	50	111	111	84-133	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	108	108	82-125	0
Chlorobenzene	ug/L (ppb)	50	103	102	83-114	1
Ethylbenzene	ug/L (ppb)	50	106	106	77-124	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	108	108	84-127	0
m.p-Xylene	ug/L (ppb)	100	107	107	83-125	0
o-Xylene	ug/L (ppb)	50	111	ι 10	86-121	1
Styrene	ug/L (ppb)	50	112	110	85-127	2
Isopropylbenzene	ug/L (ppb)	50	113	110	87-122	3
Bromoform	. ug/L (ppb)	50	118	116	74-136	2
n-Propylbenzene	ug/L (ppb)	50	112	114	74-126	2
Bromobenzene	ug/L (ppb)	50	108	111	80-121	3
1,3,5-Trlmethylbenzene	ug/L (ppb)	50	112	112	80-126	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	112	113	66-126	ı
1,2,3-Trichloropropane	ug/L (ppb)	50	108	111	67-124	3
2-Chlorotoluene	ug/L, (ppb)	50	109	111	77-127	2
4-Chlorotoluene	ug/L (ppb)	50	111	113	78-128	2
tert-Butylbenzene	ug/L (ppb)	50	113	112	85-127	ι
1.2.4-Trimethylbenzene	ug/L (ppb)	50	112	111	82-125	1
sec-Butylbenzene	ug/L (ppb)	50	112	111	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	113	112	82-127	1
1,3-Dichlorobenzene	ug/L (ppb)	50	107	107	85-116	0
1,4-Dichlorobenzene	ug/L (ppb)	50	105	105	84-121	0
1,2-Dichlorobenzene	ug/L (ppb)	50	105	105	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	106	109	57-141	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	107	112	72-130	5
Hexachlorobutadiene	ug/L (ppb)	50	102	109	53-141	7
Naphthalene	ug/L (ppb)	50	109	114	64-133	4
1,2,3-Trichlorobenzene	ug/L (ppb)	50	106	111	65-136	5

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- Al More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- $\mbox{d} s$  The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- $\boldsymbol{J}$  The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- $\,$  nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- $\operatorname{pc}$  The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

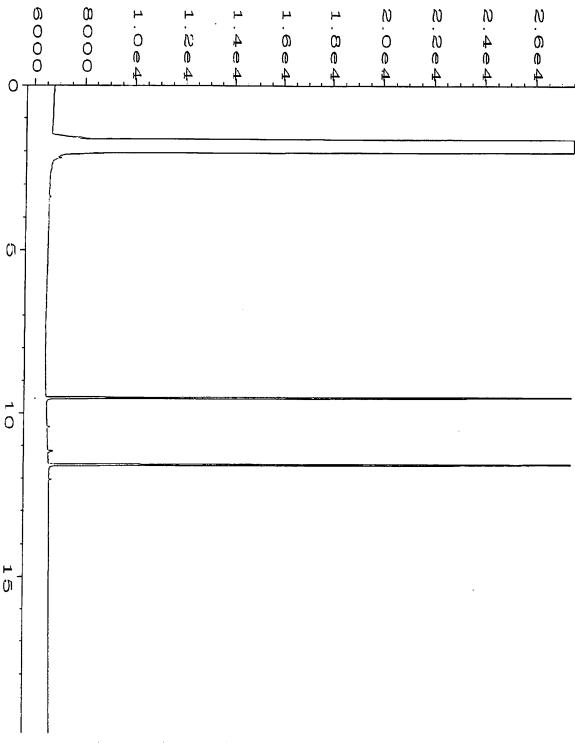


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Data File Name
                                                Page Number
Vial Number
Operator
                 : ML
                                                                  : 33
Instrument
                 : GC1
                 : 103196-02
                                                 Injection Number: 1
Sample Name
                                                 Sequence Line : 9
Run Time Bar Code:
                                                 Instrument Method: TPHD.MTH
Acquired on : 17 Mar 11
                              00:18 AM
```

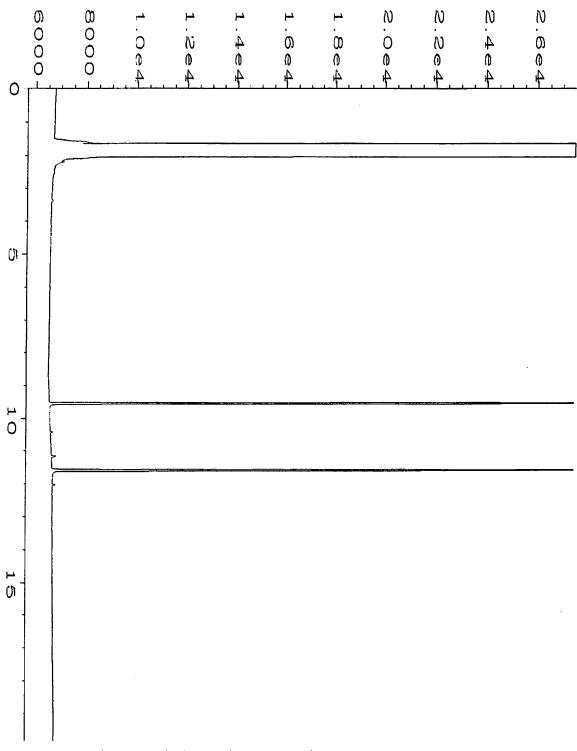
Analysis Method : TPHD.MTH

09:04 AM

Report Created on: 17 Mar 11



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Data File Name
                : C:\HPCHEM\1\DATA\03-16-11\034F0901.D
Operator
                : ML
                                              Page Number
                                                              : 1
                                              Vial Number
Instrument
                : GC1
                                                               : 34
Sample Name
                : 103196-05
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line
Acquired on : 17 Mar 11
                             00:45 AM
                                              Instrument Method: TPHD.MTH
Report Created on: 17 Mar 11
                             09:04 AM
                                              Analysis Method : TPHD.MTH
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Data File Name : C:\HPCHEM\1\DATA\03-16-11\035F0901.D

Operator : ML Page Number : 1

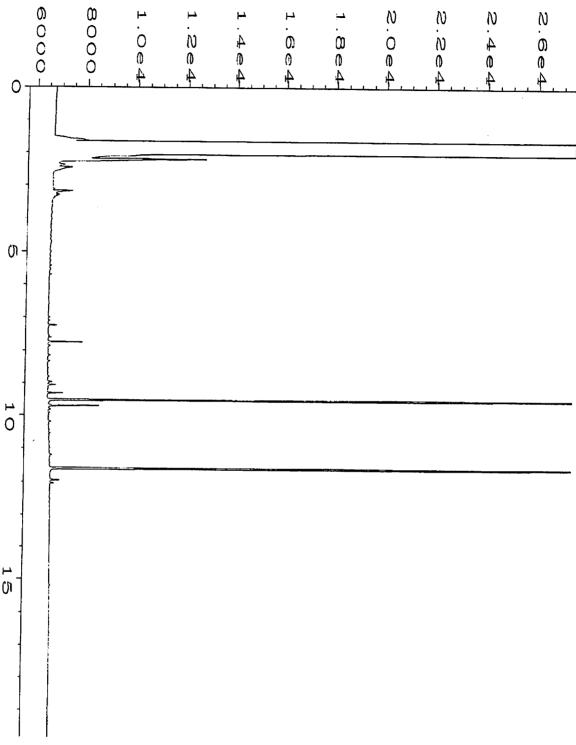
Instrument : GC1 Vial Number : 35

Sample Name : 103196-09 Injection Number : 1

Run Time Bar Code: Sequence Line : 9

Acquired on : 17 Mar 11 01:11 AM Instrument Method: TPHD
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Acquired on : 17 Mar 11 01:11 AM Instrument Method: TPHD.MTH Report Created on: 17 Mar 11 09:04 AM Analysis Method : TPHD.MTH



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Data File Name
Operator
                 : ML
                                                Page Number
Instrument
                 : GC1
                                                Vial Number
Sample Name
                : 103196-14
                                                Injection Number: 1
Run Time Bar Code:
                                                                : 7
                                                Sequence Line
Acquired on
                : 16 Mar 11 07:50 PM
                                                Instrument Method: TPHD.MTH
Report Created on: 17 Mar 11 09:02 AM
                                               Analysis Method : TPHD.MTH
```

10	Ó	10	1
10	3	17	6

SAMPLE CHAIN OF CUSTODY 14E 03/16/11 AT3/V2/V82/BO3

Send Report To Tom Camarla	SAMPLERS (signature)	PO#	TURNAROUND TIME  Standard (2 Weeks)
Company SES  Address 2811 Farricy Ave Est Sele 2000	- UT83	10#	RUSH
City, State, ZIP Suffle up 98102  Phone # 206 306,1900 Fax # 206-206-1907	REMARKS	GEMS Y/N	SAMPLE DISPOSAL  Dispose after 30 days  Return samples Will call with instructions

			·			~					ANA			QUESTED	
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH.Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	EPH 2008/1621E RCRA-8 Metals		Notes
P01-04	Pol.	05	AE	3-16-11	0844	50.1	5								HULL
P01-12	Pol	١٧	02A	=	U845-	5:1	2	×	×	×					
P01-15	Pol	15	03A		0854	50:1	5								Hisld
80- 208	Puz	80	04 A	<u> </u>	0920	5.1	5								Hisld
Poz-12	Puz		05A-		0955	Suil	5	×	×	×					
Puz-14	Poz	14	06A	-	1000	50.1	5								4.14
P03-04	भे <sub>ं</sub> र	01	07A-	=	1245	507	5								Hold
P23-07	کرح		08 A.	=	1250	5-91	5								Hold
P03-12	12,2		OGA	=	1027	5,.1	5	X	>	X					
1203-12	Puz	15	IOA	-	11 00	50:1	5								Hold
20110316-801	Pol		114		090	Webs	5			$\neg \uparrow$	X		X		, -1-4
20110316-Poz	P02	water.	12 BA-G		1070	vuter	5				X		X		
20110316-803	Pos		13.45		1105	when	5-				X	_	×		

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Libe - 1 Linsberge	SET	3-16-11	1320
Received the Carp	Michael Erclihl	FaBin	l	1
Relinquished by:			5 90	
Received by:		Samples received a		

FORMS\COC\SESGEMSRI.DOC (Revision 1)

10310	16
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Send Report To

City, State, ZIP\_

Company\_

·Address

SAMPLE CHAIN OF CUSTODY ME 03/16/11 SAMPLERS (signature) Page#\_ TURNAROUND TIME PROJECT NAME/NO. PO# Z Standard (2 Weeks) 0783 C RUSH Rush charges authorized by: REMARKS SAMPLE DISPOSAL Dispose after 30 days

GEMS Y / N

... Return samples

Phone #		Fax #_							·		<del></del>			_ Will	call w	ith instruc	tions
	<u> </u>		<del>i</del>	1		- <sub>4</sub>			·		ANAI	YSE	SREG	QUES	TED		
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of -	NWTPH.Dx	NWTPH.Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA.8 Metals			No	tes
10110516-906	Pos.	2442	AE AE	3-16-11	1215	water	6	χ	X		X						
	**/ana																·····
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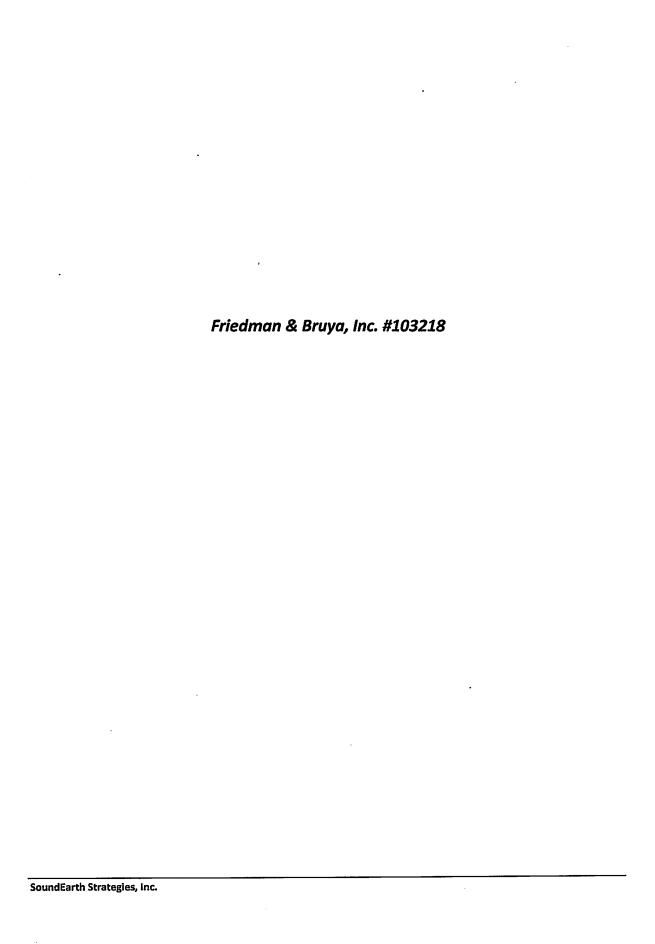
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by	Robert H. Husterg	555	3-16-11	1320
Roservalle	Michiel Erdihl	TER_	L	1
Relinquished by:				
Received by:		Samples received	at 5_°C	_

FORMS\COC\SESGEMSR1.DOC (Revision 1)



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Charlene Morrow, M.S. Yelena Aravkina, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

March 30, 2011

Tom Cammarata, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Mr. Cammarata:

Included are the results from the testing of material submitted on March 17, 2011 from the SOU\_0783\_20110317, F&BI 103218 project. There are 34 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures

c: Ryan Thompson, Ryan Bixby

SOU0330R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### **CASE NARRATIVE**

This case narrative encompasses samples received on March 17, 2011 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0783\_20110317, F&BI 103218 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 103218-01 103218-02 103218-03 103218-04 103218-05 103218-06 103218-07 103218-08 103218-09 103218-10	SoundEarth Strategies P05-03 P05-05 P05-08 P05-13 P04-04 P04-08 P04-12 P04-15 P07-04 P07-09
103218-09	P07-04
103218-10	P07-09
103218-11	P07-11
103218-12	P07-15
103218-13	20110317-P05
103218-14	20110317-P04
103218-15	20110317-P07

Several 8260C compounds failed the calibration acceptance criteria. The data were flagged accordingly.

All other quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted: 03/18/11 Date Analyzed: 03/21/11

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate ( <u>% Recovery</u> ) (Limit 58-139)
P05-03 103218-01	<2	86
P07-09 103218-10	<2	87
Method Blank	<2	94

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted: 03/18/11 Date Analyzed: 03/18/11

#### RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate ( <u>% Recovery)</u> (Limit 51-134)
20110317-P05 103218-13	<100	76
20110317-P07 103218-15	<100	79
Method Blank	<100	65

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted: 03/17/11 Date Analyzed: 03/17/11

# RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C <sub>10</sub> -C <sub>25</sub> )	Motor Oil Range (C <sub>25</sub> -C <sub>36</sub> )	Surrogate (% Recovery) (Limit 53-144)
P05-03 103218-01	<50	<250	102
P07-09 103218-10	<50	<250	101
Method Blank	<50	<250	97

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted: 03/17/11 Date Analyzed: 03/17/11

# RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C10-C25)	Motor Oil Range (C <sub>25</sub> -C <sub>36</sub> )	Surrogate (% Recovery) (Limit 50-150)
20110317-P05 103218-13	<50	<250	99
20110317-P07 103218-15	<50	<250	106
Method Blank	<50	<250	104

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Total Metals By EPA Method 200.8

Client ID:	P05-03	Client:	SoundEarth Strategies
Date Received:	03/17/11	Project:	SOU_0783_20110317, F&BI 103218
D-4- D 4 4 1	00/10/11		

 Date Extracted:
 03/18/11
 Lab ID:
 103218-01

 Date Analyzed:
 03/21/11
 Data File:
 103218-01.021

 Matrix:
 Soil
 Instrument:
 ICPMS1

 Units:
 mg/kg (ppm)
 Operator:
 AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	97	60	125
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	16.7
Arsenic	2.84
Selenium	<1
Silver	<1
Cadmium	<1
Barium	56.8
Lead	3.21

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Total Metals By EPA Method 200.8

Client ID: P04-08 Date Received: 03/17/11 Date Extracted: 03/18/11 Date Analyzed: 03/21/11 Soil

Matrix: Units:

mg/kg (ppm)

Client: Project: Lab ID:

SoundEarth Strategies

SOU\_0783\_20110317, F&BI 103218 103218-06

103218-06.022

Data File: Instrument: ICPMS1 Operator:

AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	104	60	125
Indium	90	60	125
Holmium	91	60	125

Concentration Analyte: mg/kg (ppm) Chromium 12.6 Arsenic 7.86 Selenium <1 Silver <1 Cadmium <1 Barium 94.3 Lead 98.7

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0783_20110317, F&BI 103218
Date Extracted:	03/18/11	Lab ID:	I1-193 mb
Date Analyzed:	03/21/11	Data File:	T1-193 mh 008

Date Extracted: 03/18/11 Lab ID: 11-193 mb

Date Analyzed: 03/21/11 Data File: I1-193 mb.008

Matrix: Soil Instrument: ICPMS1

Units: mg/kg (ppm) Operator: AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	97	60	125
Indium	96	60	125
Holmium	90	60	125

<1

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1

Lead

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Dissolved Metals By EPA Method 200.8

 Client ID:
 20110317-P05

 Date Received:
 03/17/11

 Date Extracted:
 03/22/11

 Date Analyzed:
 03/24/11

 Matrix:
 Water

 Units:
 ug/L (ppb)

Client: SoundEarth Strategies
Project: SOU\_0783\_20110317, F&BI 103218

Lab ID: 103218-13
Data File: 103218-13.065
Instrument: ICPMS1
Operator: AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	85	60	125
Indium	82	60	125
Holmium	91	60	125

Concentration Analyte: ug/L (ppb) Chromium <1 Arsenic 1.24 Selenium <1 Silver <1 Cadmium <1 Barium 26.4 Lead <1

# ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	20110317-P04	Client:	SoundEarth Strategies
Date Received:	03/17/11	Project:	SOU_0783_20110317, F&BI 103218
Date Extracted:	03/22/11	Lab ID:	103218-14
Date Analyzed:	03/24/11	Data File:	103218-14.066
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	87	60	125
Indium	83	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	2.92
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	2.32
Barium	23.4
Lead	<1

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0783_20110317, F&BI 103218
Date Extracted:	03/22/11	Lab ID:	I1-201 mb
Date Analyzed:	03/24/11	Data File	[1-201 mb 058

Date Analyzed: 03/24/11 Data File: I1-201 mb.058
Matrix: Water Instrument: ICPMS1
Units: ug/L (ppb) Operator: AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	86	60	125
Indium	85	60	125
Holmium	93	60	125

<1

# Concentration ug/L (ppb) Chromium <1 Arsenic <1 Selenium <1 Silver <1 Cadmium <1 Barium <1

Lead

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted: 03/17/11 Date Analyzed: 03/18/11

# RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	<u>Dissolved Mercury</u>
20110317-P05 103218-13	<0.2
20110317-P04 103218-14	<0.2
Method Blank	<0.2

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted: 03/18/11 Date Analyzed: 03/18/11

# RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
P05-03 103218-01	<0.2
P04-08 103218-06	<0.2
Method Blank	<0.2

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: P05-03 Client: SoundEarth Strategies

Date Received: 03/17/11 Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted: 03/18/11 I ab ID: 103218.01

 Date Extracted:
 03/18/11
 Lab ID:
 103218-01

 Date Analyzed:
 03/19/11
 Data File:
 031835.D

 Matrix:
 Soil
 Instrument:
 GCMS5

 Units:
 mg/kg (ppm)
 Operator:
 JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	94	42	158
Toluene-d8	97	42	159
4-Bromofluorobenzene	103	36	160

	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	< 0.05
Chloromethane ·	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	<0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	< 0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	< 0.05
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	< 0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	< 0.03	1,2,4-Trimethylbenzene	< 0.05
Trichloroethene	< 0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	< 0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: P04-08 Client: SoundEarth Strategies

Date Received: 03/17/11 Project: SOU\_0783\_20110317, F&BI 103218

 Date Extracted:
 03/18/11
 Lab ID:
 103218-06

 Date Analyzed:
 03/19/11
 Data File:
 031836.D

 Matrix:
 Soil
 Instrument:
 GCMS5

 Units:
 mg/kg (ppm)
 Operator:
 JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	97	42	158
Toluene-d8	99	42	159
4-Bromofluorobenzene	104	36	160

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	0.34
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	<0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	< 0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Methylene chloride	<0.5	o-Xylene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	< 0.05
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	< 0.05
cis-1,2-Dichloroethene	0.067	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	< 0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	< 0.03	1,2,4-Trimethylbenzene	< 0.05
Trichloroethene	9.1	sec-Butylbenzene	<0.05
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	< 0.05
Bromodichloromethane	< 0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	< 0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	< 0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	< 0.05	Naphthalene	< 0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: P07-09 Client: SoundEarth Strategies

Date Received: 03/17/11 Project: SOU\_0783\_20110317, F&BI 103218
Date Extracted: 03/18/11 Lab ID: 103218-10

Date Analyzed: 03/19/11 Data File: 031837.D

Matrix: Soil Instrument: GCMS5

Units: mg/kg (ppm) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	58	42	158
Toluene-d8	102	42	159
4-Bromofluorobenzene	106	36	160

	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	<0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Methylene chloride	<0.5	o-Xylene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	< 0.05
1,1-Dichloroethane	< 0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	0.10	sec-Butylbenzene	< 0.05
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	< 0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: NA Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted:03/18/11Lab ID:01-406 mbDate Analyzed:03/19/11Data File:031829.DMatrix:SoilInstrument:GCMS5Units:mg/kg (ppm)Operator:JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	42	158
Toluene-d8	99	42	159
4-Bromofluorobenzene	98	36	160

	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	<0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	< 0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	< 0.05
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	< 0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	< 0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	< 0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: 20110317-P05 Client: SoundEarth Strategies

Date Received: 03/17/11 Project: SOU\_0783\_20110317, F&BI 103218

 Date Extracted:
 03/23/11
 Lab ID:
 103218-13

 Date Analyzed:
 03/23/11
 Data File:
 032320.D

 Matrix:
 Water
 Instrument:
 GCMS4

 Units:
 ug/L (ppb)
 Operator:
 JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
•		•	•
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<l ca<="" td=""><td>1,2-Dibromoethane (EDB)</td><td>&lt;1</td></l>	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1 ca	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	5.3 ca lc	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<l< td=""><td>Bromobenzene</td><td>&lt;1</td></l<>	Bromobenzene	<1
Chloroform	1.2	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1 ca	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<l< td=""></l<>
Carbon tetrachloride	<1 ca	tert-Butylbenzene	<1
Benzene	< 0.35	1,2,4-Trimethylbenzene	<l< td=""></l<>
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: 20110317-P04 Client: SoundEarth Strategies

Date Received: 03/17/11 Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted:03/23/11Lab ID:103218-14Date Analyzed:03/23/11Data File:032321.DMatrix:WaterInstrument:GCMS4Units:ug/L (ppb)Operator:JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	102	60	133

	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<l< td=""></l<>
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1 ca	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1 ca	Ethylbenzene	<1
Acetone	14	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5 ca	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1 ca	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1 ca	tert-Butylbenzene	<1
Benzene	< 0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: 20110317-P07 Client: SoundEarth Strategies

Date Received: 03/17/11 Project: SOU\_0783\_20110317, F&BI 103218

 Date Extracted:
 03/23/11
 Lab ID:
 103218-15

 Date Analyzed:
 03/24/11
 Data File:
 032322.D

 Matrix:
 Water
 Instrument:
 GCMS4

 Units:
 ug/L (ppb)
 Operator:
 JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1 ca	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1 ca	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	5.9 ca lc	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1 ca	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<l ca<="" td=""><td>tert-Butylbenzene</td><td>&lt;1</td></l>	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<l< td=""></l<>
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: NA Project: SOU\_0783\_20110317, F&BI 103218

Date Extracted:03/23/11Lab ID:01-413 mbDate Analyzed:03/23/11Data File:032311.DMatrix:WaterInstrument:GCMS4Units:ug/L (ppb)Operator:JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	104	60	133

	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1 ca	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1 ·
Trichlorofluoromethane	<1 ca	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5 ca	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<ld><ld>ca</ld></ld>	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1 ca	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 103207-15 (Duplicate)

,	` `	(Wet Wt)	(Wet Wt)	Relative Percent
	Reporting	Sample	Duplicate	Difference
Analyte	Units	Result	Result	(Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

		Percent				
Analyte	Reporting Units	Spike Level	Recovery LCS	Acceptance Criteria		
Gasoline	mg/kg (ppm)	20	80	61-153		

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 103230-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

			Percent	
Analyte	Reporting Units	Spike Level	Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	91	69-134

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 103218-10 (Matrix Spike)

			(Wet wt)	Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	99	64-133	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	97	58-147

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

			Percent	Percent			
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD	
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)	_
Diesel Extended	ug/L (ppb)	2,500	106	110	63-142	4	•

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 103171-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	10.2	104 b	106 b	51-132	2 b
Arsenic	mg/kg (ppm)	10	2.64	109 b	104 b	44-151	5 b
Selenium	mg/kg (ppm)	5	<1	101	99	52-128	2
Silver	mg/kg (ppm)	10	<1	107	109	69-125	2
Cadmium	mg/kg (ppm)	10	<1	106	108	83-120	2
Barium	mg/kg (ppm)	50	20.5	104 b	107 b	47-147	3 b
Lead	mg/kg (ppm)	20	1.32	105	111	65-126	6

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Chromium	mg/kg (ppm)	50	107	79-125
Arsenic	mg/kg (ppm)	10	101	80-120
Selenium	mg/kg (ppm)	5	100	81-121
Silver	mg/kg (ppm)	10	107	84-117
Cadmium	mg/kg (ppm)	10	104	89-116
Barium	mg/kg (ppm)	50	108	88-113
Lead	mg/kg (ppm)	20	110	81-120

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 103257-16 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	ug/L (ppb)	20	<1	111	110	67-132	1
Arsenic	ug/L (ppb)	10	<1	115	107	56-167	7
Selenium	ug/L (ppb)	5	<1	115	105	54-170	9
Silver	ug/L (ppb)	5	<1	105	101	66-121	4
Cadmium	ug/L (ppb)	5	<1	109	103	86-118	6
Barium	ug/L (ppb)	50	52.9	114 b	103 b	63-133	10 b
Lead	ug/L (ppb)	10	7.94	111 b	117 b	76-125	5 b

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Chromium	ug/L (ppb)	20	114	66-135
Arsenic	ug/L (ppb)	10	110	55-128
Selenium	ug/L (ppb)	5	113	59-134
Silver	ug/L (ppb)	5	111	64-136
Cadmium	ug/L (ppb)	5	112	66-135
Barium	ug/L (ppb)	50	113	66-133
Lead	ug/L (ppb)	10	109	67-135

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Laboratory Code: 103218-13 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recover y MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	ug/L (ppb)	0.5	<0.2	101	106	48-160	5

Analyte	Reporting Units	Spike Level	Percent Recover y LCS	Acceptance Criteria
Mercury	ug/L (ppb)	0.5	102	79-126

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recover y MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	0.125	<0.2	102	110	45-162	8

Analyte	Reporting Units	Spike Level	Percent Recover y LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	0.125	104	63-144

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 103203-02 (Matrix Spike)

	Reporting	Spike	Sample	Percent Recovery	Acceptance
Analyte	Ünits	Level	Result	MS <sup>*</sup>	Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	30	10-171
Chloromethane	mg/kg (ppm)	2.5	<0.5	56	10-162
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	58	10-166
Bromomethane	mg/kg (ppm)	2.5	<0.5	71	10-165
Chloroethane	mg/kg (ppm)	2.5	<0.5	70	10-161
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	57	10-168
Acetone	mg/kg (ppm)	12.5	<0.5	40	20-155
1.1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	82	10-168
Methylene chloride	mg/kg (ppm)	2.5	<0.5	81	21-149
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	88	39-139
trans-1,2-Dichloroethene 1.1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	81	20-150
2,2-Dichloropropane	mg/kg (ppm)	2.5 2.5	<0.05 <0.05	85 82	30-114 17-150
cis-1,2-Dichloropthene	mg/kg (ppm)	2.5	<0.05	92	36-111
Chloroform	mg/kg (ppm)	2.5	< 0.05	91	39-111
2-Butanone (MEK)	mg/kg (ppm) mg/kg (ppm)	12.5	<0.5	95	24-153
1.2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	90	38-116
1.1.1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	95	27-119
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	89	26-118
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	92	22-123
Benzene	mg/kg (ppm)	2.5	<0.03	92	33-113
Trichloroethene	mg/kg (ppm)	2.5	< 0.03	92	36-113
1,2-Dichloropropane	mg/kg (ppm)	2.5	< 0.05	93	40-113
Bromodichloromethane	mg/kg (ppm)	2.5	< 0.05	95	43-118
Dibromomethane	mg/kg (ppm)	2.5	< 0.05	99	43-113
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	< 0.5	93	34-154
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	< 0.05	96	43-117
Toluene	mg/kg (ppm)	2.5	< 0.05	93	38-139
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	< 0.05	95	44-140
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	95	38-146
2-Hexanone	mg/kg (ppm)	12.5	<0.5	101	37-150
1,3-Dichloropropane	mg/kg (ppm)	2.5	< 0.05	92	47-133
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	91	29-117
Dibromochloromethane	mg/kg (ppm)	2.5	< 0.05	98	46-116
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	98	44-139
Chlorobenzene	mg/kg (ppm)	2.5	< 0.05	93	41-114
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	95	38-120
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	99	43-120
m,p-Xylene	mg/kg (ppm)	5	<0.1	109	37-122
2-Xylene	mg/kg (ppm)	2.5	<0.05	102	39-121
Styrene	mg/kg (ppm)	2.5	<0.05	98	43-121
Isopropylbenzene	mg/kg (ppm)	2.5 2.5	<0.05	98 98	38-126
Bromoform	mg/kg (ppm)	2.5 2.5	<0.05 <0.05	98	44-120 34-127
n-Propylbenzene	mg/kg (ppm)	2.5 2.5	<0.05	98	42-115
Bromobenzene	mg/kg (ppm)	2.5	<0.05	103	34-126
1.3.5-Trimethylbenzene 1.1.2.2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	98	41-113
1,1,2,2-Tetracinoroethane 1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	98	45-134
2-Chlorotoluene	mg/kg (ppm) mg/kg (ppm)	2.5	<0.05	99	40-120
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	98	41-119
ert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	100	37-125
.2.4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	98	34-129
ec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	102	35-127
o-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	105	35-128
1.3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	98	39-115
1.4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	92	39-114
1.2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	98	43-115
.2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	105	30-147
1.2.4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	97	37-121
		2.5	<0.25	100	29-121
Hexachlorobutadiene	mg/kg (ppmi	2.3	~0.20	100	49.161
Hexachlorobutadiene Naphthalene	mg/kg (ppm) mg/kg (ppm)	2.5	<0.05	102	12-168

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

, , , , , , , , , , , , , , , , , , ,	Reporting	Spike	Percent Recovery	Percent Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	57	55	10-142	4
Chloromethane	mg/kg (ppm)	2.5	68	68	25-121	0
Vinyl chloride	mg/kg (ppm)	2.5	71	70	29-135	i
Bromomethane	mg/kg (ppm)	2.5	83	78	33-123	6
Chloroethane	mg/kg (ppm)	2.5	79	67	10-281	16
Trichlorofluoromethane	mg/kg (ppm)	2.5	84 98	80 89	13-151	5 10
Acetone 1.1-Dichloroethene	mg/kg (ppm)	12.5 2.5	98 96	86	10-151 22-151	11
Methylene chloride	mg/kg (ppm) mg/kg (ppm)	2.5	89	83	42-144	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	102	98	62-124	4
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	88	92	60-125	4
1.1-Dichloroethane	mg/kg (ppm)	2.5	95	95	66-123	ō
2,2-Dichloropropane	mg/kg (ppm)	2.5	98	99	53-134	ī
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	102	101	72-118	ι
Chloroform	mg/kg (ppm)	2.5	100	100	71-123	0
2-Butanone (MEK)	mg/kg (ppm)	12.5	107	104	10-150	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	100	100	60-124	0
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	105	107	68-128	2
1.1-Dichloropropene	mg/kg (ppm)	2.5	97	100	71-123	3
Carbon tetrachloride	mg/kg (ppm)	2.5	105	106	64-136	1
Benzene	mg/kg (ppm)	2.5	98	99 102	69-122	1 3
Trichloroethene	mg/kg (ppm)	2.5 2.5	99 101	102	71-122 71-120	3 0
1,2-Dichloropropane Bromodichloromethane	mg/kg (ppm) mg/kg (ppm)	2.5 2.5	109	107	68-140	2
Dibromomethane	mg/kg (ppm)	2.5	109	108	72-121	ī
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	104	99	10-150	5
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	104	105	74-126	Ī
Toluene	mg/kg (ppm)	2.5	98	102	72-122	4
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	105	105	70-131	0
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	103	102	70-122	l
2-Hexanone	mg/kg (ppm)	12.5	112	110	10-152	2
1,3-Dichloropropane	mg/kg (ppm)	2.5	102	101	72-121	1
Tetrachloroethene	mg/kg (ppm)	2.5	98	104	69-125	6
Dibromochloromethane	mg/kg (ppm)	2.5	110	111	68-130	1
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	110	109 100	72-121 69-125	1 3
Chlorobenzene	mg/kg (ppm)	2.5 2.5	97 99	100	72-130	5 5
Ethylbenzene 1,1,1,2-Tetrachloroethane	mg/kg (ppm) mg/kg (ppm)	2.5	107	109	69-133	2
m,p-Xylene	mg/kg (ppm)	5	113	119	72-131	5
o-Xylene	mg/kg (ppm)	2.5	107	111	71-129	4
Styrene	mg/kg (ppm)	2.5	102	105	73-132	3
Isopropylbenzene	mg/kg (ppm)	2.5	103	108	73-134	* 5
Bromoform	mg/kg (ppm)	2.5	113	110	68-129	3
n-Propylbenzene	mg/kg (ppm)	2.5	100	106	72-136	6
Bromobenzene	mg/kg (ppm)	2.5	103	107	73-125	4
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	107	111	72-132	4
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	106	104 104	67-116 67-123	2 0
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	104 102	104	72-130	4
2-Chlorotoluene 4-Chlorotoluene	mg/kg (ppm)	2.5 2.5	102	105	73-129	5
tert-Butylbenzene	mg/kg (ppm) mg/kg (ppm)	2.5	102	108	71-130	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	100	106	70-132	6
sec-Butylbenzene	mg/kg (ppm)	2.5	104	110	71-134	6
p-lsopropyltoluene	mg/kg (ppm)	2.5	108	115	71-135	6
I ,3-Dichlorobenzene	mg/kg (ppm)	2.5	100	106	70-124	6
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	95	99	68-126	4
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	ror	105	71-125	4
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	122	119	63-122	2
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	104	69-132	4 10
Hexachlorobutadiene	mg/kg (ppm)	2.5	101	112	68-121 60-125	10
Naphthalene	mg/kg (ppm)	2.5 2.5	107 106	108 109	68-121	3
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.3	100	103	00-151	•

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 103252-10 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	86	10-172
Chloromethane	ug/L (ppb)	50	<10	89	25-166
Vinyl chloride	ug/L (ppb)	50	< 0.2	92	36-166
Bromomethane	ug/L (ppb)	50	<1	81	47-169
Chloroethane	ug/L (ppb)	50	<1	88	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	87	44-165
Acetone	ug/L (ppb)	250	<10	92	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	94	60-136
Methylene chloride	ug/L (ppb)	50	5.3	83	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<l< td=""><td>93</td><td>74-127</td></l<>	93	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<l< td=""><td>95</td><td>72-129</td></l<>	95	72-129
1.1-Dichloroethane	ug/L (ppb)	50	<l< td=""><td>97</td><td>70-128</td></l<>	97	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<l< td=""><td>72</td><td>36-154</td></l<>	72	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<l< td=""><td>101</td><td>71-127</td></l<>	101	71-127
Chloroform	ug/L (ppb)	50	<1	97	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	92	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	93	69-133
1.1.1 Trichloroethane	ug/L (ppb)	50	<1	91	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	100	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	90	56-152
Benzene	ug/L (ppb)	50	< 0.35	99	76-125
Trichloroethene	ug/L (ppb)	50	<l< td=""><td>94</td><td>66-135</td></l<>	94	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<l< td=""><td>101</td><td>78-125</td></l<>	101	78-125
Bromodichloromethane	ug/L (ppb)	50	< l	102	61-150
Dibromomethane	ug/L (ppb)	50	<l< td=""><td>100</td><td>66-141</td></l<>	100	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	110	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	101	72-132
Toluene	ug/L (ppb)	50	<1	98	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	76-130
1.1.2-Trichloroethane	ug/L (ppb)	50	<1	99	68-131
2-Hexanone	ug/L (ppb)	250	<10	104	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	99	71-128
Tetrachloroethene	ug/L (ppb)	50	< l	103	73-129
Dibromochloromethane	ug/L (ppb)	50	<l< td=""><td>104</td><td>70-139</td></l<>	104	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	< l	102	69-134
Chlorobenzene	ug/L (ppb)	50	<l< td=""><td>98</td><td>77-122</td></l<>	98	77-122
Ethylbenzene	ug/L (ppb)	50	<l< td=""><td>99</td><td>69-135</td></l<>	99	69-135
1.1.1.2-Tetrachloroethane	ug/L (ppb)	50	<l< td=""><td>101</td><td>73-137</td></l<>	101	73-137
m,p-Xylene	ug/L (ppb)	100	<2	101	69-135
o-Xylene	ug/L (ppb)	50	<1	103	68-137
Styrene	ug/L (ppb)	50	<1	102	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	101	65-142
Bromoform	ug/L (ppb)	50	<1	105	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	103	58-144
Bromobenzene	ug/L (ppb)	50	<1	104	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	101	66-137
1.1.2.2-Tetrachloroethane	ug/L (ppb)	50	<1	103	51-154
1.2.3-Trichloropropane	ug/L (ppb)	50	<1	100	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	102	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	101	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	101	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	101	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	100	64-140
p-lsopropyltoluene	ug/L (ppb)	50	<1	100	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	98	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	96	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	97	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	100	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	106	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	97	60-143
Naphthalene	ug/L (ppb)	50	<1	111	44-164
1.2.3-Trichlorobenzene	ug/L (ppb)	50	<1	107	69-148

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 03/30/11 Date Received: 03/17/11

Project: SOU\_0783\_20110317, F&BI 103218

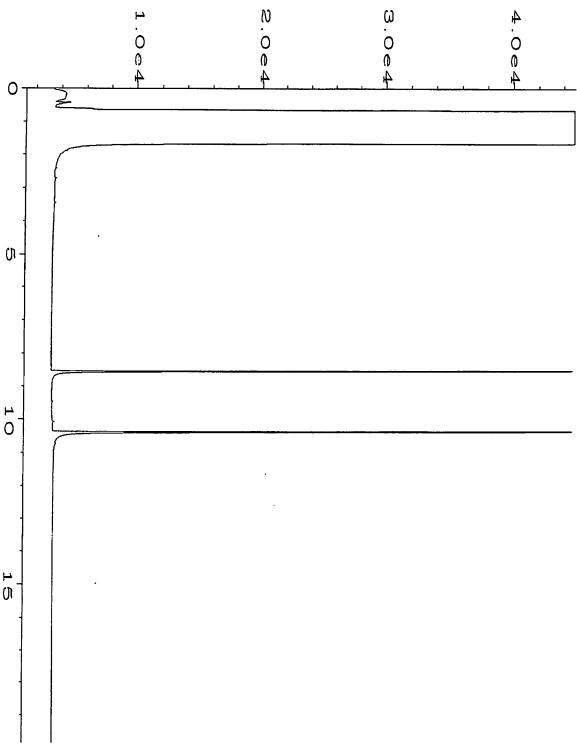
# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

	Reporting	Spike	Percent Recovery	Percent Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	106	105	25-158	1
Chloromethane	ug/L (ppb)	50	102	103	45-156	Į.
Vinyl chloride	ug/L (ppb)	50	102	101	50-154	ţ
Bromomethane	ug/L (ppb)	50	90	89	55-143	L
Chloroethane	ug/L (ppb)	50	97	99	58-146	2
Trichlorofluoromethane	ug/L (ppb)	50	91	91	50-150	0
Acetone	ug/L (ppb)	250	98	98	60-155	0
1,1-Dichloroethene	ug/L (ppb)	50	104	102	67-136	2
Methylene chloride	ug/L (ppb)	50	89	91	39-148	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	103	101	64-147	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	95	68-128	4
1,1-Dichloroethane	ug/L (ppb)	50	100	99	79-121	l l
2,2-Dichloropropane	ug/L (ppb)	50	96	102	55-143	6
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	105	80-123	2
Chloroform	ug/L (ppb)	50	100	99	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	97	96	57-149	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	95	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	90	86	83-130	5
1,1-Dichloropropene	ug/L (ppb)	50	106	103	77-129	3
Carbon tetrachloride	ug/L (ppb)	50	92	91	75-158	t
Benzene	ug/L (ppb)	50	104	102	69-134	2
Trichloroethene	ug/L (ppb)	50	98	97	80-120	ı
1,2-Dichloropropane	ug/L (ppb)	50	106	105	77-123	i
Bromodichloromethane	ug/L (ppb)	50	105	103	81-133	2
Dibromomethane	ug/L (ppb)	50	105	103	82-125	2
4-Methyl-2-pentanone	ug/L (ppb)	250	113	111	70-140	Ž
cis-1,3-Dichloropropene	ug/L (ppb)	50	112	110	82-132	ž
Toluene	ug/L (ppb)	50	103	102	72-122	ī
trans-1.3-Dichloropropene	ug/L (ppb)	50	110	108	80-136	ž
1.1.2-Trichloroethane	ug/L (ppb)	50	103	103	75-124	ō
2-Hexanone	ug/L (ppb)	250	103	108	64-152	ŏ
1.3-Dichloropropane		50	104	102	76-126	2
	ug/L (ppb)	50 50	110	108	76-121	2
Tetrachloroethene	ug/L (ppb)	50 50	110	109	84-133	l
Dibromochloromethane	ug/L (ppb)	50 50		105	82-125	2
1.2-Dibromoethane (EDB)	ug/L (ppb)		107			2
Chlorobenzene	ug/L (ppb)	50	102	100 102	83-114 77-124	1
Ethylbenzene	ug/L (ppb)	50	103			2
1.1.1.2-Tetrachloroethane	ug/L (ppb)	50	104	102	84-127	
m.p-Xylene	ug/L (ppb)	100	104	104	83-125	0
o-Xylene	ug/L (ppb)	50	107	106	86-121	1
Styrene	ug/L (ppb)	50	108	108	85-127	0
Isopropylbenzene	ug/L (ppb)	50	105	105	87-122	0
Bromoform	ug/L (ppb)	50	110	110	74-136	o.
n-Propylbenzene	ug/L (ppb)	50	109	108	74-126	ļ
Bromobenzene	ug/L (ppb)	50	107	106	80-121	l .
1,3,5-Trimethylbenzene	ug/L (ppb)	50	107	106	80-126	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	ι06	106	66-126	0
1,2,3-Trichloropropane	ug/L (ppb)	50	102	102	67-124	0
2-Chlorotoluene	ug/L (ppb)	50	106	105	77-127	Į.
4-Chlorotoluene	ug/L (ppb)	50	106	105	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	106	104	85-127	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	106	105	82-125	1
sec-Butylbenzene	ug/L (ppb)	50	105	104	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	107	106	82-127	1
1.3-Dichlorobenzene	ug/L (ppb)	50	102	101	85-116	1
1.4-Dichlorobenzene	ug/L (ppb)	50	101	100	84-121	1
1.2-Dichlorobenzene	ug/L (ppb)	50	101	101	85-116	Ö
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	105	104	57-141	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	113	111	72-130	ż
	ug/L (ppb)	50	104	101	53-141	3
Hevachlorobutadiene						
Hexachlorobutadiene Naphthalene	ug/L (ppb)	50	117	116	64-133	ı

### **ENVIRONMENTAL CHEMISTS**

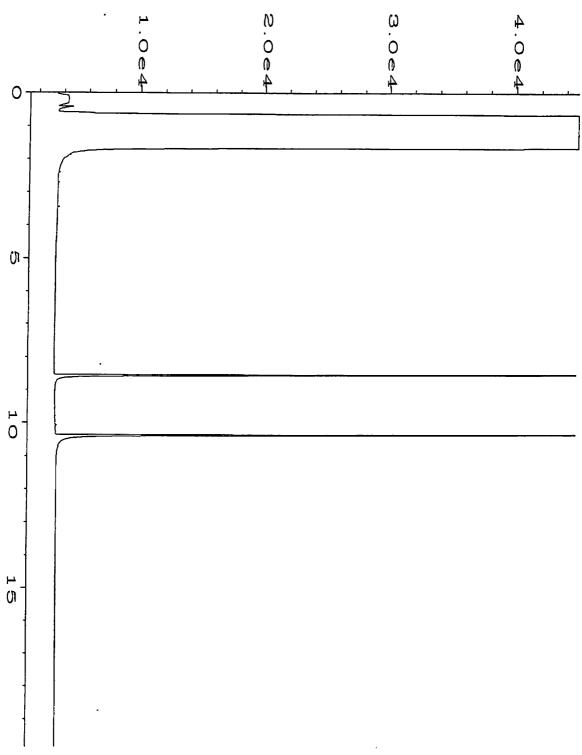
### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- $\,$  nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



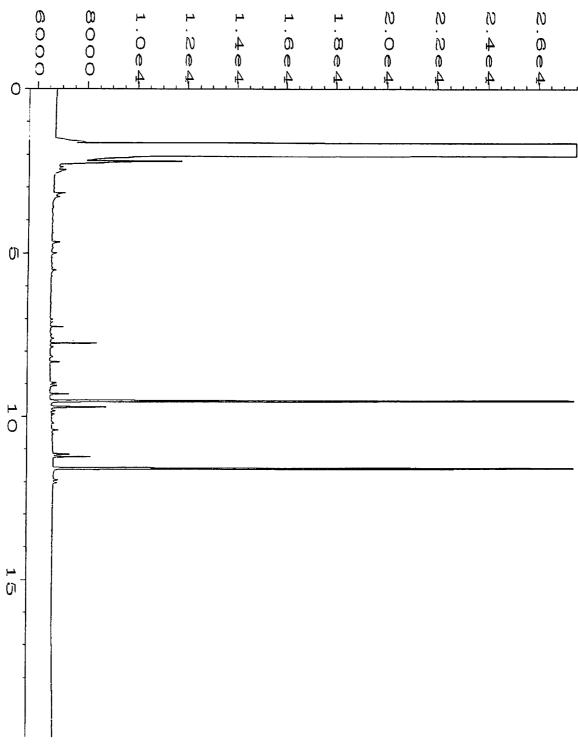
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Operator
                                                  Page Number
                  : ML
                                                  Vial Number : 21
Instrument
                  : GC #6
                                                  Injection Number: 1
Sample Name
                 : 103218-01
                                                  Sequence Line : 6
Instrument Method: TPHD.MTH
Run Time Bar Code:
                               07:09 PM
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Acquired on : 17 Mar 11 Report Created on: 18 Mar 11 Analysis Method : TPHD.MTH 09:52 AM



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Data File Name
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Operator
                                                    Page Number
                  : ML
Instrument
                  : GC #6
                                                   Vial Number
                                                                   : 22
Sample Name
                  : 103218-10
                                                    Injection Number: 1
                                                   Sequence Line : 6
Instrument Method: TPHD.MTH
Run Time Bar Code:
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: 17 Mar 11 Acquired on 07:35 PM Report Created on: 18 Mar 11 09:52 AM Analysis Method : TPHD.MTH



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Operator : ML Page Number : 1

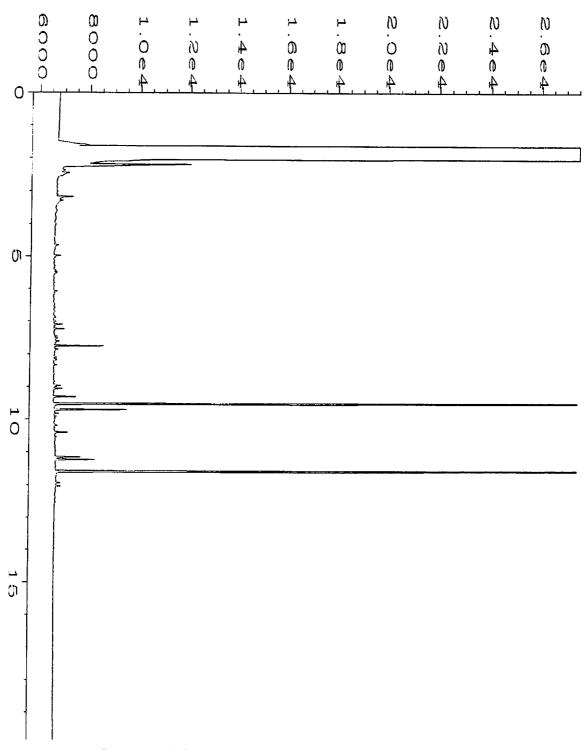
Instrument : GC1 Vial Number : 23

Sample Name : 103218-13 Injection Number : 1

Run Time Bar Code: Sequence Line : 5

Acquired on : 17 Mar 11 06:51 PM Instrument Method: TPHD
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Acquired on : 17 Mar 11 06:51 PM Instrument Method: TPHD.MTH Report Created on: 18 Mar 11 08:59 AM Analysis Method : TPHD.MTH



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                                                 Page Number
Vial Number
Operator
                 : ML
Instrument
                 : GC1
                                                                   : 24
Sample Name
                 : 103218-015
                                                 Injection Number: 1
Run Time Bar Code:
                                                 Sequence Line
                                                                : 5
Acquired on
                 : 17 Mar 11
                              07:18 PM
                                                 Instrument Method: TPHD.MTH
Report Created on: 18 Mar 11
                              08:59 AM
                                                 Analysis Method : TPHD.MTH
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103218
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SAMPLE CHAIN OF CUSTODY MG 3/17/11 VZ/VS2/AT3/BOY

Send Report To lon Connect	SAMPLERS (signature)	2/1/2	Page #of TURNAROUND TIME
Company SBS  Address 2811 Farum Am Back Sal 2000	PROJECT NAME/NO.	PO#	Ø Standard (2 Weeks) □ RUSH Rush charges authorized by:
City, State, ZIP Seattle LA 98102  Phone # 206 306 1900 Fax # 206 306 -1907	REMARKS	GEMS Y/N	SAMPLE DISPOSAL  Dispose after 30 days Return samples Will call with instructions
,		ANALYSEŚ R	

l	ļ	<u> </u>		· •		γ	<u> </u>				ANAI	YSE	Ś REC	QUES	TED	
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH.Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
P05-03	Post.	03	OIAC	31711.	0850	Sol	5	X	Х		.3		X			
805-05		30	021		0855	(	5									Hold
P05-08		08	03		0 840		5									Hold
P05-13		13	04		0845		5-									Lile
P0464	Poh	64	05		0915		5									trold
P07-08			06		0920		5				X		X			11001
P37-12			07		0925		5									Jesh
Po5-15			08		0930		سے	·			1					1-1.11
P57-04	P07		09		1005		5			_	一十					Holl
P17-09	1		10	<del>//</del>	1010	<del>}</del>	5	×	X	-	X			$\dashv$		ruce
. Po7-11			11	1	1015	-	5		<del>-  </del>	-+	<del>^</del>					
PV7-15	1		12	<del>\</del>	1020		5			$\dashv$	-+		-			Hulu Hulu
20110517-805	P.5		13A-F		0910	سعامها	6	X	×	$\dashv$	×		×			Field Filtered

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNAPURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Root A. Hangluger	SFS	3-1211	1245
Received by: How My	HONG NGWIEN	RUSS	17	V
Relinquished by:			C SM	
Received by:		Samples received at	12	

FORMS\COC\SESGEMSR1.DOC (Revision 1)

(03%	218		•		SAMPLI	E CHAIN O	)F CU	JSTO	DΥ	MÉ	- ン・		3/17	411	VZ	-/v.	57/AI3/
Send Report T					SAME	PLERS (signal	ture)	12	TI	h			7		Page#_	2	_of_Z
Company		e fex	ut			IECT NAMEA		<i>D</i> -			PC			Z Star	TUKN/ ndard ( SH	AROUN (2 Week	VD TIME
City, State, ZI	P				REMA	ARKS						****		⊡ Disr	SAMP	LE DIS ter 30 d	SPOSAL
Phone #	<del></del>	Fax #_						<del></del>		G.	EM5	Y/1	- 1 1	∃ Retı	ura san	nples	ructions
	<del> </del>		<del> </del>	<del></del>			$oxed{\Box}$				ANA	LYSE	S RE	QUES	TED		
Sample ID	Sample Location		ID	Date Sampled	Time Sampled	Matrix	# of jars	k NWTPH.Dx	K NWTPH.Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals				Notes
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Received by:

Fax (206) 283-5044

# ATTACHMENT D **UST Closure and Site Assessment Notice and UST Site Assessment Checklist** SoundEarth Strategies, Inc.



# UNDERGROUND STORAGE TANK Closure and Site Assessment Notice

FOR OFFICE USE ONLY
Site 10 #:
Owner ID #:

See back of form for instructions

Please ✓ the appropriate box(es)  ☐ Temporary Tank Closure ☐	Change-In-Service	Permanent	Tank Closure (5)	ite Check/Site Assessment				
Site Information	22 G G -2	\$ 14 A	Owner Inf	ormation e Property LLC.				
Site ID Number (Available from Ecology if the tanks are registere	ed)	UST Owne	r/Operats. AHn:	John D. Perine JR.				
Site/Business Name Perine Roustreet	perly LLC	Mailing Add	Mailing Address 2995 Wardsick Rd Ste 4					
Site Address 820 South Add		£		Street I				
City/State South Pr WA		City/State	Woodside,	S.O. Box Deliturnia				
Zip Code 98134 Telephone	650 504-6925		V. 100	lephone 659 50:4-692				
Owners Signature Julie	un (/,							
	Closuré/Chang		e Company					
	entrading U	·						
Certified Supervisor William W.	pooner -	Decommi	ssioning Certification	n No. 5032311-42 V				
Supervisor's Signature Will W	fram		Date	4-12-11				
ddress 17807 SE 34	6th St.							
Auburn, WA	•	P.O. Box		275 - 17 27 57				
City	State	98097 Zin Code	Telepho	ne253 347 -332/				
		a.p 0010						
	Site Check/	Site Assess	sor					
Certified Site Assessor Coze	1							
Address 2811 Famulai	1 1	CAS T						
Street	. Λ	P.O. 80x						
seathly	WA	98102	Telepho	ne206) 306-1900				
City	State	Zip Code						
Tan	k Information			Contamination Present				
Tank ID Closure Date Clos	sure Method Tan	k Capacity	Substance Stored	at the Time of Closure				
#1 4/12/11 In		1000	CIAS	Yas No Unknown				
			0	Check unknown if no obvious contamination was observed				
				and sample results have not				
	2 2			yet been received from analytical lab.				
				0 0				
				Yes No If contamination is present,				
				has the release been reported				
				to the appropriate regional office?				
_								

To receive this document in an alternative format, contact the TOXICS CLEANUP PROGRAM at 1-800-833-6388 (VOICE) OR 711 (TTY). ECY 020-94 (Rev. 6-99)



# UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

I	FOR OFFICE USE ONLY
I	Site #:
	Facility Site ID #:

### INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. The results of the site check or site assessment must be included with this checklist. This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section Department of Ecology PO Box 47655 Olympia WA 98504-7655

SITE INFORMATION		,
Site ID Number (Available from Ecology Site/Business Name: Perre Site Address: 820 Society Seuth/e	(Ropent) LLC	Telephone: <u>\$59,504 - 692,5</u> 98,704 Zip Code
TANK INFORMATION  Tank ID No.	Tank Capacity	Substance Stored
	1000gal	945
REASON FOR CONDUCTING SITE C		
Investigate suspected release of US  Extend temporary closure of US  UST system undergoing chang		Sec
UST system permanently close Abandoned tank containing pro Required by Ecology or delega Other (describe): UST		0122188. Site Assessment

CHECKLIST			
Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	VEO	110	
The location of the UST site is shown on a vicinity map.	YES	NO	
A brief summary of information obtained during the site inspection is provided.	10	,	
(see Section 3.2 in site assessment guidance)			
3. A summary of UST system data is provided. (see Section 3.1.)			
4. The soils characteristics at the UST site are described. (see Section 5.2)			
5. Is there any apparent groundwater in the tank excavation?			
6. A brief description of the surrounding land use is provided. (see Section 3.1)	1		
<ol> <li>Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.</li> </ol>			
8. A sketch or sketches showing the following items is provided:			
- location and ID number for all field samples collected			
- groundwater samples distinguished from soil samples (if applicable)			
- samples collected from stockpiled excavated soil			
- tank and piping locations and limits of excavation pit			
- adjacent structures and streets			
- approximate locations of any on-site and nearby utilities			
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)			
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.			
11. Any factors that may have compromised the quality of the data or validity of the results are described.			
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.		V	
SITE ASSESSOR INFORMATION			
Conex Ceagal. ScanlEarth Strategie  Person registered with Ecology  Firm Affiliated with	<i>D</i>		
Person regislered with Ecology Firm Affiliated with  Business Address: 28/1 Fair View Ave. EAST Suit 2000 Telephone: 200 306-190	0		
Business Address: 28/11 Fair View Ave. EAST Sait 2000 Telephone: BCB 306-190 Street  City State  Telephone: BCB 306-190  Zip Code			
City State Zip Code			
I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Pe submitting false information are subject to penalties under Chapter 173.360 WAC.	rsons		
4/25/11			
/Date Signature of Person Registered with Ecology			