



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

July 10, 2012

Mr. Mark Myers Williams Kastner 601 Union Street, Suite 4100 Seattle, Washington 98111

SUBJECT:

LIMITED SUBSURFACE INVESTIGATION

Arnold's Property

631 Queen Anne Avenue North

Seattle, Washington

Project Number: 0320-001-04

Dear Mr. Myers:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this summary letter to document the results of the limited subsurface investigation activities completed by SoundEarth at the Property located at 631 Queen Anne Avenue North in Seattle, Washington (the Property). The primary objective of the limited subsurface investigation was to evaluate the current distribution of gasoline- and diesel-range petroleum hydrocarbons (GRPH and DRPH), benzene, toluene, ethylbenzene, and xylenes (BTEX) in soil beneath the Property subsequent to the remedial actions completed by others.

The following subsections provide a brief background of the Property, describe the field activities conducted to meet the objectives of the investigation, and provide the results of the limited subsurface investigation conducted by SoundEarth in May 2012.

Project Background

The project background and history of the Property presented below are from SAIC's *Final Remedial Investigation and Site Summary Report,* dated August 20, 2007.

A service station operated at the Property from approximately 1927 to 1993. The Property was originally leased to California Petroleum Corporation, which was acquired by the Texaco Corporation in 1929, at which time Texaco entered into a new lease of the Property. In 1954, Texaco purchased the Property and built a new service station. In 1977, the Arnold family purchased the Property but the service station continued operations under the Texaco brand name. The Property was sold by the Arnold family in 1989; however, the purchase and sales agreement was rescinded and the Property was returned to the Arnold family in 1993. Following the return of the Property to the Arnold family, the service station was demolished, seven of the underground storage tanks (USTs) were removed from the Property, and one UST was abandoned in place. Historical configurations of the former Texaco service station and UST locations are shown on Figure 1. The Property is currently occupied by a convenience store.

Releases associated with the historical fueling operations resulted in petroleum impacts to soil and groundwater beneath the Property. Numerous subsurface investigations were completed at the Property and downgradient properties from 1986 to 2004 to assess the extent of soil and groundwater contamination. The Washington State Department of Ecology (Ecology) oversaw remedial investigation activities at the Property from 1986 through 1997 and Texaco began remedial investigation activities in 1999. In 1993, Ecology oversaw the installation of a soil vapor extraction system (SVE) on the eastern and central portions of the Property, which operated intermittently until 1997. In 2003, Chevron Environmental Management Company (EMC) (Texaco was acquired by Chevron) modified and restarted the SVE system, which operated until 2005. A dual-phase extraction (DPE) system that was designed to address both on- and off-Property contamination was installed in 2006 by SAIC, Chevron EMC's consultant and operated through 2008. According to SAIC's DPE Remediation System, First Quarter 2008 Operations Report, the DPE system has reportedly removed approximately 45,000 pounds of petroleum hydrocarbons before its shutdown in April 2008.

Geologic and Hydrogeologic Conditions

The geologic and hydrogeologic conditions for the Property presented below are from SAIC's *Final Remedial Investigation and Site Summary Report* dated August 20, 2007.

Previous subsurface investigations indicated the Property is underlain by three major distinct lithologic units, which include the Vashon till, Esperance Sand, and Lawton Clay. The Vashon till units consists of a silty, gravelly sand layer that appears to be glacial till with some overlying fill. This unit is present near the surface at the northeast corner of the Property and tapers out to the southwest. Vashon till overlies the Esperance Sand below the western portion of the Property. The Esperance Sand unit is pervasive beneath the western and southwestern portion of the Property, but tapers out to the northeast. The Lawton Clay unit typically consists of more silt than clay and is encountered approximately 10 feet below ground surface (bgs) in the northeastern portion of the Property and slopes downward to the south-southwest to approximately 30 feet bgs.

Shallow groundwater occurs primarily in sand, or in sand with some silt, that overlies a very thick unit of clayey silt (Lawton Clay). The silt is encountered as shallow as 10 feet bgs in the northern areas of the Property and as deep as 25 feet bgs in the western areas of the Property. A zone of finer-grained soil is present along the western Property boundary, which produces locally perched groundwater. Depth to shallow groundwater typically ranges from 11 to 15 feet bgs on the eastern portion of the Property and 18 to 28 feet bgs on the western portion of the Property. The shallow water-bearing zone in this vicinity is not considered a potable source by the Ecology. The determination of groundwater beneath the Property as non-potable was confirmed in e-mail correspondence between SAIC and Ecology's case manager, Christopher Maurer, dated September 27, 2010.

Field Program

The following scope of work was completed in an effort to evaluate the current soil conditions beneath the Property:

Preparing a health and safety plan in accordance with Washington State Model Toxics Control Act (MTCA) and Part 1910.120 of Title 29 of the Code of Federal Regulations before initiating field activities.

- Performing a utility locate at the proposed boring locations using a private utility location service and contacting the One-Call Center for utility location.
- Performing a ground-penetrating radar (GPR) survey at the Property.
- Advancing nine soil borings (P01 through P09) using push-probe drilling methods on the Property.
- Submitting select soil samples for laboratory analysis.
- Preparing this letter report.

A detailed description of the limited subsurface investigation field activities is provided in the following subsection.

Field Activities

On May 1, 2012, Underground Detection Services, Inc., of Seattle, Washington, completed the GPR and private utility location surveys in preparation for drilling activities. The GPR survey was conducted to identify whether remediation piping beneath the Property intersected with proposed boring locations. The GPR survey was inconclusive due to the density of the soil and site conditions.

The drilling activities were performed on May 2, 2012. Nine soil borings (P01 through P09) were advanced on the Property (Figure 1). Borings P01 through P09 were completed to assess the extent of residual soil contamination and evaluate the effectiveness of the SVE and DPE remediation systems that previously operated at the Property. Drilling activities were conducted under the supervision of a SoundEarth geologist. Borings P01 through P09 were advanced by Environmental Services Network of Olympia, Washington, using a limited-access direct-push drill rig.

Continuous soil samples were collected from each of the borings at approximately 4- to 5-foot intervals from ground surface to total depths of 24 feet bgs in borings P01 through P07 and P09, and to a total depth of 28 feet bgs in boring P08. Soil samples collected from each of the borings were described in accordance with the Unified Soil Classification System (USCS) and were screened in the field for evidence of potential contamination using visual observations, notations of odor, and by conducting headspace analysis using a photoionization detector (PID) to detect the presence of volatile organic vapors. The odor observations and PID values are presented in Table 1.

Headspace analysis was conducted by placing soil from each sample interval into a resealable plastic bag and allowing the sample to warm for a minimum of 30 seconds. The probe of the PID was then inserted into the bag, and the highest reading obtained over an approximately 30-second interval was recorded. The USCS symbol, visual and olfactory notations for the samples, PID readings, and/or the location of the sample proximate to the soil-groundwater interface were recorded on boring log forms, which are provided in Attachment A.

After the maximum depth was achieved in each sample interval, relatively undisturbed, discrete soil samples were collected from the soil boring and were transferred directly into laboratory-prepared sample containers. Selected soil samples were collected in accordance with U.S. Environmental Protection Agency (EPA) Method 5035A for sampling and analysis of low-level volatile organic

compounds (VOCs). Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported to Friedman & Bruya, Inc., of Seattle, Washington under standard chain-of-custody protocols for laboratory analysis. Selected soil samples were analyzed for GRPH, DRPH, and oil-range petroleum hydrocarbons (ORPH) by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Gx and NWTPH-Dx, respectively; and VOCs, including benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B.

Non-dedicated field sampling equipment was cleaned and decontaminated between uses before leaving the Property. Soil cuttings and decontamination washwater were contained on the Property in labeled 16-gallon drums pending waste profiling and proper disposal.

FINDINGS

The findings of the limited subsurface investigation conducted at the Property in May 2012 are summarized below. The soil analytical results for the samples collected during the recent SoundEarth investigation are presented on Figure 2 and in Table 1. Laboratory analytical reports are included in Attachment B. SoundEarth reviewed and compiled the historical soil analytical results for the Property, which are presented on Figure 3.

- Soil encountered beneath the Property generally consists of dense, silty sand with gravel between 8 to 11 feet thick underlain by medium to fine sand with silt and gravel. As shown on Figures 4 and 5, dense silt with fine sand was encountered in some locations between 16 to 24 feet bgs (the maximum depth achieved in those borings). Groundwater was encountered between 11 to 12 feet bgs throughout the Property.
- Soil samples collected from borings P02 through P09 contained concentrations of GRPH above the MTCA Method A cleanup level of 30 milligrams per kilogram (mg/kg). The highest concentration of GRPH detected was 2,500 mg/kg in boring P08 at a depth of 14 feet. With the exception of two shallow soil samples collected from borings P05 and P07, concentrations of GRPH that exceeded the MTCA Method A cleanup level were only encountered in soil samples collected near the soil-groundwater interface at an average depth of 11 feet bgs or within the saturated zone.
- Benzene was detected in soil collected from borings P03 through P08 at concentrations exceeding the MTCA Method A cleanup level of 0.03 mg/kg. The highest concentration of benzene detected was 2.5 mg/kg in soil collected from boring P08 at a depth of 14 feet. With the exception of two shallow soil samples collected from borings P05 and P07, concentrations of benzene that exceeded the MTCA Method A cleanup level were only encountered in soil samples collected near the soil-groundwater interface or within the saturated zone.
- The concentrations of ethylbenzene and total xylenes exceeded their respective MTCA Method A cleanup levels in soil collected from boring P08 at a depth of 14 feet bgs.
- The concentrations of toluene, ethylbenzene, and total xylenes exceeded their respective MTCA Method A cleanup levels in soil collected from boring P09 at a depth of 15 feet bgs.

- DRPH was detected in soil samples collected from borings P02 through P09, but only the soil samples collected from borings, P04, P07, and P08 contained DRPH concentrations that exceeded the MTCA Method A cleanup level of 2,000 mg/kg. The highest concentration of DRPH was 3,300 mg/kg in soil collected from boring P07 at a depth of 20 feet. Each of the soil samples that contained DRPH concentrations exceeding the MTCA Method A cleanup level were collected near the soil-groundwater interface or within the saturated zone.
- Concentrations of ORPH were below the laboratory reporting limit in soil samples collected from borings P01 through P04 and P06 through P09. The soil sample collected from boring P05 at a depth of 4 feet contained a concentration of ORPH that exceeded the laboratory reporting limit, but was below the MTCA Method A cleanup level of 2,000 mg/kg.
- Fill material that included wood, rotten logs, brick, and asphalt fragments was encountered in borings P05 through P09 at approximately 7 to 8 feet bgs and up to 2 feet in thickness. In boring P08, a rotten log was encountered from ground surface to 8 feet bgs.

DATA QUALITY REVIEW

SoundEarth reviewed laboratory quality control data provided with the Friedman & Bruya, Inc. reports to evaluate the usability of the analytical results. SoundEarth reviewed the accuracy and precision data in addition to sample holding times, laboratory method blanks, and laboratory method detection limits, where applicable. DRPH concentrations detected in the soil samples collected from borings P03 and P06 at 4 and 14 feet bgs, respectively, were flagged by the laboratory because their chromatograms resembled another fuel type. The laboratory also flagged the reported benzene concentration in soil samples collected 15 feet bgs in borings P03 and P09 because the results were below normal reporting limits; the value reported is an estimate. All other quality control criteria are acceptable for the samples; therefore, no action is required and analytical results are usable to meet the project objectives. Copies of the laboratory analytical reports are provided in Attachment B.

CONCLUSIONS

Previous investigations conducted by others at the Property have revealed petroleum-contaminated soil beneath much of the Property. The results of the limited subsurface investigation completed in May 2012 indicate that concentrations of GRPH, DRPH, and/or BTEX exceeding their respective MTCA Method A cleanup levels remain in soil beneath approximately two thirds of the Property (Figure 2). The highest concentrations of GRPH, DRPH, and BTEX were detected in soil samples collected near or beneath the soil-groundwater interface, which was encountered at an average depth of approximately 11 feet bgs. The thickness of petroleum-contaminated soil increases from approximately 5 feet beneath the eastern portion of the Property to approximately 15 feet beneath the southwestern portion of the Property (Figures 4 and 5). Petroleum contamination in shallow soil (i.e., less than 10 feet bgs) above the soil-groundwater interface was only encountered in borings P05 and P07. The results of the limited subsurface investigation will be used to generate a preliminary remedial excavation cost estimate to evaluate residual petroleum hydrocarbons beneath the Property.

LIMITATIONS

The findings and conclusions documented in this report have been prepared for the specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. Sampling was conducted at widely spaced boring locations and depths, and a potential always remains for unknown, unidentified, or unforeseen subsurface contamination to exist on portions of the Property that were not accessed in the course of this investigation. No warranty, expressed or implied, is made. This report is intended for the exclusive use of the Williams Kastner and Liberty Mutual Insurance Company.

CLOSING

SoundEarth appreciates the opportunity to work with you on this project. Please contact the undersigned at (206) 306-1900 if you have any questions or require additional information.

Respectfully,

SoundEarth Strategies, Inc.

Associate Engineer

Principal Hydrogeologist

ocations.

Attachments: Figure 1, Exploration Location Plan with Geologic Cross Section

Figure 2, Soil Analytical Results (May 2, 2012)

Figure 3, Historical Soil Analytical Data

Figure 4, Cross Section A-A' with Current and Historical Analytical Result

Figure 5, Cross Section B-B' with Current and Historical Analytical Result

Table 1, Summary of Soil Analytical Results

A, Boring Logs

B, Laboratory Analytical Reports

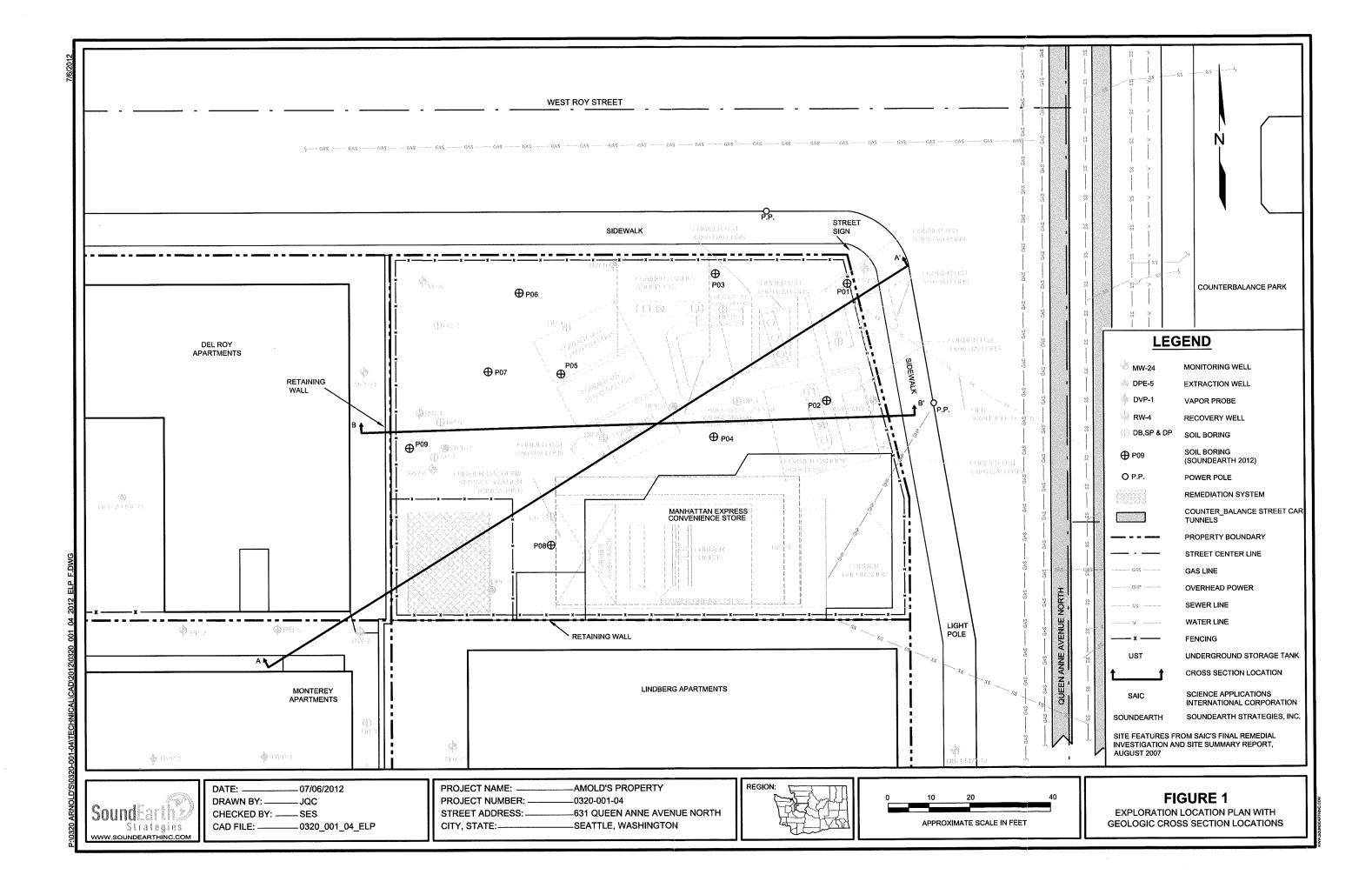
Friedman & Bruya, Inc. #205047

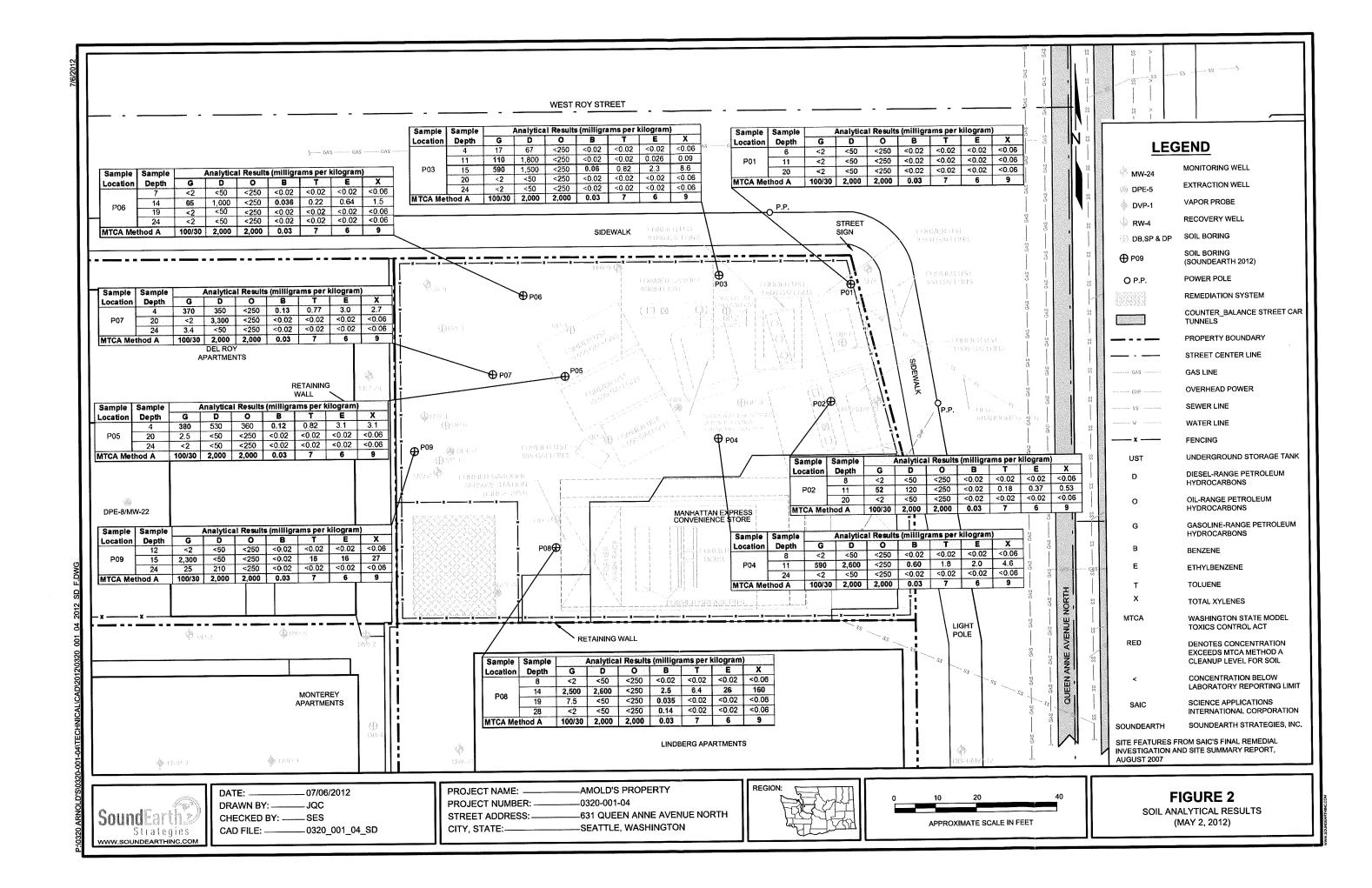
Friedman & Bruya, Inc. #205047 (additional)

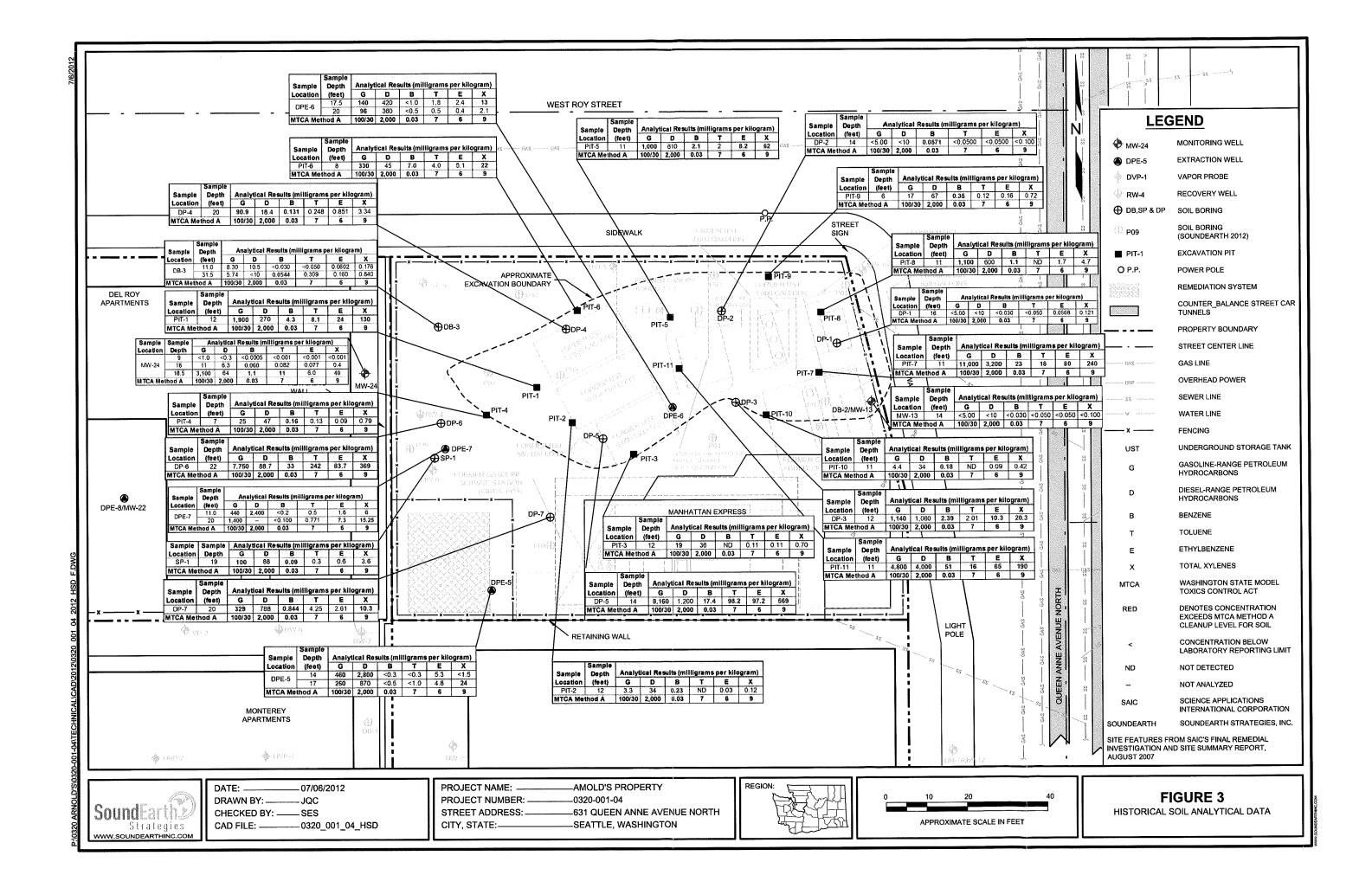
Friedman & Bruya, Inc. #205050

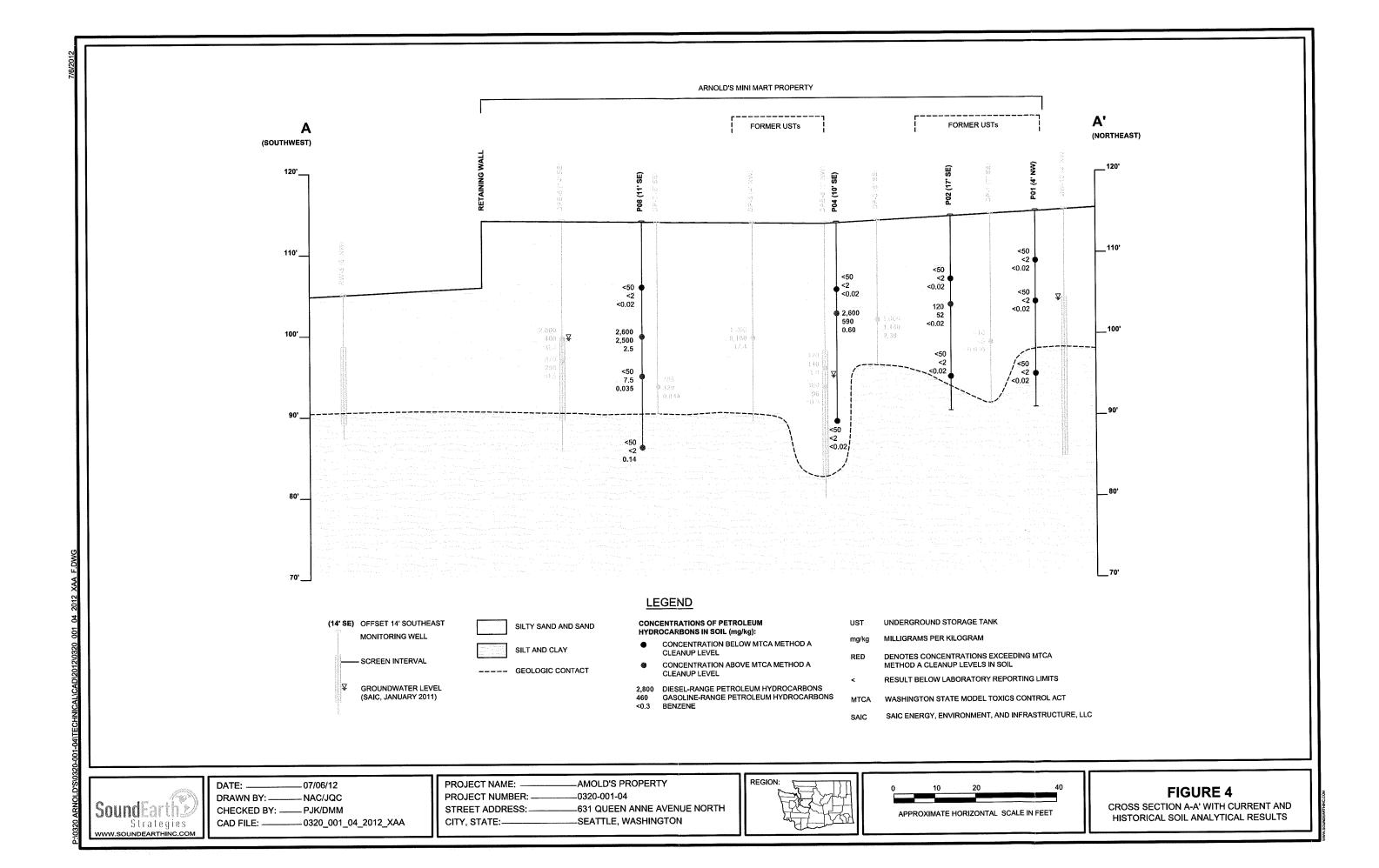
SES:mdb/hsc

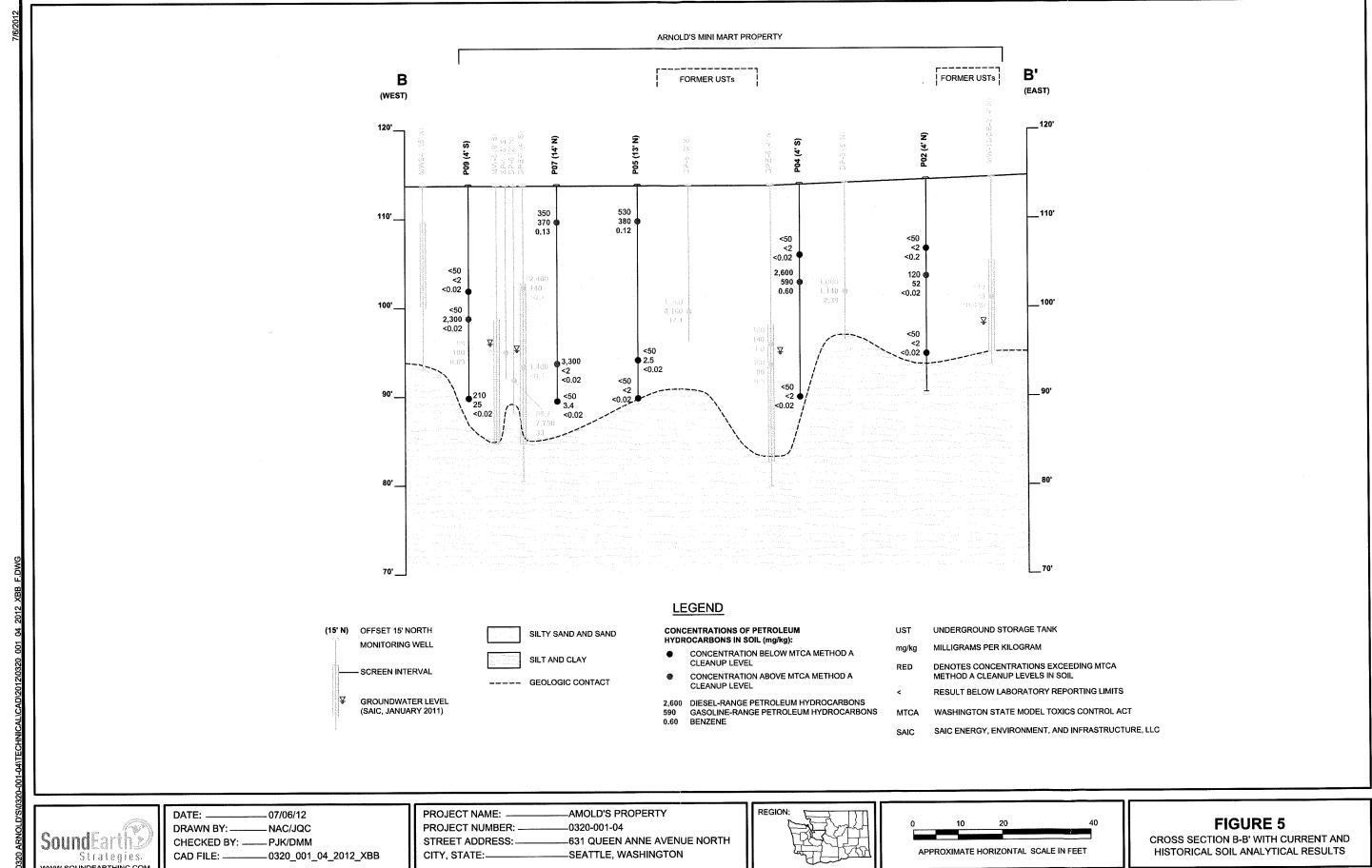
FIGURES











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TABLE



Table 1 Summary of Soil Analytical Results Arnold's Property 631 Queen Anne Avenue North Seattle, Washington

				Sample		Analytical Results (mg/kg)							
ample Location	Sample ID	Sample Date	Sampled By	Depth (feet bgs)	PID (ppmv)	GRPH ¹	DRPH ²	ORPH ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xvlenes ³	Notes
ampie Location	P01-04	05/02/12	SoundEarth	4	1.1								No Odor
	P01-06	05/02/12	SoundEarth	6	3.8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P01-11	05/02/12	SoundEarth	11	11.1	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
P01	P01-14	05/02/12	SoundEarth	14	44.0								Slight-Moderate HC O
	P01-20	05/02/12	SoundEarth	20	2.1	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P01-24	05/02/12	SoundEarth	24	1.0								No Odor
· · · · · · · · · · · · · · · · · · ·	P02-04	05/02/12	SoundEarth	4	1.3								No Odor
	P02-08	05/02/12	SoundEarth	8	0.8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P02-11	05/02/12	SoundEarth	11	24.7	52	120	<250	<0.02	0.18	0.37	0.53	Moderate HC Odor
P02	P02-16	05/02/12	SoundEarth	16	4.3								No Odor
	P02-10	05/02/12	SoundEarth	20	2.4	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P02-24	05/02/12	SoundEarth	24	0.5			1200					No Odor
	P03-04	05/02/12	SoundEarth	4	34.5	17	67 ^x	<250	<0.02	<0.02	<0.02	<0.06	Moderate HC Odor
	P03-04	05/02/12	SoundEarth	8	2.9			1250					No Odor
	P03-08	05/02/12	SoundEarth	11	100.2	110	1,800	<250	<0.02	<0.02	0.026	0.090	Moderate-Strong HC
P03	P03-11 P03-15	05/02/12	SoundEarth	15	203.5	590	1,500	<250	0.06 ^j	0.82	2.3	8.6	Strong HC Odor
	P03-15 P03-20	05/02/12	SoundEarth	20	4.0	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P03-20 P03-24	05/02/12	SoundEarth	24	2.7	<2	<50 <50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P03-24 P04-04	05/02/12	SoundEarth	4	1.9								No Odor
	P04-04	05/02/12	SoundEarth	8	3.8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
			SoundEarth	11	567.0	590	2,600	<250	0.60	1.8	2.0	4.6	Strong HC Odor
P04	P04-11	05/02/12						~-					Slight HC Odor
	P04-15	05/02/12	SoundEarth SoundEarth	15	76.2 9.5								No Odor
	P04-20	05/02/12	SoundEarth	20 24	9.5 2.4	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P04-24	05/02/12		4	29.1	380		-	0.12	0.82	3.1	3.1	Moderate HC Odor
	P05-04	05/02/12	SoundEarth				530	360	0.12			2.1	No Odor
	P05-08	05/02/12	SoundEarth	8	2.4				 	 			No Odor
P05	P05-11	05/02/12	SoundEarth	11	6.2					 	**		No Odor
	P05-15	05/02/12	SoundEarth	15	12.5	2.5		<250	<0.02	<0.02	<0.02	<0.06	Strong HC Odor
	P05-20	05/02/12	SoundEarth	20	827.0		<50	+	<0.02	<0.02	<0.02	<0.06	No Odor
	P05-24	05/02/12		24	3.5	<2	<50	<250					No Odor
	P06-04	05/02/12	SoundEarth	4	1.0			<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P06-07	05/02/12	SoundEarth	7	0.8	<2	<50						Slight Odor
P06	P06-11	05/02/12		11	74.3				0.036	0.22	0.64	1.5	Slight-Moderate HC (
	P06-14	05/02/12		14	116.0	65	1,000*	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P06-19	05/02/12		19		<2	<50	<250	<0.02	<0.02	<0.02	<0.06	
	P06-24	05/02/12		24	PID	<2	<50	<250	-	0.77	3.0	2.7	No Odor
	P07-04	05/02/12		4	Inoperable	370	350	<250	0.13			 	Slight HC Odor
	P07-08	05/02/12		8									Strong HC Odor
P07	P07-11	05/02/12	-	11				 					Slight-Strong HC Odo
	P07-14	05/02/12	_{	14	315.0								Strong HC Odor
	P07-20	05/02/12		20	476.0	<2	3,300	<250	<0.02	<0.02	<0.02	<0.06	Strong HC Odor
	P07-24	05/02/12		24	4.2	3.4	<50	<250	<0.02	<0.02	<0.02	<0.06	Slight HC Odor
	P08-08	05/02/12		8	0.2	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
	P08-11	05/02/12		11	3.7				 			160	No Odor
P08	P08-14	05/02/12		14	662.0	2,500	2,600	<250	2.5	6.4	26	160	Strong HC Odor
	P08-16	05/02/12		16	36.0					 			No Odor
	P08-19	05/02/12		19	298.0	7.5	<50	<250	0.035	<0.02	<0.02	<0.06	Strong HC Odor
	P08-28	05/02/12		28	2.4	<2	<50	<250	0.14	<0.02	<0.02	<0.06	No Odor
	P09-03	05/02/12		3	0.8	<u> </u>		<u> </u>				 	No Odor
	P09-08	05/02/12		8	1.5						<u> </u>		No Odor
P09	P09-12	05/02/12	SoundEarth	12	6.5	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	No Odor
FUS	P09-15	05/02/12	SoundEarth	15	177.0	2,300	<50	<250	<0.02 ^j	18	16	27	Strong HC Odor
	P09-20	05/02/12	SoundEarth	20	42.3		<u> </u>			-	·-		Moderate HC Odor
	P09-24	05/02/12	SoundEarth	24	4,4	25	210	<250	<0.02	<0.02	<0.02	<0.06	No Odor
							1	1					

NOTES:
Red denotes concentration exceeds MTCA cleanup level.

< = not detected at a concentration exceeding the laboratory reporting limit.</p>
Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

¹Analyzed by Method NWTPH-Gx.

²Analyzed by Method NWTPH-Dx.

³Analyzed by EPA Method 80218.

 $^{\rm h}$ MTCA Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the WAC, revised November 2007.

^b100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.

Laboratory Notes

¹ The result is below normal reporting limits. The value reported is an estimate.

*The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

-- = not analyzed

mg/kg = milligrams per kilogram

bgs = below ground surface

DRPH = diesel-range petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

HC = hydrocarbon

MTCA = Washington State Model Toxics Control Act

NWTPH = northwest total petroleum hydrocarbon ORPH = oil-range petroleum hydrocarbons

 $\textbf{WAC} \cong \textbf{Washington Administrative Code}$

1 of 1 P:\0320 Arnold's\0320-001-04\Technicsl\Tables\0320_2012SD_F

ATTACHMENT A BORING LOGS



Project: Arnold's Property

Project Number: 0320-001
Logged by: RAH
Date Started: 5/2/12
Surface Conditions: Asphalt

Well Location N/S: 3.6' S of MW10
Well Location E/W: 4.2' W of MW10

Reviewed by: RKB
Date Completed: 5/2/12

BORING | P01 LOG

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
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	1.0		SP		Asphalt at surface. Damp to moist, medium to fine SAND with silt and gravel, light brown, no hydrocarbon odor (10-80-10).	
				1.1	P01-04				
5			80	3.8	P01-06	SM		Damp, dense, silty SAND with gravel, dark brown, no hydrocarbon odor (20-70-10).	
_				1.9		SP		Moist, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (10-85-5).	
- - -			70	4.3 11.1	P01-11			Wet, dense, medium to fine SAND with silt and gravel, reddish-brown, no hydrocarbon odor (10- 85-5).	
15			100	44	P01-14			Wet, dense, medium to fine SAND with silt, brownish gray to gray, slight to moderate hydrocarbon odor (5-95-0).	
Drilli Drilli Samp Hamr	ng Ed pler T ner T	ype/W	nt: D eight:		lbs F	Well/Auger E Well Screend Screen Slot	ed Interval Size: Jsed:	/2 inches I: feet bgs inches	
Total	Well	ng Der Depth ID No.	: -		feet bgs A	Surface Seal Annular Sea Monument T	l:	Asphalt Bentonite	Page: 1 of 2



State Well ID No.:

Project: Arnold's Property
Project Number: 0320-001

Project Number: 0320-0 Logged by: RAH Date Started: 5/2/12

Surface Conditions: Asphalt
Well Location N/S: 3.6' S of MW10

Well Location E/W: 4.2' W of MW10
Reviewed by: RKB

Date Completed:

RKB 5/2/12 BORING | P01 LOG |

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

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

11 feet bgs-- feet bgs

2 of 2

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15 -				3.8					
-			100	2.1		ML		Damp, dense, SILT with fine sand, brown, no hydrocarbon odor (60-40-0).	
20 —				2.1	P01-20			Damp, dense, SILT with fine sand, gray, no hydrocarbon odor (60-40-0).	
-			100	1.0	P01-24				
25 —								Boring terminated at 24' bgs.	
-									
Drilli	ng Eq	o./Drille julpme		SN/Don irect Push	We	ell/Auger E	ed Interval		
Samp Hamr Total Total	oler T mer T Bori Well		 eight: oth: 24 :	4	lbs Fill feet bgs Su feet bgs An	reen Slot ter Pack U rface Seal nular Sea	sed: : I:	inches Asphalt Bentonite	Page:

Monument Type:



State Well ID No.:

Project: Arnold's Property

Project Number: 0320-001
Logged by: RAH
Date Started: 5/2/12
Surface Conditions: Asphalt
Well Location N/S: 0' S of MW13

BORING | P02 LOG |

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

1 of 2

 Well Location E/W:
 11.5' W of MW13

 Reviewed by:
 RKB
 Water Depth At Time of Drilling:
 11 feet bgs

 Date Completed:
 5/2/12
 Water Depth After Completion:
 -- feet bgs

1				Du	to complete	,u. 0/	2/12		
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic Description	Well Construction Detail
0	1					SM		Asphalt at surface.	
	$\mathbb{N}H$							Damp, dense, silty SAND with gravel, brown, no	
-	M							hydrocarbon odor (20-75-5).	
	V								
-			80	1.0					
	M								
-	$\{/\}$							Marie days a like CAND with proved become	
	$\parallel \parallel \parallel$							Moist, dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).	
-	\square			1.3					
	$\ \cdot \ $			1.0	P02-04				
5—	11///								
	M								
-			80	1.0					
	$ \wedge $		00	1.0					
_	1/\								
	I I								
_				0.0					
	$\ \cdot\ $			0.8	P02-08	SP		Moist, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (10-85-5).	
_				2.4				,	
	M			2.4					
10-]		90						
	$ \Lambda $		90						
-				04.7					
	TI			24.7	P02-11			Wet, dense, medium to fine SAND with silt and gravel, brown, moderate hydrocarbon odor (10-	
-								85-5).	
	$\ \ $								
_]			4.0					
	Ш			4.3					
	\mathbb{N}								
	$ \Lambda $		100						
15									
		./Drille		SN/Don		Well/Auger D		/2 inches Notes/Comments:	
Drillin		ne. Jipme	nt: D	irect Push		Well Screene Screen Slot S		: feet bgs inches	
	-	pe. /pe/We				Filter Pack U			
		g Dep				Surface Seal		Asphalt	
Total	Well [Depth:			~	Annular Seal		Bentonite	Page:
I Ctoto	MALL	D No				fanumant T	uno:		1 of 2

Monument Type:



State Well ID No.:

Project: Arnold's Property 0320-001

Project Number: Logged by:

Date Started: Surface Conditions:

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

Reviewed by:

Monument Type:

Date Completed:

RKB 5/2/12

RAH

5/2/12

Asphalt 0' S of MW13

11.5' W of MW13

BORING LOG

P02

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

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

feet bgs 11 feet bgs

2 of 2

				Da	te Compieted	: 5	2/12	Water Deptil After Completion.	icci bgo
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15				4.3	P02-16				
-									
-				1.9					
-									
<u>-</u>									
20 —				2.4	P02-20				
-				1.0	7 02-20				
-] }			1.0		ML		Damp, dense, SILT with fine sand, gray, no hydrocarbon odor (60-40-0).	
_	$]$ Λ								
	$\ \cdot \ $			0.5	P02-24				
_								Boring terminated at 24' bgs.	
25 —									
-									
_									
-									
-									
30									
	ng Co	o./Drille	er: E	SN/Don	We	ell/Auger D	iameter:	/2 inches Notes/Comments:	
Drilli	ng Ed	Juipme		irect Push	We	ell Screene	ed Interval	: feet bgs	
Samp					ı	reen Slot		inches	
		ype/W				ter Pack U		 Aonhait	
		ng Dep Depth			- 1	rface Seal Inular Seal		Asphalt Bentonite	Page:
J.u.		- opui	•				• •		



Hammer Type/Weight:

24

Total Boring Depth:

Total Well Depth:

State Well ID No.:

lbs

feet bgs

feet bgs

Filter Pack Used:

Monument Type:

Asphalt

Bentonite

Surface Seal:

Annular Seal:

Project:

Project Number:

Logged by:

Date Started:

Arnold's Property 0320-001

RAH

5/2/12 Asphalt

2.0' S of MW09 75.2' E of MW09

Well Location E/W: Reviewed by: **Date Completed:**

Surface Conditions:

Well Location N/S:

RKB 5/2/12 BORING P03 LOG

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

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

feet bgs 11 feet bgs

Page:

1 of 2

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description Construction Detail
0 -						SM		Asphalt at surface. Damp, dense, silty SAND with gravel, brown, no hydrocarbon odor (20-70-10).
	M		80	1.9				
5—				34.5	P03-04			Damp, dense, silty SAND with gravel, dark brown, moderate hydrocarbon odor (20-75-5). Damp, dense, silty SAND with gravel, brown, no hydrocarbon odor (20-70-10).
_	\bigwedge		80	4.9				
-	\prod			2.9	P03-08	SP		Moist, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (5-90-5).
10 —			100	4.6				
	Ž			100.2	P03-11			Wet, dense, medium to fine SAND with silt and gravel, gray to brownish gray, moderate to strong hydrocarbon odor (5-90-5).
-			100	23.6				
	ıg Eq	o./Drille uipme ype:		SN/Don irect Push	V	/ell/Auger D /ell Screene creen Slot S	ed Interval	/2 inches Notes/Comments: feet bgs inches



Project: Arnold's Property

Project Number: 0320-001
Logged by: RAH
Date Started: 5/2/12
Surface Conditions: Asphalt

Well Location N/S: 2.0' S of MW09
Well Location E/W: 75.2' E of MW09

Reviewed by: RKB
Date Completed: 5/2/12

BORING | P03 LOG |

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

					to opinipiote		£! £		
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15	H			203.5	P03-15				
_						ML		Damp, dense, SILT with fine sand, dark brown, no hydrocarbon odor (60-40-0).	
_			400	648		SP		Wet, dense, medium to fine SAND with silt and gravel, gray, strong hydrocarbon odor (10-80-10).	
- 20 —			100					Wet, dense, medium to fine SAND with silt and gravel, gray, no hydrocarbon odor (10-80-10).	
-				4.0	P03-20			Wet, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (10-80-10).	
_									
_				2.7	P03-24				
25 —	-							Boring terminated at 24' bgs.	
-									
_									
30	_								
Drilli Drilli Samı	ng Ed oler T	o./Drille juipme ype: ype/We	nt:	ESN/Don Direct Push 	y s	/ell/Auger D /ell Screene creen Slot ! ilter Pack U	ed Interval Size:	/2 inches Notes/Comments: : feet bgs inches	
Total Total	Bori Well	ype/w ng Dep Depth ID No.	th:	 24 	feet bgs Seet bgs A	urface Seal unface Seal unular Seal	: :	Asphalt Bentonite	Page: 2 of 2



Arnold's Property Project:

Project Number: 0320-001 Logged by: RAH Date Started: 5/2/12 **Surface Conditions:** Asphalt

7.6' S of DPE-G Well Location N/S: Well Location E/W: 10.0' E of DPE-C BORING P04 LOG

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs Reviewed by: RKB Water Depth After Completion: feet bgs Date Completed: 5/2/12

					to oumpiet		2112		
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	e USCS Class	Graphic	Lithologic Description	Well Construction Detail
0		•			, 110 Avri	SM		Asphalt at surface. Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10).	
			90	1.0					
5—				1.9	P04-04			Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).	
-			90	2.1					
				3.8	P04-08			Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10).	
10-				4.6		SP		Moist, dense, medium to fine SAND with silt and gravel, grayish-brown, no hydrocarbon odor (10-80-10).	
-				567	P04-11			Wet, dense, medium to fine SAND with silt and gravel, gray, strong hydrocarbon odor (10-80-10).	
15									
Drilling Drilling	-			SN/Don irect Push		Well/Auger D Well Screene		/2 inches Notes/Comments:	
Sample	er Ty	pe:			;	Screen Slot S	Size:	inches	
Hamme Total B					1	Filter Pack U Surface Seal		 Asphalt	
Total V State V	Vell I	Depth:			feet bgs	Annular Seal Monument T	l:	Bentonite 	Page: 1 of 2



Project: Arnold's Property

Project Number: Logged by: Date Started:

Surface Conditions: Well Location N/S:

Well Location E/W:

Reviewed by:

Date Completed:

5/2/12

RKB

0320-001

RAH

5/2/12

Asphalt 7.6' S of DPE-G

10.0' E of DPE-C

BORING LOG P04

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

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

11 feet bgs feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15 - -				76.2 63.2	P04-15			Wet, dense, medium to fine SAND with silt and gravel, brownish-gray, slight hydrocarbon odor (5-85-10).	
- 20			100	9.5	P04.00			Wet, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (5-95-0).	
-				3.9	P04-20				
25 —				2.4	P04-24			Boring terminated at 24' bgs.	
-									
-									
	ng Eq	./Drille		SN/Don irect Push	We	ell/Auger D	ed Interval	/2 inches Notes/Comments: : feet bgs	

Sampler Type:

Total Well Depth:

State Well ID No.:

Hammer Type/Weight:

Total Boring Depth: 24

feet bgs feet bgs

lbs

Well Screened Interval: Screen Slot Size:

inches

Filter Pack Used: Surface Seal:

Monument Type:

Annular Seal:

Asphalt

Bentonite

Page: 2 of 2



Arnold's Property Project:

Project Number: 0320-001 Logged by: RAH 5/2/12 Date Started: **Surface Conditions:** Asphalt 8' N of DPE-6 Well Location N/S:

27.8' W of DPE-6

Date Completed: 5/2/12 BORING P05 LOG

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

Well Location E/W: Reviewed by: RKB Water Depth At Time of Drilling: 11 feet bgs Water Depth After Completion: feet bgs

				Da	te Complet	eu. 5/	2/12	Water Deptil After Completion.	leet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	e USCS Class	Graphic	Lithologic Description	Well Construction Detail
0	1		***************************************	***************************************		SP		Asphalt at surface.	
_								Damp, dense, medium to fine SAND with gravel and silt, light brown, no hydrocarbon odor (10-80-10).	
	A		100	1.6					
5—				29.1	P05-04	SM		Damp, dense, silty SAND with gravel, dark brown, moderate hydrocarbon odor (20-75-5).	
-			80	30.0				Damp, dense, silty SAND with gravel, dark brown, brick fragments and fill debris towards bottom, no hydrocarbon odor (20-70-10).	
				2.4	P05-08				
10 —				6.0					
				6.2	P05-11	SP		Wet, dense, medium to fine SAND with silt and gravel, dark brown to dark gray, slight hydrocarbon odor (10-85-5).	
- - 15				10.3				Wet, dense, medium to fine SAND with silt, dark brown to dark gray, slight hydrocarbon odor (10- 90-0).	
Drilling	n Co	/Drille	, c	SN/Don	1	—— Well/Auger D	iameter	/2 inches Notes/Comments:	L.,,,,,
Drilling	-			Siv/Don Direct Push	- 1	we⊪Auger D Well Screene			
Sample					1	Screen Slot S		inches	
Hamme			eight: -		1	Filter Pack U	sed:	-	
Total B					0 1	Surface Seal	:	Asphalt	D
Total W		-			•	Annular Seal		Bentonite	Page:
State V	vell i	D No.:		•		Monument T	ype:		1 of 2



Project: Arnold's Property

Project Number: 0320-001
Logged by: RAH
Date Started: 5/2/12
Surface Conditions: Asphalt

Well Location N/S: 8' N of DPE-6
Well Location E/W: 27.8' W of DPE-6

Reviewed by: RKB
Date Completed: 5/2/12

BORING | P05 LOG |

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

Water Depth At Time of Drilling: 11 feet bgs
Water Depth After Completion: -- feet bgs

				Da	te Completed	: 5/	2/12	Water Depth After Completion.	1001.090
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15 -				12.5	P05-15			Wet, dense, medium to fine SAND with silt, brown, no hydrocarbon odor (5-95-0).	
-				12.5				Moist, dense, medium to fine SAND with gravel and silt, brown, no hydrocarbon odor (10-80-10).	
20 —				827	P05-20			Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0). Wet, dense, medium to fine SAND with silt,	
-			100	46.8				grayish-brown, slight hydrocarbon odor (5-95-0). Wet, dense, medium to fine SAND with silt,	
-				3.5	P05-24			Boring terminated at 24' bgs.	
25 -									
30								·	
Drilli Drilli Samı	ng Eq oler T		nt: [W Sc	ell/Auger Dell Screens creen Slot	ed Interval Size:	/2 inches : feet bgs inches	
Total Total	Bori Well	ype/Wang Dep Depth ID No.	th: 2	-	feet bgs St	iter Pack U urface Seal nnular Sea onument T	l: l:	 Asphalt Bentonite 	Page: 2 of 2



Total Boring Depth:

Total Well Depth:

State Well ID No.:

24

feet bgs

feet bgs

Surface Seal:

Annular Seal:

Monument Type:

Asphalt

Bentonite

Project: Arnold's Property

Project Number: 0320-001
Logged by: RAH
Date Started: 5/2/12
Surface Conditions: Asphalt

Well Location N/S: 6.6' S of MW09
Well Location E/W: 23.3' W of MW09

Reviewed by: RKB **Date Completed:** 5/2/12

BORING | P06 LOG |

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

Water Depth At Time of Drilling: 11
Water Depth After Completion: --

1 feet bgs - feet bgs

Page:

1 of 2

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Li	thologic De	scription	Well Construction Detail
- - -			90	1.0		SM		Asphalt at suri Damp, dense, fragments, ligi 70-10).	silty SAND wi	ith gravel and brick nydrocarbon odor (20-	
5—				1.0	P06-04	ML		Damp, dense S brown, no hyd	SILT with grav	vel and fine sand, dark or (40-50-10).	
-				1.0		SP		Damp, dense, no hydrocarbo	medium to fir on odor (5-95-	ne SAND, light brown, 0).	
-				0.8	P06-07	ML		Damp, dense, fragments, da 50-10).	SILT with fine rk brown, no l	e sand and wood hydrocarbon odor (40-	
- 10				4.3 74.3	P06-11	SP		brown, no hyd Wet, dense, m	rocarbon odd	ne SAND with silt, or (5-95-0). SAND with silt ocarbon odor (10-80-	
- 15				116	P06-14						
Drilli Drillii Samp	ng Ed oler T		nt: D		\	Well/Auger D Well Screene Screen Slot S	ed Interval: Size:	/2 	inches feet bgs inches	Notes/Comments:	
Hami	ner T	ype/W	eight:		lbs i	Filter Pack U	sed:	 A anhalt			



Project: Arnold's Property

Project Number: 0320-001
Logged by: RAH
Date Started: 5/2/12
Surface Conditions: Asphalt

Well Location N/S: 6.6' S of MW09
Well Location E/W: 23.3' W of MW09

BORING | P06 LOG |

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

Reviewed by: RKB Water Depth At Time of Drilling: 11 feet bgs

Date Completed: 5/2/12 Water Depth After Completion: -- feet bgs

l			Da	te completet	•• 5/	2/12	11.000 x op 11.11.000 v on province	
Depth (feet bgs) Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15			28.7				Wet, dense, medium to fine SAND with gravel and silt, brownish gray to gray, slight to moderate hydrocarbon odor (10-80-10).	
20			PID inoperable	P06-19			Wet, dense, medium SAND with silt and gravel, gray, no hydrocarbon odor (5-90-5).	
25 —			PID inoperable	P06-24			Boring terminated at 24' bgs.	
Drilling Co./Driller: ESN/Don Drilling Equipment: Direct Push Sampler Type: Hammer Type/Weight: lbs				lbs Fi	ell/Auger Cell Screens creen Slot S	ed Interval Size: Ised:	inches	
Total Boring Depth: Total Well Depth: State Well ID No.:			24 	feet bgs A	urface Seal nnular Sea onument T	l:	Asphalt Bentonite	Page: 2 of 2



Total Well Depth:

State Well ID No.:

Project: Arnold's Property

Project Number: Logged by:

Date Started:

0320-001 RAH

5/2/12 Asphalt

5/2/12

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

26' S of MW09

Reviewed by: Date Completed:

feet bgs

Annular Seal:

Monument Type:

31' W of MW09 **RKB**

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

BORING |

LOG

P07

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

feet bgs feet bgs

1 of 2

Interval Blow Count % Recovery Graphic Well Depth (feet bgs) **USCS** Sample Lithologic Description Construction PID (ppmv) ID Class Detail SM Asphalt at surface. Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10). 90 Damp, dense, silty SAND with gravel, dark brown, slight hydrocarbon odor (20-75-5). PID P07-04 Inoperable 5 90 PID P07-08 Damp, dense, silty SAND with gravel and asphalt Inoperable debris, dark brown, strong hydrocarbon odor (20-Damp, dense, silty SAND with gravel, dark brown, slight hydrocarbon odor (20-75-5). 10 80 Wet, dense, medium to fine SAND with silt, dark SP gray, slight hydrocarbon odor (5-95-0). PID P07-11 Inoperable Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0). 100 315 P07-14 Notes/Comments: Well/Auger Diameter: --/2 inches **Drilling Co./Driller:** ESN/Don feet bgs **Drilling Equipment:** Direct Push Well Screened Interval: Screen Slot Size: inches Sampler Type: Filter Pack Used: Hammer Type/Weight: lhs 24 Surface Seal: Asphalt **Total Boring Depth:** feet bgs Page:

Bentonite



Total Well Depth:

State Well ID No.:

feet bgs

Annular Seal:

Monument Type:

Bentonite

Project:

Project Number:

Logged by: Date Started:

Surface Conditions:

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

Reviewed by:

Date Completed:

Arnold's Property

0320-001

RAH 5/2/12 Asphalt

RKB

5/2/12

26' S of MW09 31' W of MW09

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

P07

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

BORING

LOG

11 feet bgs feet bgs

Page:

2 of 2

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description Lithologic Description Detail
15	I			326				Wet, dense, medium to fine SAND, reddish- brown, slight hydrocarbon odor (5-95-0).
-				7.2				
_	$\left\{ \right\}$							Silt lens. Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0).
20 —				476	P07-20			
-				285				
				4.2	P07-24			Wet, dense, medium to fine SAND, gray, slight hydrocarbon odor (5-95-0).
-								Boring terminated at 24' bgs.
25 —								
-								
-								
30								
Drilli Drilli Samp Hamr	Drilling Co./Driller: ESN/Don Drilling Equipment: Direct Push Sampler Type: Ibs Total Boring Depth: 24 feet bgs						Diameter: ed Interval Size: sed:	/2 inches feet bgs inches Asphalt



Project: Arnold's Property

Project Number: 0320-001 Logged by: RAH Date Started: 5/2/12

Surface Conditions: Asphalt
Well Location N/S: 4.4' S of NW corner of ramp

Well Location E/W: 4.8' W of NW corner of ramp

Reviewed by: RKB Water Depth At Time of Drilling: 11 feet bgs

Date Completed: 5/2/12 Water Depth After Completion: -- feet bgs

BORING |

LOG

P08

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

					te complete	- U	2/12		
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic Description	Well Construction Detail
0	M	***************************************				Blank		Asphalt at surface.	
	$\ \ $							Rotten log.	
-	1//							Notice rog.	
	M								
	III								
	Λ								
	$ \mathcal{M} $								
	M								
_	\Box								
	$\ \ $								
5-	M								
	W								
_	V								
	Λ		50						
	$ \Lambda $								
_	IM					SM		Damp, loose, silty SAND with gravel, dark brown,	
	$I \setminus$							no hydrocarbon odor (20-75-5).	
-	\Box			0.2	P08-08			Moist, dense, silty SAND with gravel, dark brown,	
	$\backslash I$							no hydrocarbon odor (20-75-5).	
-	M								
	\mathbb{V}								
10-			80	0.3					
	Α.		80	0.3		SP		Wet, dense, medium to fine SAND with silt, brownish-gray, no hydrocarbon odor (5-95-0).	
	$\frac{4}{1}$							brownian gray, no nyarodarbon daer (e de e).	
	11			3.7	P08-11				
	$ \cdot $								
-									
	$ \cdot $								
-	M								
	$ \cdot $								
-	ľ		75	662					
	$ \Lambda $		/5	002	P08-14			Wet, medium to fine SAND with silt, gray, strong hydrocarbon hydrocarbon odor (5-95-0).	
15	$ \perp\rangle$							nydrocarbon nydrocarbon odor (3-33-0).	
		./Drille		SN/Don		Well/Auger D		/2 inches Notes/Comments:	
•	Drilling Equipment: Direct Push						d Interval:	~	
Samp		ype: ype/W	 eiaht:			Screen Slot S Filter Pack U		inches	
		ype/wi 1g Dep			- 1	Surface Seal		Asphalt	
1		Depth:			٠ ١	Annular Seal		Bentonite	Page:
State	Well	ID No.	:		ľ	Monument Ty	/pe:	-	1 of 2



State Well ID No.:

Project:

Arnold's Property

Project Number: Logged by:

0320-001

RAH

Date Started: **Surface Conditions:** Well Location N/S:

5/2/12 Asphalt

4.4' S of NW corner of ramp

Well Location E/W: Reviewed by: Date Completed:

RKB 5/2/12 LOG

BORING

11

feet bgs

feet bgs

2 of 2

P08

Site Address: 631 Queen Anne Avenue North Seattle, Washington

4.8' W of NW corner of ramp

Water Depth At Time of Drilling:

Water Depth After Completion:

ı				Da	te completed	. 5/	2112	***	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15		1.00		36.0	P08-16			Wet, dense, medium to fine SAND, gray, no hydrocarbon odor (5-95-0).	
-	$\left \right $			237				Moist, dense, medium to fine SAND, brown, strong hydrocarbon odor (5-95-0).	
-	$\left \begin{array}{c} \\ \\ \end{array} \right $		90						
20 —				298	P08-19			Wet, dense, medium to fine SAND, brown, strong	
-								hydrocarbon odor (5-95-0).	
-				277					
-				30.1		ML		Damp, dense, SILT with fine sand, brown,	_
25 –								moderate hydrocarbon odor (60-40-0).	
-				7.0				Damp, dense, SILT with fine sand, gray, no hydrocarbon odor (70-30-0).	
				2.4	P08-28				_
								Boring terminated at 28' bgs.	
30									
	ng Co	o./Drille	er: E	 SN/Don	w	ell/Auger [Diameter:	/2 inches Notes/Comments:	<u></u>
Drilli	ng Ed	Juipme		irect Push	w	ell Screen	ed Interval		
Sam					I .	creen Slot Iter Pack U		inches	
		ype/W ng Dep		- 8		iter Pack C urface Sea		 Asphalt	
						nnular Sea		Bentonite	Page:
									2 of 2

Monument Type:



State Well ID No.:

Project:

Project Number:

Logged by: Date Started:

Surface Conditions: Well Location N/S:

Well Location E/W:

Date Completed:

Reviewed by:

Arnold's Property

0320-001

RAH

5/2/12 Asphalt

5/2/12

0' N of DPE-7 8.7' W of DPE-7 RKB

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

BORING |

LOG

P09

Site Address: 631 Queen Anne Avenue North

Seattle, Washington

12 feet bgs feet bgs

1 of 2

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic Description	Well Construction Detail	
0	$\ \ $,		SM		Asphalt at surface.		
-								Damp, loose, silty SAND with gravel, dark brown, no hydrocarbon odor (20-75-5).		
-			90	0.9		SP		Damp, loose, medium to fine SAND with silt, light brown, no hydrocarbon odor (5-95-0).		
5-				0.8	P09-03	SM		Damp, loose, silty SAND with gravel, dark brown, no hydrocarbon odor (20-75-5).		
-			100	0.8					·	
10 —		ì		1.5	P09-08					
-				1.6		SP		Moist, dense, medium to fine SAND with silt, light brown, no hydrocarbon odor (5-95-0).		
-				6.5	P09-12			Wet, dense, medium to fine SAND with silt, light brown, no hydrocarbon odor (5-95-0).		
15										
	ng Co	./Drille	er: E	SN/Don	1	Well/Auger D	iameter:	/2 inches Notes/Comments:		
Drilli	ng Eq	uipme		irect Push	١,	Well Screene	d Interval	=		
Samı						Screen Slot S		inches		
		ype/W				Filter Pack U		 Acnhalt		
		ng Dep			· ·	Surface Seal		Asphalt Reptopite	Page:	
lotal	Total Well Depth: feet bgs						Annular Seal: Bentonite			

Monument Type:



Project: Arnold's Property

Project Number: 0320-001 Logged by: RAH Date Started: 5/2/12 Surface Conditions: Asphalt

Well Location N/S: 0' N of DPE-7
Well Location E/W: 8.7' W of DPE-7

BORING | P09 LOG |

Site Address: 631 Queen Anne Avenue North

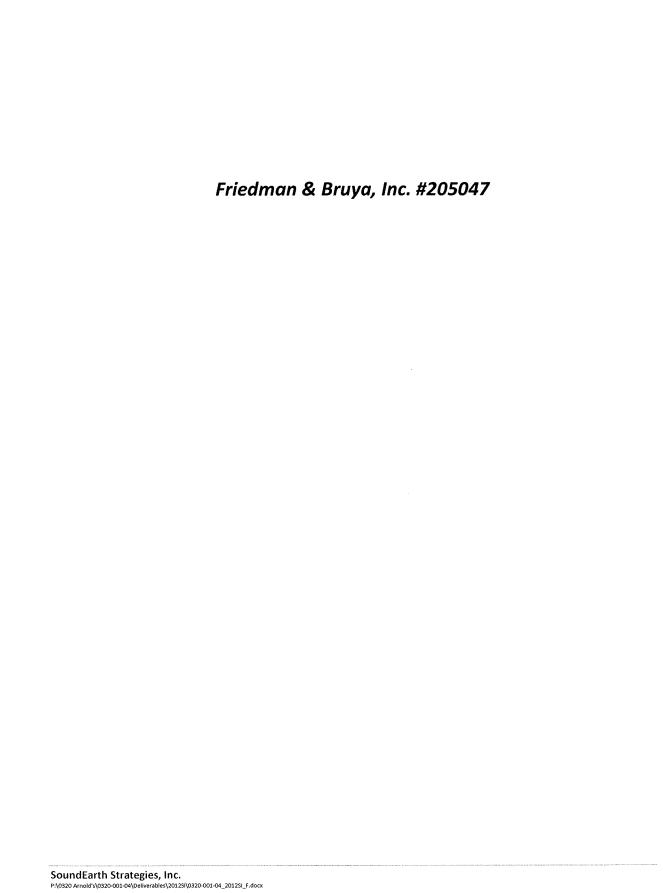
Seattle, Washington

Reviewed by: RKB Water Depth At Time of Drilling: 12 feet bgs

Date Completed: 5/2/12 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
15 - 20		Blo	90	2.3 42.3 4.7	P09-15		9	Wet, dense, medium to fine SAND, dark gray, strong hydrocarbon odor (5-95-0). Wet, dense, medium to fine SAND, brown. Wet, dense, medium to fine SAND with silt, gray, moderate hydrocarbon odor (5-95-0). Wet, dense, medium to fine SAND with silt, light gray to gray, no hydrocarbon odor (5-95-0).	Detail
Drillin Samp Hami Total Total	ng Eq pler T mer T Bori Well	o./Drillo quipme ype: ype/W ng Dep Depth ID No.	nt:	4	W So Ibs Fi feet bgs feet bgs Ai	ell/Auger E ell Screens creen Slot S iter Pack U urface Seal nnular Seal onument T	ed Interval Size: sed: :	/2 inches : feet bgs inches Asphalt Bentonite	Page: 2 of 2

ATTACHMENT B LABORATORY ANALYTICAL REPORTS



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. 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 e-mail: fbi@isomedia.com

May 11, 2012

Suzy Stumpf, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Stumpf:

Included are the results from the testing of material submitted on May 3, 2012 from the SOU_0320_20120503, F&BI 205047 project. There are 13 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 SOU0511R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 3, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0320_20120503, F&BI 205047 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
205047-01	P01-04
205047-02	P01-06
205047-03	P01-11
205047-04	P01-14
205047-05	P01-20
205047-06	P01-24
205047-07	P02-04
205047-08	P02-08
205047-09	P02-11
205047-10	P02-16
205047-11	P02-20
205047-12	P02-24
205047-13	P03-04
205047-14	P03-08
205047-15	P03-11
205047-16	P03-15
205047-17	P03-20
205047-18	P03-24
205047-19	P04-04
205047-20	P04-08
205047-21	P04-11
205047-22	P04-15
205047-23	P04-20
205047-24	P04-24
205047-25	P05-04
205047-26	P05-08
205047-27	P05-11
205047-28	P05-15
205047-29	P05-20
205047-30	P05-24
205047-31	P06-04
205047-32	P06-07
205047-33	P06-11
205047-34	P06-14
205047-35	P06-19

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE (continued)

<u>Laboratory ID</u>	SoundEarth Strategies
205047-36	P06-24
205047-37	P07-04
205047-38	P07-08
205047-39	P07-11
205047-40	P07-14
205047-41	P07-20
205047-42	P07-24
205047-43	P08-08
205047-44	P08-11
205047-45	P08-14
205047-46	P08-16
205047-47	P08-19
205047-48	P08-28
205047-49	P09-03
205047-50	P09-08
205047-51	P09-12
205047-52	P09-15
205047-53	P09-20
205047-54	P09-24

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/04/12

Date Analyzed: 05/04/12, 05/05/12, 05/07/12, and 05/08/12

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

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
P01-06 205047-02	< 0.02	< 0.02	< 0.02	<0.06	<2	96
P01-11 205047-03	< 0.02	< 0.02	< 0.02	<0.06	<2	99
P01-20 205047-05	< 0.02	< 0.02	< 0.02	<0.06	<2	96
P02-08 205047-08	< 0.02	< 0.02	< 0.02	<0.06	<2	95
P02-11 205047-09	< 0.02	0.18	0.37	0.53	52	106
P02-20 205047-11	< 0.02	< 0.02	< 0.02	<0.06	<2	94
P03-04 205047-13	< 0.02	< 0.02	< 0.02	< 0.06	17	93
P03-11 205047-15	< 0.02	< 0.02	0.026	0.090	110	93
P03-15 205047-16 1/5	0.06 j	0.82	2.3	8.6	590	108
P03-24 205047-18	< 0.02	<0.02	< 0.02	<0.06	<2	93

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/04/12

Date Analyzed: 05/04/12, 05/05/12, 05/07/12, and 05/08/12

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

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
P04-08 205047-20	< 0.02	< 0.02	< 0.02	<0.06	<2	93
P04-11 205047-21 1/5	0.60	1.8	2.0	4.6	590	102
P04-24 205047-24	< 0.02	< 0.02	< 0.02	<0.06	<2	94
P05-04 205047-25 1/5	0.12	0.82	3.1	3.1	380	115
P05-20 205047-29	< 0.02	< 0.02	< 0.02	<0.06	2.5	95
P05-24 205047-30	< 0.02	< 0.02	< 0.02	<0.06	<2	98
P06-07 205047-32	< 0.02	< 0.02	< 0.02	<0.06	<2	93
P06-14 205047-34	0.036	0.22	0.64	1.5	65	103
P06-24 205047-36	< 0.02	< 0.02	< 0.02	<0.06	<2	95
P07-04 205047-37 1/5	0.13	0.77	3.0	2.7	370	112
P07-20 205047-41	< 0.02	<0.02	<0.02	<0.06	<2	94

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/04/12

Date Analyzed: 05/04/12, 05/05/12, 05/07/12, and 05/08/12

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

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
P07-24 205047-42	< 0.02	< 0.02	< 0.02	< 0.06	3.4	93
P08-08 205047-43	< 0.02	< 0.02	< 0.02	<0.06	<2	96
P08-14 205047-45 1/100	2.5	6.4	26	160	2,500	100
P08-28 205047-48	0.14	< 0.02	< 0.02	<0.06	<2	92
P09-12 205047-51	< 0.02	< 0.02	< 0.02	<0.06	<2	94
P09-15 205047-52 1/50	<0.02 j	18	16	27	2,300	103
P09-24 205047-54	<0.02	<0.02	<0.02	<0.06	25	95
Method Blank 02-0759 MB	< 0.02	< 0.02	< 0.02	<0.06	<2	91
Method Blank 02-0760 MB	< 0.02	< 0.02	< 0.02	<0.06	<2	92

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/07/12

Date Analyzed: 05/07/12, 05/08/12, and 05/09/12

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

Sample ID Laboratory ID	$rac{ ext{Diesel Range}}{ ext{(C}_{10} ext{-C}_{25})}$	$rac{ ext{Motor Oil Range}}{ ext{(C}_{25} ext{-C}_{36} ext{)}}$	Surrogate (% Recovery) (Limit 50-150)
P01-06 205047-02	<50	<250	85
P01-11 205047-03	<50	<250	88
P01-20 205047-05	<50	<250	89
P02-08 205047-08	<50	<250	91
P02-11 205047-09	120	<250	88
P02-20 205047-11	<50	<250	84
P03-04 205047-13	67 x	<250	93
P03-11 205047-15	1,800	<250	89
P03-15 205047-16	1,500	<250	90
P03-24 205047-18	<50	<250	89
P04-08 205047-20	<50	<250	88
P04-11 205047-21	2,600	<250	90

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/07/12

Date Analyzed: 05/07/12, 05/08/12, and 05/09/12

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

Sample ID Laboratory ID	$rac{ ext{Diesel Range}}{ ext{(C}_{10} ext{-C}_{25} ext{)}}$	$rac{ ext{Motor Oil Range}}{ ext{(C}_{25} ext{-C}_{36})}$	Surrogate (% Recovery) (Limit 50-150)
P04-24 205047-24	<50	<250	96
P05-04 205047-25	530	360	92
P05-20 205047-29	<50	<250	91
P05-24 205047-30	<50	<250	94
P06-07 205047-32	<50	<250	96
P06-14 205047-34	1,000 x	<250	90
P06-24 205047-36	<50	<250	91
P07-04 205047-37	350	<250	93
P07-20 205047-41	3,300	<250	105
P07-24 205047-42	<50	<250	103
P08-08 205047-43	<50	<250	103
P08-14 205047-45	2,600	<250	115

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/07/12

Date Analyzed: 05/07/12, 05/08/12, and 05/09/12

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

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{\text{(C}_{10}\text{-C}_{25})}$	$rac{ ext{Motor Oil Range}}{ ext{(C}_{25} ext{-C}_{36} ext{)}}$	Surrogate (% Recovery) (Limit 50-150)
P08-28 205047-48	<50	<250	102
P09-12 205047-51	<50	<250	103
P09-15 205047-52	<50	<250	108
P09-24 205047-54	210	<250	105
Method Blank 02-766 MB	<50	<250	102
Method Blank 02-765 MB	<50	<250	98

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

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: 205047-02 (Duplicate)

·		(Wet Wt)	(Wet Wt)	Relative Percent
		\mathbf{Sample}	Duplicate	Difference
Analyte	Reporting Units	Result	Result	(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	6	$\mathbf{n}\mathbf{m}$

V	·	•	Percent	
		Spike	Recovery	Acceptance
Analyte	Reporting Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	68	66-121
Toluene	mg/kg (ppm)	0.5	72	72 - 128
Ethylbenzene	mg/kg (ppm)	0.5	78	69 - 132
Xylenes	mg/kg (ppm)	1.5	82	69-131
Gasoline	mg/kg (ppm)	20	110	61-153

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

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: 205047-41 (Duplicate)

v	` -	(Wet Wt) Sample	(Wet Wt) Duplicate	Relative Percent Difference
Analyte	Reporting Units	Result	Result	(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

			$\mathbf{Percent}$	
		Spike	Recovery	Acceptance
Analyte	Reporting Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	79	66-121
Toluene	mg/kg (ppm)	0.5	87	72 - 128
Ethylbenzene	mg/kg (ppm)	0.5	88	69-132
Xylenes	mg/kg (ppm)	1.5	91	69-131
Gasoline	mg/kg (ppm)	20	105	61-153

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES

FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 205047-42 (Matrix Spike)

			(Wet wt)	Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery MSD	Acceptance	RPD
Analyte	Units	Level	Result	MS		Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	102	99	63-146	3

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Diesel Extended	mg/kg (ppm)	5.000	103	79-144		

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES

FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 205047-08 (Matrix Spike)

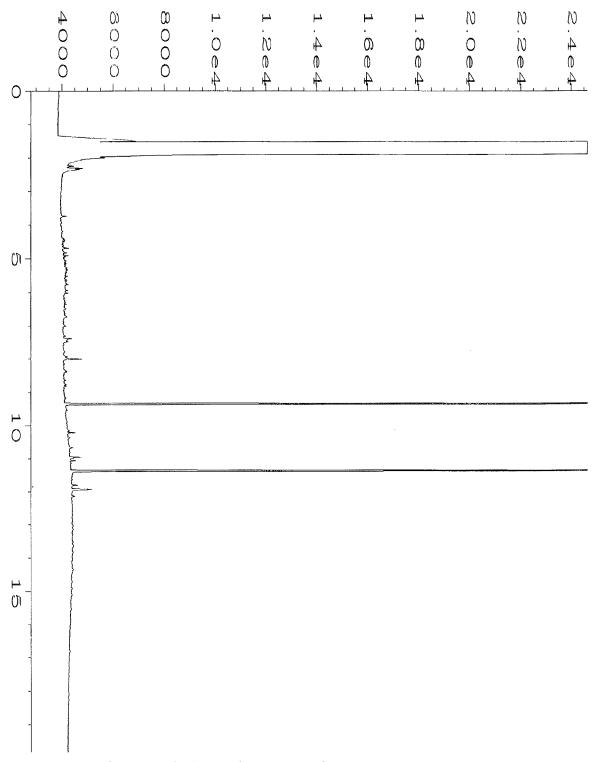
·	Reporting	Spike	(Wet wt) Sample	Percent Recovery	Percent Recovery MSD	Acceptance	RPD
Analyte	Units	Level	Result	MS		Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5.000	< 50	103	103	73-135	0

	Percent				
	Reporting Units	Spike	Recovery	Acceptance	
Analyte		Level	LCS	Criteria	_
Diesel Extended	mg/kg (nnm)	5.000	103	74-139	_

ENVIRONMENTAL CHEMISTS

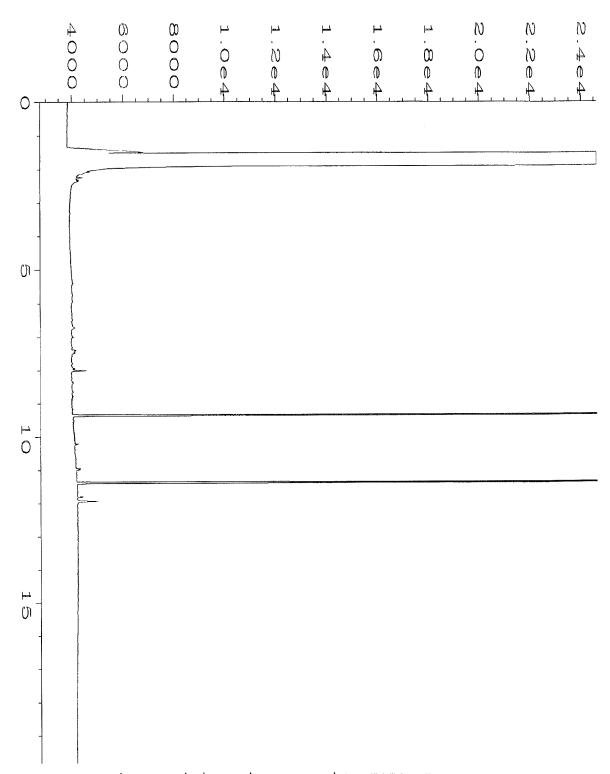
Data Qualifiers & Definitions

- 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.
- i 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.
- yo 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
Operator
                 : ML
Instrument
                : GC#4
                                               Vial Number
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Sample Name
                : 205047-02
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
                                                             : 5
                             06:58 PM
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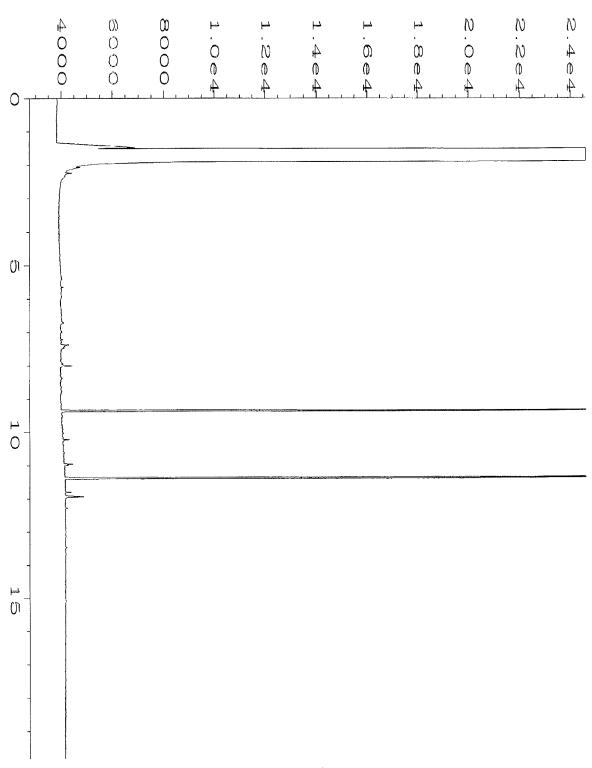
Acquired on : 08 May 12 Instrument Method: TPHD.MTH Report Created on: 10 May 12 Analysis Method : TPHD.MTH 10:25 AM



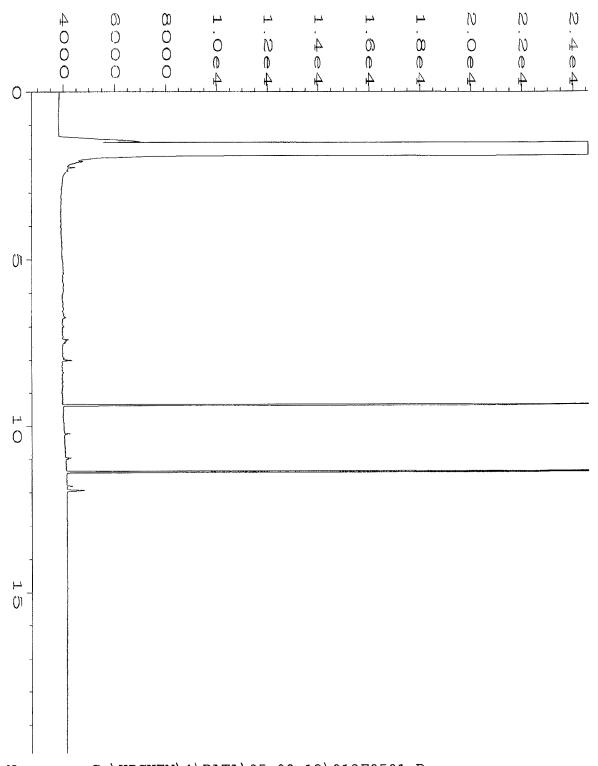
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Data File Name
                                               Page Number
Operator
                 : ML
                                               Vial Number
Instrument
                 : GC#4
                                                                : 11
Sample Name
                 : 205047-03
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
                                                               : 5
Acquired on
            : 08 May 12
                             07:25 PM
                                               Instrument Method: TPHD.MTH
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Analysis Method : TPHD.MTH Report Created on: 10 May 12 10:25 AM

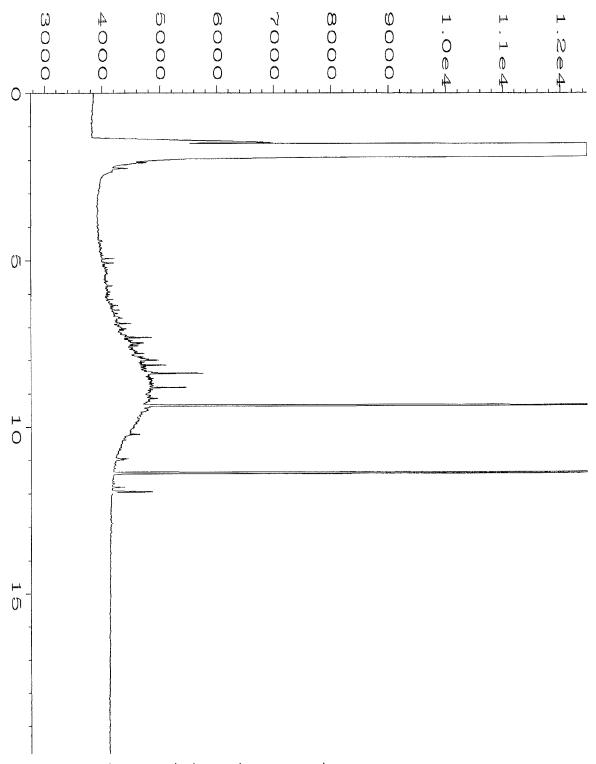
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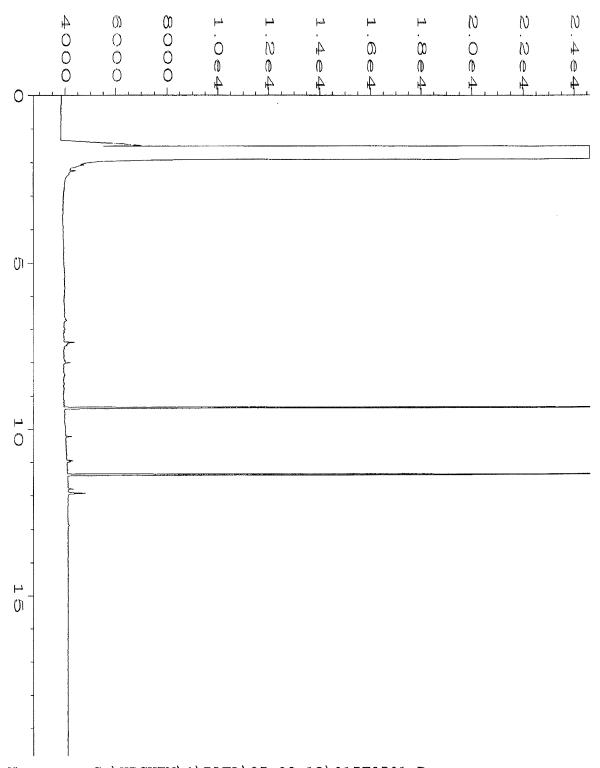
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 Data File Name
                                                Page Number
 Operator
                  : ML
 Instrument
                  : GC#4
                                                Vial Number
                                                                 : 12
 Sample Name
                  : 205047-05
                                                Injection Number: 1
 Run Time Bar Code:
                                                Sequence Line
                                                              : 5
 Acquired on : 08 May 12
                                                Instrument Method: TPHD.MTH
                              07:52 PM
                                                Analysis Method : TPHD.MTH
* Report Created on: 10 May 12
                              10:25 AM
```



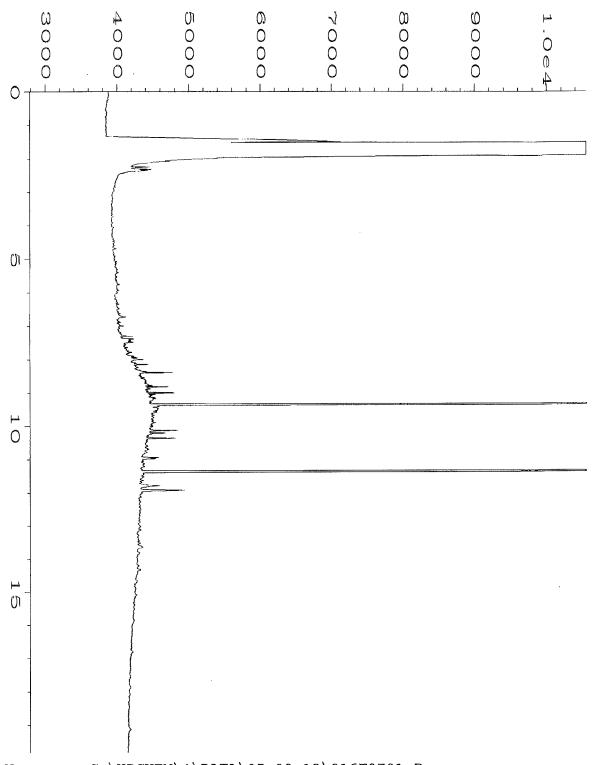
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Data File Name
                                               Page Number
Operator
                : ML
                                               Vial Number
Instrument
                : GC#4
                                                                : 13
Sample Name
                : 205047-08
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
                                                              : 5
Acquired on : 08 May 12
                             08:20 PM
                                               Instrument Method: TPHD.MTH
Report Created on: 10 May 12 10:25 AM
                                               Analysis Method : TPHD.MTH
```



```
Data File Name
                 : C:\HPCHEM\4\DATA\05-08-12\014F0501.D
                                                Page Number
Operator
                 : ML
                                                Vial Number
                                                                 : 14
Instrument
                 : GC#4
                                                Injection Number: 1
Sample Name
                 : 205047-09
                                                Sequence Line
Run Time Bar Code:
                                                                : 5
Acquired on : 08 May 12
                              08:46 PM
                                                Instrument Method: TPHD.MTH
                                               Analysis Method : TPHD.MTH
Report Created on: 10 May 12
                              10:25 AM
```

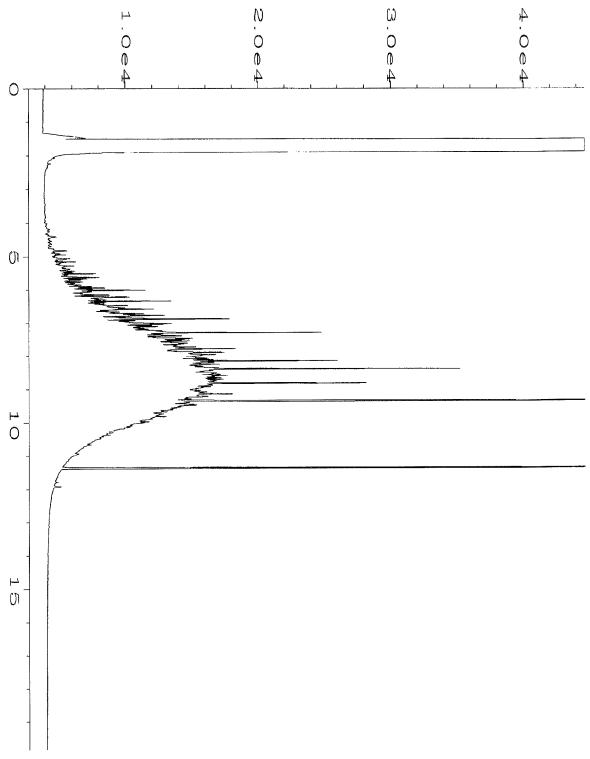


```
Data File Name
              : C:\HPCHEM\4\DATA\05-08-12\015F0501.D
                                              Page Number
Operator
                : ML
Instrument
                : GC#4
                                              Vial Number
                                                               : 15
                : 205047-11
Sample Name
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line
                                                             : 5
Acquired on : 08 May 12
                             09:14 PM
                                              Instrument Method: TPHD.MTH
Report Created on: 10 May 12 10:25 AM
                                              Analysis Method : TPHD.MTH
```



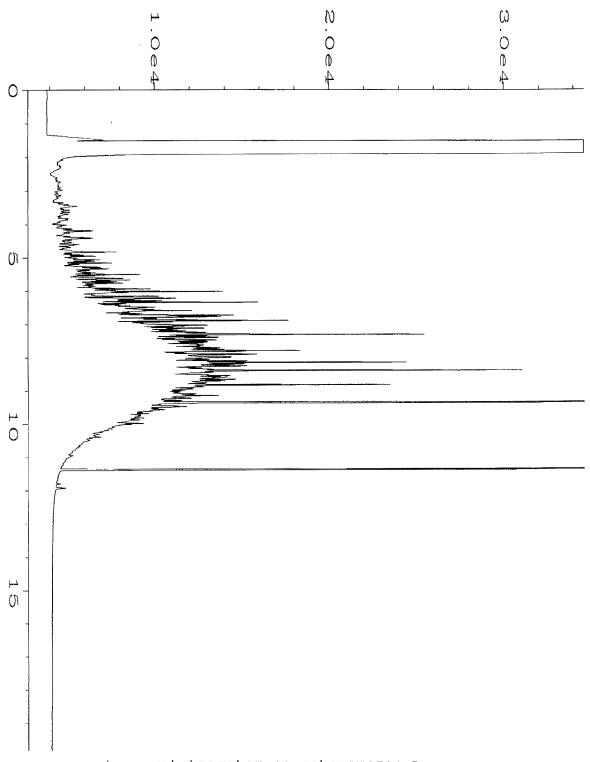
```
: C:\HPCHEM\4\DATA\05-08-12\016F0701.D
Data File Name
                                                Page Number
Operator
                 : ML
Instrument
                 : GC#4
                                                Vial Number
                                                                 : 16
                                                Injection Number: 1
Sample Name
                 : 205047-13
Run Time Bar Code:
                                                Sequence Line
                                                                : 7
Acquired on : 08 May 12
                                                Instrument Method: TPHD.MTH
                              10:35 PM
```

Report Created on: 10 May 12 Analysis Method : TPHD.MTH 10:26 AM



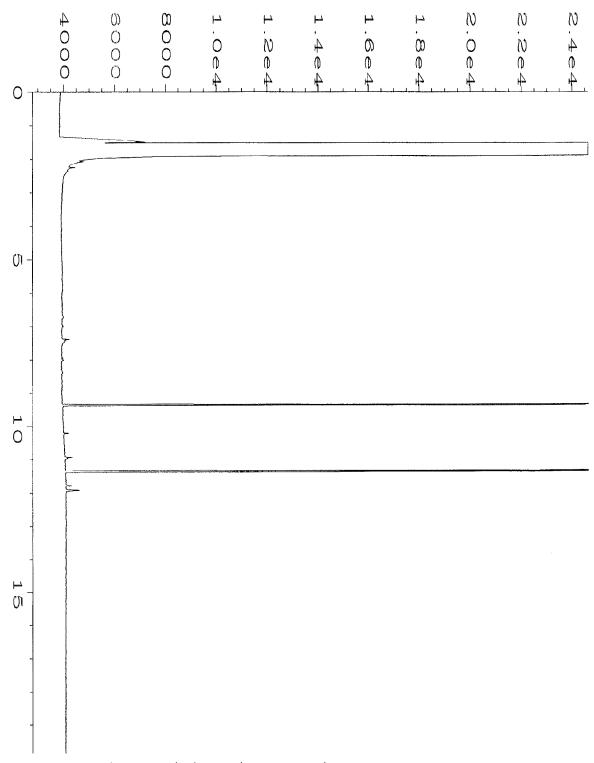
```
: C:\HPCHEM\4\DATA\05-08-12\017F0701.D
Data File Name
                                               Page Number
Operator
                 : ML
Instrument
                : GC#4
                                               Vial Number
                                                               : 17
                : 205047-15
                                               Injection Number: 1
Sample Name
                                                             : 7
Run Time Bar Code:
                                               Sequence Line
Acquired on : 08 May 12
                                               Instrument Method: TPHD.MTH
                             11:02 PM
```

Analysis Method : TPHD.MTH Report Created on: 10 May 12 10:26 AM



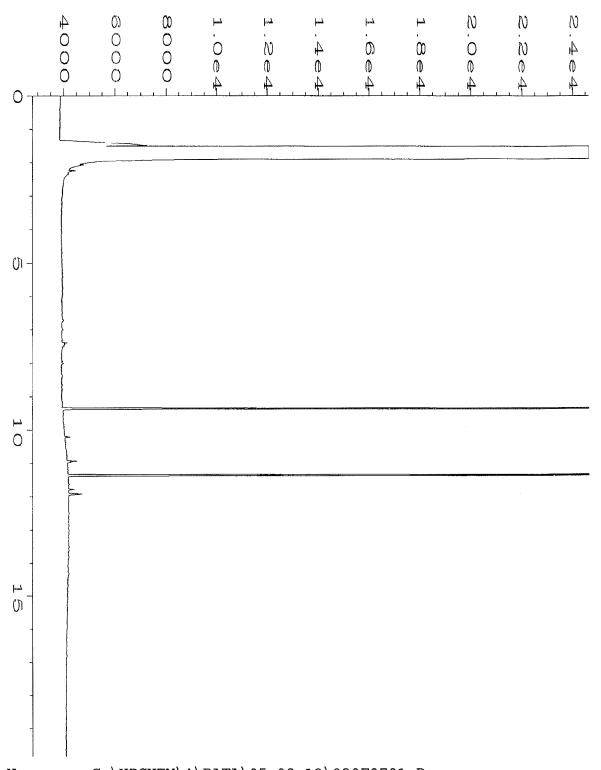
```
Data File Name
                : C:\HPCHEM\4\DATA\05-08-12\018F0701.D
Operator
                                              Page Number
                : ML
Instrument
                                              Vial Number
                : GC#4
                                                               : 18
                                              Injection Number: 1
Sample Name
                : 205047-16
                                              Sequence Line
Run Time Bar Code:
                                                            : 7
Acquired on : 08 May 12
                            11:29 PM
                                              Instrument Method: TPHD.MTH
```

Report Created on: 10 May 12 10:26 AM Analysis Method : TPHD.MTH



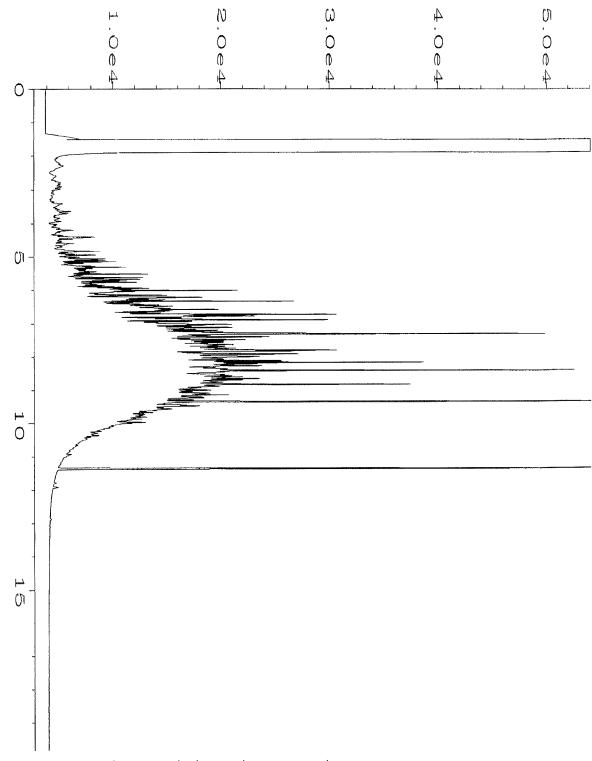
```
: C:\HPCHEM\4\DATA\05-08-12\019F0701.D
Data File Name
                                               Page Number
Operator
                 : ML
                                                                : 19
Instrument
                 : GC#4
                                               Vial Number
Sample Name
                : 205047-18
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
                                                               : 7
Acquired on : 08 May 12
                             11:56 PM
```

Instrument Method: TPHD.MTH Analysis Method : TPHD.MTH Report Created on: 10 May 12 10:26 AM



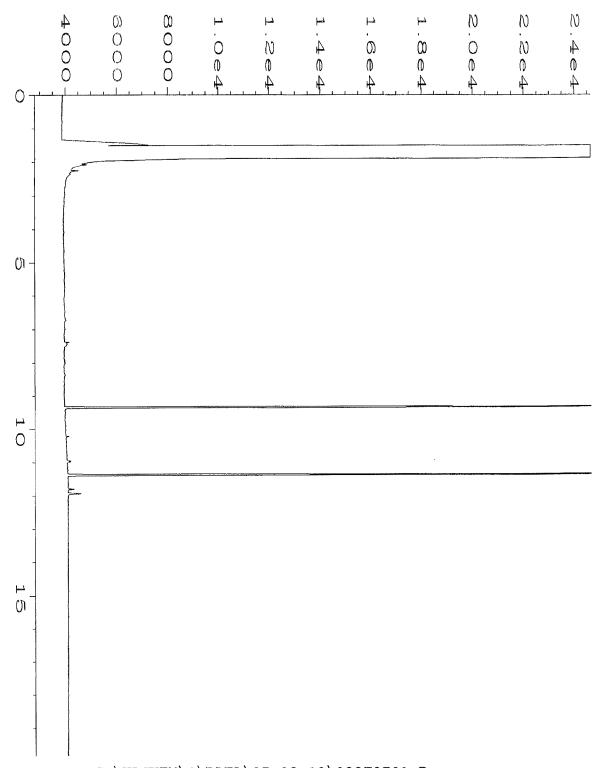
```
Data File Name
              : C:\HPCHEM\4\DATA\05-08-12\020F0701.D
Operator
                                              Page Number
                : ML
Instrument
                : GC#4
                                              Vial Number
                                                              : 20
                : 205047-20
Sample Name
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line
                                                            : 7
Acquired on : 09 May 12 00:23 AM
                                              Instrument Method: TPHD.MTH
```

Acquired on : 09 May 12 00:23 AM Instrument Method: TPHD.MTH Report Created on: 10 May 12 10:26 AM Analysis Method : TPHD.MTH

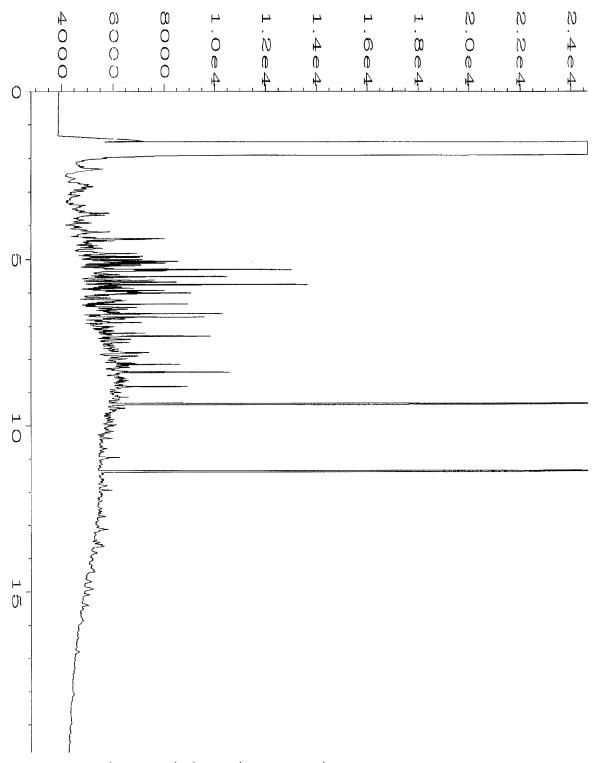


```
: C:\HPCHEM\4\DATA\05-08-12\021F0701.D
Data File Name
                                                 Page Number
Operator
                 : ML
                                                 Vial Number
Instrument
                 : GC#4
                                                                  : 21
                 : 205047-21
                                                 Injection Number: 1
Sample Name
Run Time Bar Code:
                                                 Sequence Line
                                                                  : 7
                              00:50 AM
```

Acquired on : 09 May 12 00:50 AM Instrument Method: TPHD.MTH Report Created on: 10 May 12 10:27 AM Analysis Method : TPHD.MTH

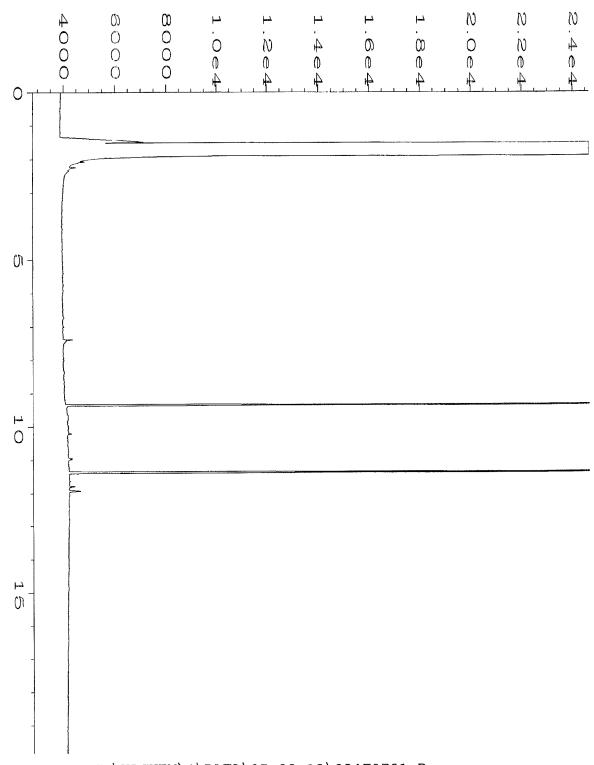


```
Data File Name : C:\HPCHEM\4\DATA\05-08-12\022F0701.D
Operator
                                              Page Number
                 : ML
Instrument
                                              Vial Number
                                                               : 22
                : GC#4
                : 205047-24
                                              Injection Number: 1
Sample Name
Run Time Bar Code:
                                              Sequence Line
                                                               : 7
                                              Instrument Method: TPHD.MTH
Acquired on : 09 May 12 01:17 AM
Report Created on: 10 May 12
                             10:27 AM
                                              Analysis Method : TPHD.MTH
```



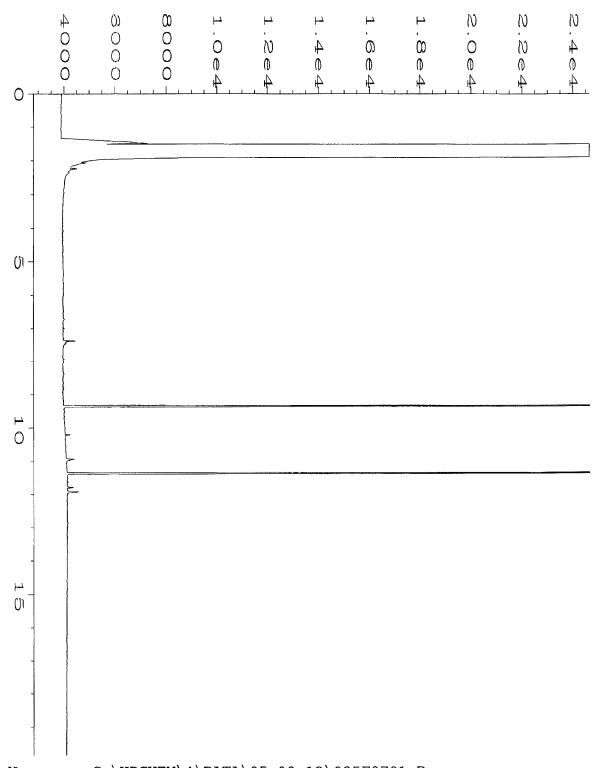
```
Data File Name
               : C:\HPCHEM\4\DATA\05-08-12\023F0701.D
Operator
                 : ML
                                               Page Number
Instrument
                                               Vial Number
                                                                 : 23
                 : GC#4
                                                Injection Number: 1
Sample Name
                 : 205047-25
Run Time Bar Code:
                                               Sequence Line
                                                                : 7
Acquired on
             : 09 May 12
                              01:44 AM
```

Acquired on : 09 May 12 01:44 AM Instrument Method: TPHD.MTH Report Created on: 10 May 12 10:27 AM Analysis Method : TPHD.MTH

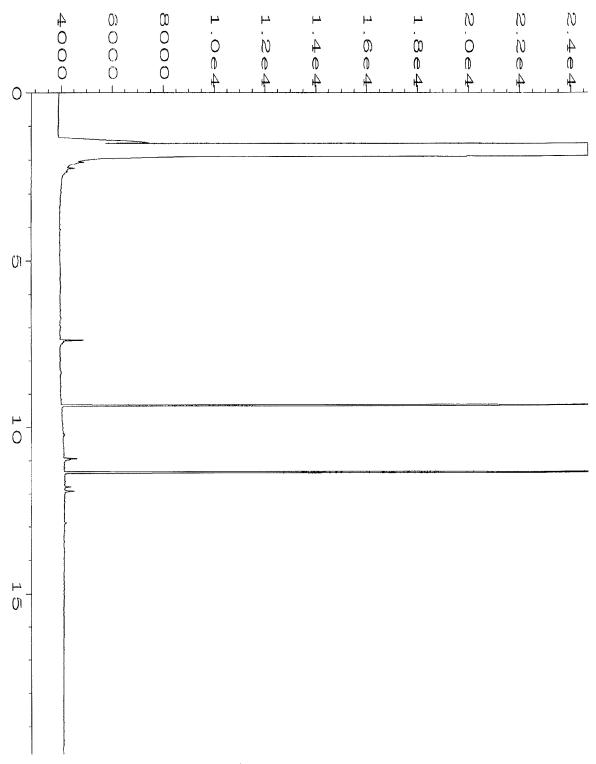


```
: C:\HPCHEM\4\DATA\05-08-12\024F0701.D
Data File Name
Operator
                 : ML
                                                Page Number
                                                                 : 24
Instrument
                                                Vial Number
                 : GC#4
                 : 205047-29
                                                Injection Number: 1
Sample Name
Run Time Bar Code:
                                                Sequence Line
                                                                : 7
                              02:11 AM
```

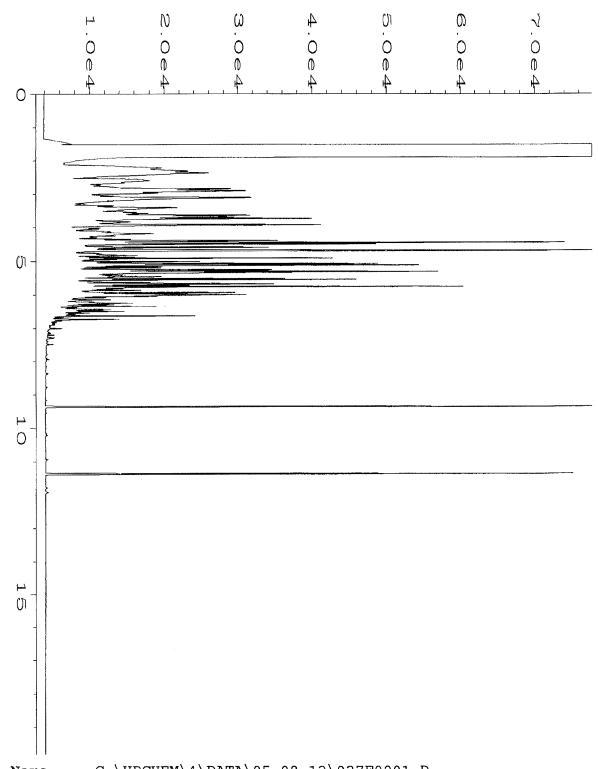
Acquired on : 09 May 12 02:11 AM Instrument Method: TPHD.MTH Report Created on: 10 May 12 10:27 AM Analysis Method : TPHD.MTH



```
Data File Name
                 : C:\HPCHEM\4\DATA\05-08-12\025F0701.D
                                               Page Number
Vial Number
Operator
                 : ML
Instrument
                 : GC#4
Sample Name
                 : 205047-30
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line : 7
Acquired on : 09 May 12 02:38 AM
                                                Instrument Method: TPHD.MTH
Report Created on: 10 May 12 10:27 AM
                                               Analysis Method : TPHD.MTH
```

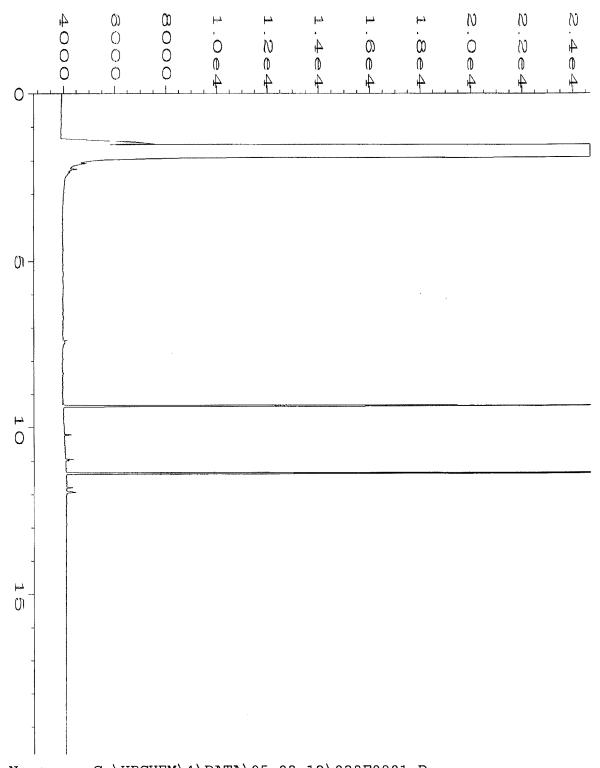


```
Data File Name
                 : C:\HPCHEM\4\DATA\05-08-12\026F0901.D
                                               Page Number
Operator
                 : ML
                                                                : 26
Instrument
                 : GC#4
                                               Vial Number
Sample Name
                 : 205047-32
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
                                                               : 9
Acquired on : 09 May 12
                             03:58 AM
                                               Instrument Method: TPHD.MTH
Report Created on: 10 May 12
                                               Analysis Method : TPHD.MTH
                             10:27 AM
```

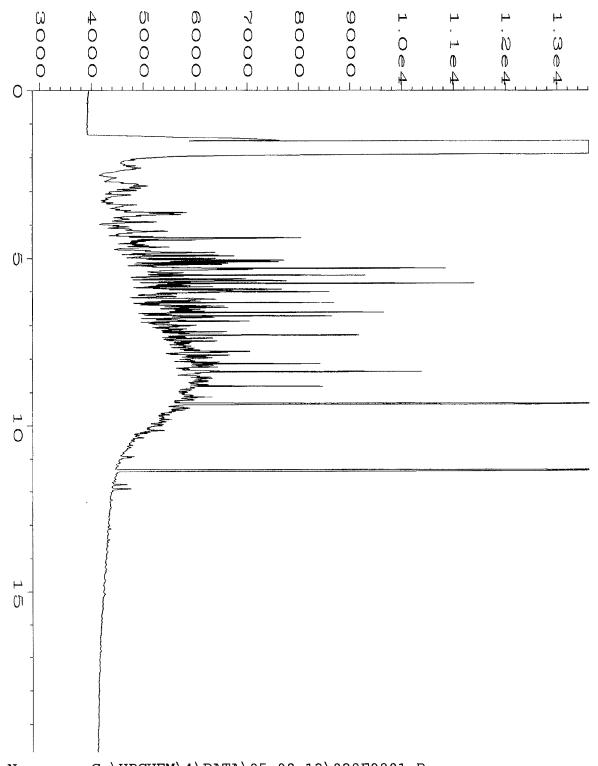


: C:\HPCHEM\4\DATA\05-08-12\027F0901.D Data File Name Operator : ML Page Number Instrument : GC#4 Vial Number : 27 Injection Number: 1 Sample Name : 205047-34 Run Time Bar Code: Sequence Line : 9 Acquired on : 09 May 12 Instrument Method: TPHD.MTH 04:25 AM

Report Created on: 10 May 12 Analysis Method : TPHD.MTH 10:27 AM

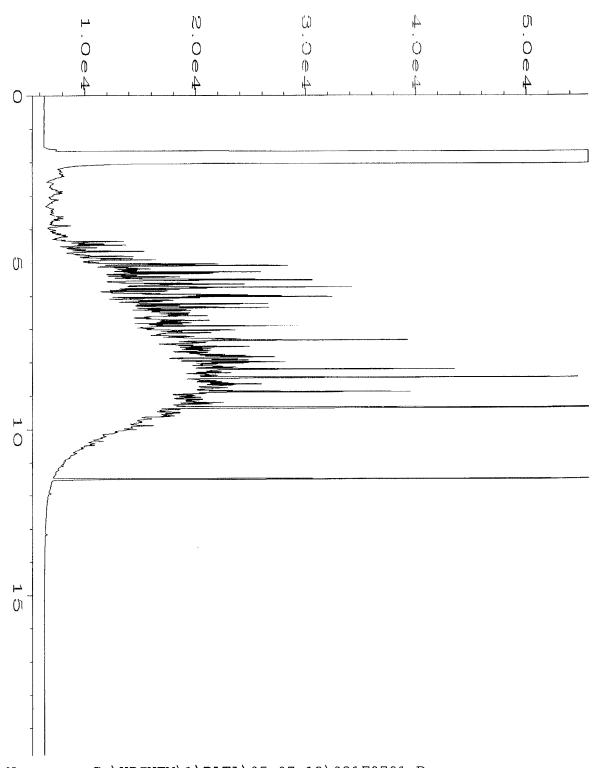


```
Data File Name : C:\HPCHEM\4\DATA\05-08-12\028F0901.D
                                              Page Number
Operator
                : ML
                                                              : 28
Instrument
                : GC#4
                                              Vial Number
                                              Injection Number: 1
Sample Name
                : 205047-36
Run Time Bar Code:
                                              Sequence Line : 9
Acquired on : 09 May 12 04:51 AM
                                              Instrument Method: TPHD.MTH
Report Created on: 10 May 12 10:28 AM
                                              Analysis Method : TPHD.MTH
```

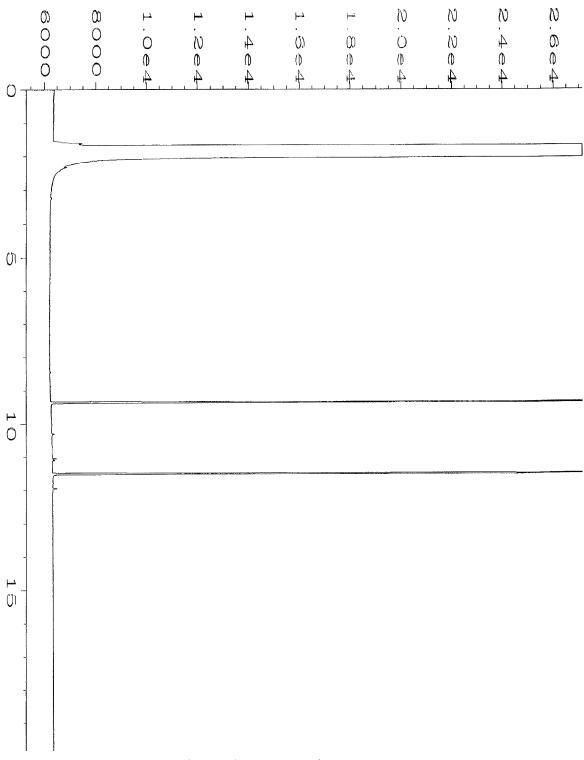


: C:\HPCHEM\4\DATA\05-08-12\029F0901.D Data File Name Page Number Operator : ML : 1 Instrument : GC#4 Vial Number : 29 Sample Name : 205047-37 Injection Number: 1 Run Time Bar Code: Sequence Line : 9 Acquired on : 09 May 12 Instrument Method: TPHD.MTH 05:18 AM

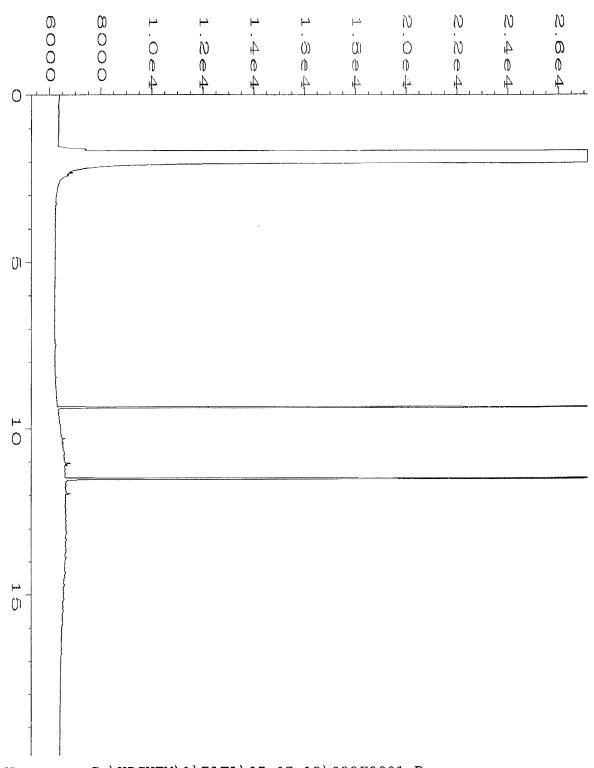
Analysis Method : TPHD.MTH Report Created on: 10 May 12 10:28 AM



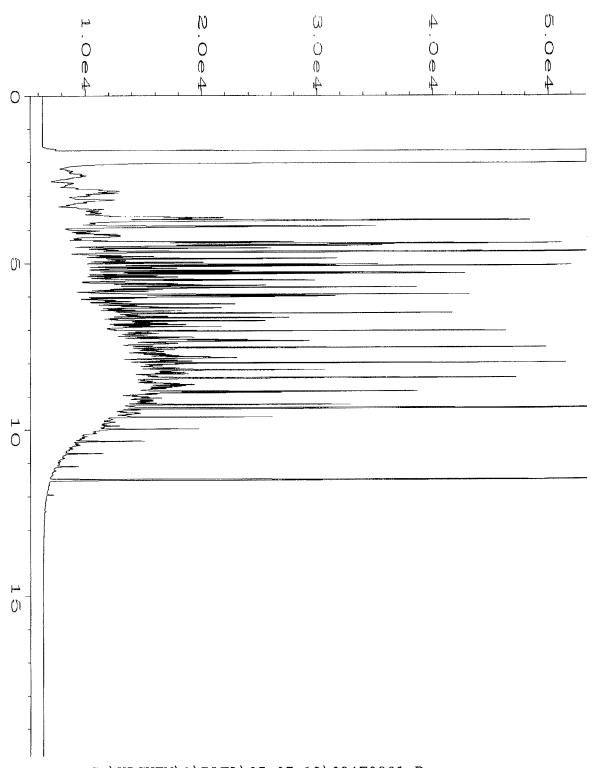
```
Data File Name
                 : C:\HPCHEM\1\DATA\05-07-12\021F0701.D
                                               Page Number
Operator
                 : ML
Instrument
                                               Vial Number
                                                                : 21
                 : GC1
                                               Injection Number : 1
Sample Name
                 : 205047-41
Run Time Bar Code:
                                               Sequence Line
                                                             : 7
                                               Instrument Method: TPHD.MTH
Acquired on : 07 May 12
                             09:17 PM
                                               Analysis Method : TPHD.MTH
Report Created on: 08 May 12
                             10:27 AM
```



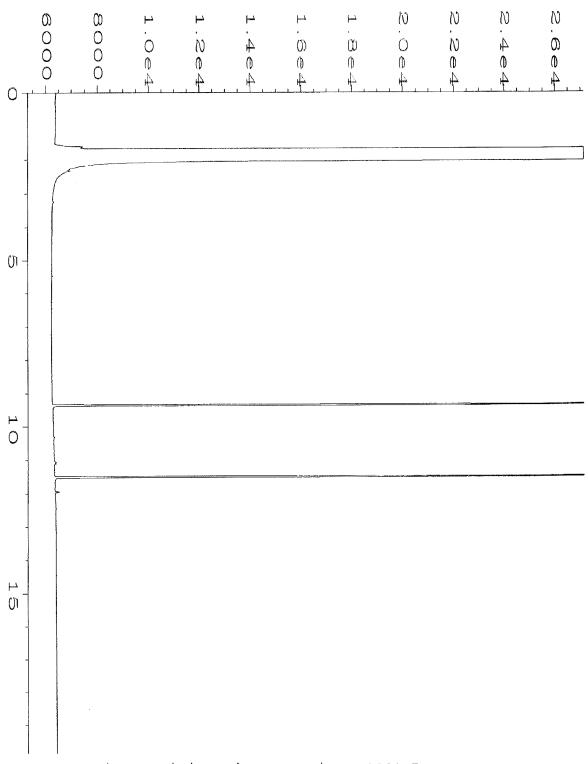
```
: C:\HPCHEM\1\DATA\05-07-12\022F0901.D
Data File Name
                                              Page Number
Operator
                : ML
                                              Vial Number
Instrument
                : GC1
                                              Injection Number: 1
                : 205047-42
Sample Name
                                              Sequence Line : 9
Run Time Bar Code:
                                              Instrument Method: TPHD.MTH
Acquired on : 07 May 12
                            10:42 PM
                                              Analysis Method : TPHD.MTH
Report Created on: 08 May 12 10:27 AM
```



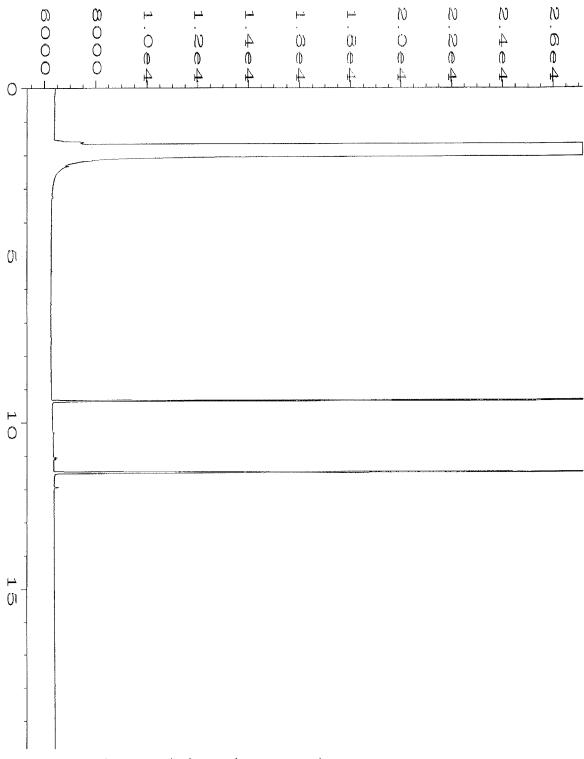
```
Data File Name
                   : C:\HPCHEM\1\DATA\05-07-12\023F0901.D
                                                     Page Number
                                                                       : 1
Operator
                   : ML
                                                     Vial Number
                                                                       : 23
Instrument
                   : GC1
                                                     Injection Number: 1
Sample Name
                   : 205047-43
                                                     Sequence Line
Run Time Bar Code:
                                                                       : 9
Acquired on : 07 May 12 11:10 PM Report Created on: 08 May 12 10:27 AM
                                                     Instrument Method: TPHD.MTH
                                                     Analysis Method : TPHD.MTH
```



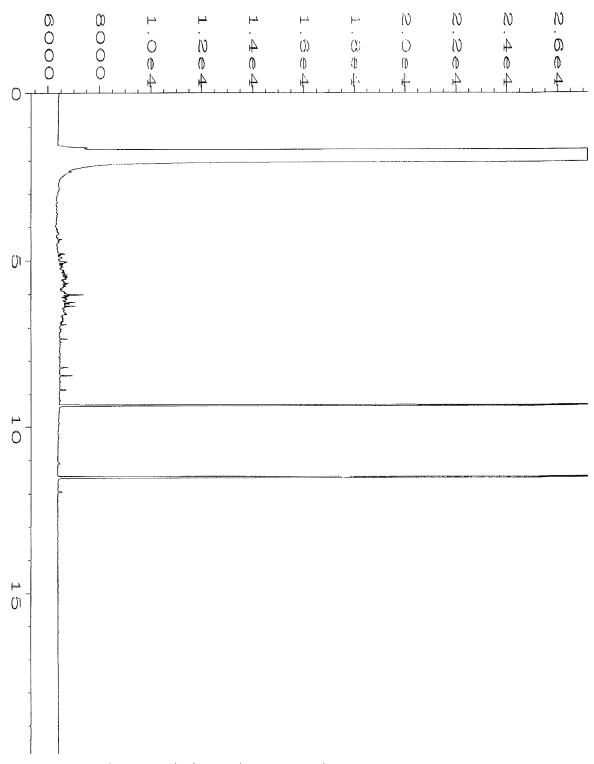
```
: C:\HPCHEM\1\DATA\05-07-12\024F0901.D
Data File Name
                                                Page Number
Vial Number
Operator
                 : ML
                                                                 : 24
Instrument
                 : GC1
                                                Injection Number: 1
Sample Name
                 : 205047-45
Run Time Bar Code:
                                                Sequence Line : 9
                                                Instrument Method: TPHD.MTH
Acquired on : 07 May 12
                              11:38 PM
                                                Analysis Method : TPHD.MTH
Report Created on: 08 May 12
                              10:27 AM
```



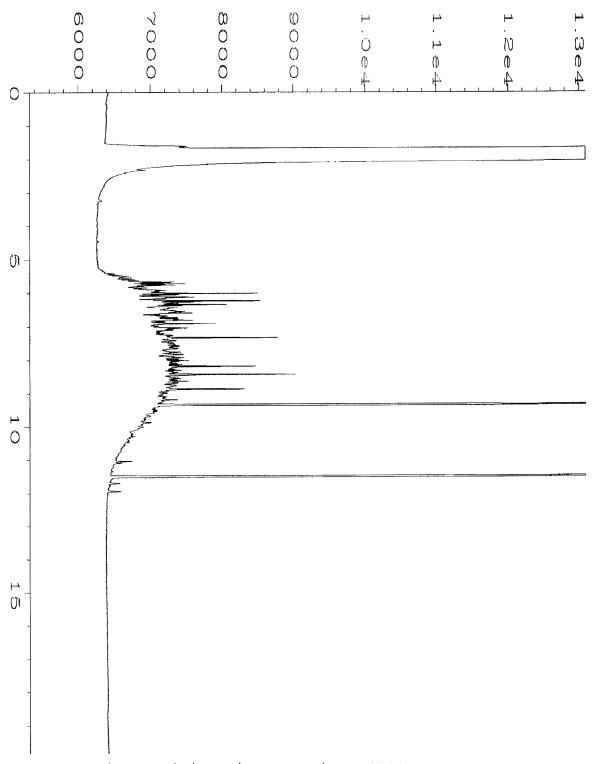
```
Data File Name
                 : C:\HPCHEM\1\DATA\05-07-12\025F0901.D
                 : ML
                                               Page Number
Operator
                                               Vial Number
                                                               : 25
Instrument
                 : GC1
                                               Injection Number: 1
                 : 205047-48
Sample Name
                                               Sequence Line
Run Time Bar Code:
                                                             : 9
                                               Instrument Method: TPHD.MTH
Acquired on : 08 May 12
                             00:07 AM
                                               Analysis Method : TPHD.MTH
Report Created on: 08 May 12
                             10:27 AM
```



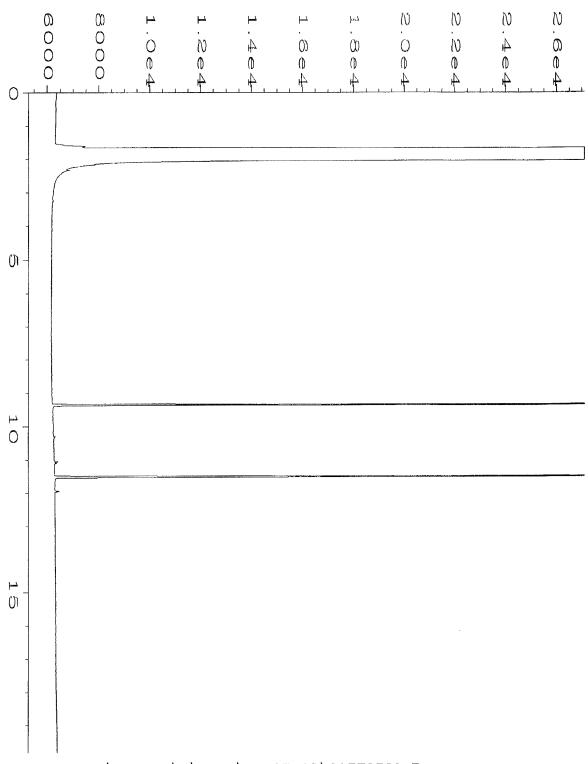
```
: C:\HPCHEM\1\DATA\05-07-12\026F0901.D
Data File Name
                                              Page Number
Operator
                : ML
                                              Vial Number
Instrument
                                                              : 26
                : GC1
                : 205047-51
                                              Injection Number: 1
Sample Name
                                              Sequence Line : 9
Run Time Bar Code:
Acquired on : 08 May 12 00:35 AM
                                              Instrument Method: TPHD.MTH
                                              Analysis Method : TPHD.MTH
Report Created on: 08 May 12 10:27 AM
```

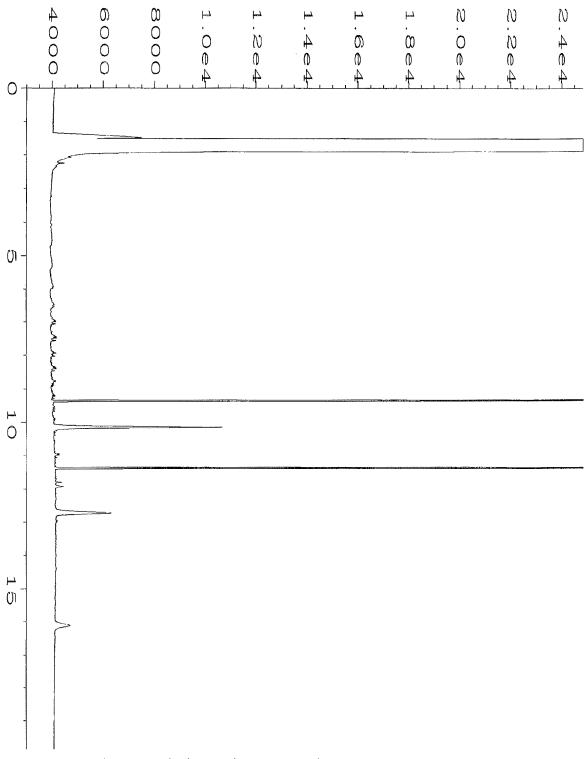


```
Data File Name
                 : C:\HPCHEM\1\DATA\05-07-12\027F0901.D
                 : ML
                                               Page Number
Operator
                                               Vial Number
Instrument
                                                               : 27
                 : GC1
Sample Name
                : 205047-52
                                               Injection Number : 1
Run Time Bar Code:
                                               Sequence Line : 9
                                               Instrument Method: TPHD.MTH
Acquired on : 08 May 12 01:03 AM
Report Created on: 08 May 12 10:27 AM
                                              Analysis Method : TPHD.MTH
```

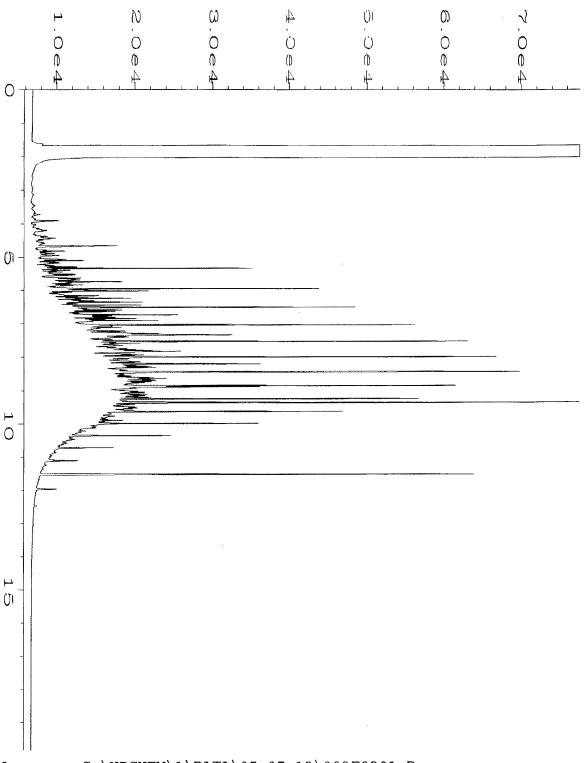


```
Data File Name
                 : C:\HPCHEM\1\DATA\05-07-12\028F0901.D
                                                 Page Number
Vial Number
Operator
                 : ML
                                                                  : 28
Instrument
                 : GC1
                                                 Injection Number: 1
Sample Name
                 : 205047-54
                                                               : 9
Run Time Bar Code:
                                                 Sequence Line
                                                 Instrument Method: TPHD.MTH
Acquired on : 08 May 12
                              01:31 AM
                                                 Analysis Method : TPHD.MTH
Report Created on: 08 May 12
                              10:27 AM
```





```
Data File Name : C:\HPCHEM\4\DATA\05-09-12\006F0401.D
Operator
                : ML
                                              Page Number
Instrument
                : GC#4
                                              Vial Number
                                                              : 6
Run Time Bar Code: 01-765 MR
                                              Injection Number: 1
                                              Sequence Line : 4
Acquired on : 09 May 12
                             02:58 PM
                                              Instrument Method: TPHD.MTH
Report Created on: 10 May 12
                            10:24 AM
                                              Analysis Method : TPHD.MTH
```



```
: C:\HPCHEM\1\DATA\05-07-12\003F0201.D
Data File Name
                                              Page Number
Operator
                : ML
                                              Vial Number
Instrument
                : GC1
Sample Name
                : 500 WADF 37-06B
                                              Injection Number: 1
                                              Sequence Line
Run Time Bar Code:
                                                           : 2
Acquired on : 07 May 12 09:10 AM
                                              Instrument Method: TPHD.MTH
Report Created on: 08 May 12 10:26 AM
                                              Analysis Method : TPHD.MTH
```

205047	SAMPLE CHAIN OF CUSTODY	HF 05-4	B05/V84
Send Report To Say Stanf	SAMPLERS (signature)		Page # of TURNAROUND TIME
Company SES Address 2811 Farver one E Sale 2000	PROJECT NAME/NO.	PO#	☑ Standard (2 Weeks) □ RUSH Rush charges authorized by:
City, State, ZIP South was 98102 Phone # 206-306-1900 Fax # 206-306-1907	REMARKS	GEMSY/ N	SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions
	<u>\$</u>	ANALYSES R	EQUESTED

			l						A		ANAI	YSE	SREC	UES	TED	
Sample ID	Sample Location	Sam ple Depth	ID .	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx/R	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
P01-04	Pol	04	01 A-E	5-2-12	0710	Spel	5									Hold
Po1-06		OL	02	j	D715	١	5	×	X							
1701-11		11	03		0720		5	X	X							
PO1-14		15	04		0730		5									FI J.X
P01-20		20	05		0745		_	X	X				,			
P01-24			06		: USOD		5				-					1-1.12
P02-04	POZ		07	4	. ۳8۱۶ <u>.</u>		5									. HUIJ
P02-08	}	08	08		0820		5	X	X							
P02-11			09		0352		5	×	X							
P02-16		7.1	10		UKLU		5									ا برنا
P02-20			.11		0835		5	X	V							
P02-24			12		0545		5	. 1	- 			一十				Fold
P03-01	P03	04	13		0905		5	X	Y		- 1					

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-Ph. (206) 285-8282 Fax (206) 283-5044

:	Signature	PRINT NAME	COMPANY	DATE	TIME
it	Relinquished by	Polet A. Herman	SES	5-3-12	1045
	Received by May Cow	Whan Phan	FEBI	5-3-12	1045
	Relinquished by:				
	Received by:				

FORMS\COC\SESCEMSR1.DOC (Revision 1)

Samples received at 2 °C

nd Report	To 5,7	2050			SAMPL	ERS <i>Isiona</i>	ture!	1/	7/1	1/-	<i></i>				Page #	Z	Bos of 5	
mpany_	SES	2			PROJE	CT NAME/	NO.			T	PO	#			ındard			
	-	er ove	E < 1	7		532°C					• •			□ RU Rush	SH charges authorized by:			
State 5	~ S.)	He wa		- 2008	REMAR	KS .				╁	-		-		SAMI	LE DI	SPOSAL	
		Fax			1 (4KMS Y /							☐ Dispose after 30 days ☐ Return samples ☐ Will call with instructions						
			T	1					-3-	.	ANAI	YSES	1 2 2 2				HI UCUATO	
ple ID	Sample Location			Date Sampled	Time Sampled	Matrix	# of jars	NW.TPH-Dx	हि	3TEX by 8021B			RCRA-8 Metals	T			Notes	
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- 1 \		1).	15	1	0915	1	5	X	X							;	· · · · · · · · · · · · · · · · · · ·	
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-20		20	17		0135		5									Hu	ノ	
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1-15		15	22		1020		5									H	ハク	
-20		20	2.3		1035		5									1	八人	
-24		24	24		انهم خ		5	×	7									
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an & Bn	ya, Inc.			NATURE		PR	NT NA	ME	·,	T		ОМР	ANY		D	ATE	TIME	
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WA 981	19-	Received by	nll	of lan		17/2-	\	37	in	1.		ELB	, 7			-12	1045	
5) 285- 8 :	82	Relinquishe	d by:	nau		Mai	<u>~</u>	VIC	~~~	+	 '			:	+	- 1	1013	
5) 283-5	044	Received by				· · · · · · · · · · · · · · · · · · ·			 	-	* 2				<u> </u>			

Send Report	To_	174	Stand	F .			SAM	LERS	Isigno	ture)	4	= 1/	I. L	<u> </u>]	Page # _	3	05/V _or_5
ompany_	PC	7	>		*****		PRO	ECT N	AME/	NO.			1	PO	. #	\dashv		mqaiq (MXML		D TIME bal
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ddress 28	11.5	<u> </u>	- Eve	<u> </u>	.12	2000											Rush			
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City, State, ZIP South WA 98102	REMARKS		SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907		GEMSY/ N	Return samples Will call with instructions
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2000 2010 285-8282

7h. (206) 285-8282 Relinquisher

7ax (206) 283-5044 Received by:

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. 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 e-mail: fbi@isomedia.com

May 22, 2012

Suzy Stumpf, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Stumpf:

Included are the additional results from the testing of material submitted on May 3, 2012 from the SOU_0320_20120503, F&BI 205047 project. There are 7 pages included in this report.

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 SOU0522R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 3, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0320_20120503, F&BI 205047 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
205047-01	P01-04
205047-02	P01-06
205047-03	P01-11
205047-04	P01-14
205047-05	P01-20
205047-06	P01-24
205047-07	P02-04
205047-08	P02-08
205047-09	P02-11
205047-10	P02-16
205047-11	P02-20
205047-12	P02-24
205047-13	P03-04
205047-14	P03-08
205047-15	P03-11
205047-16	P03-15
205047-17	P03-20
205047-18	P03-24
205047-19	P04-04
205047-20	P04-08
205047-21	P04-11
205047-22	P04-15
205047-23	P04-20
205047-24	P04-24
205047-25	P05-04
205047-26	P05-08
205047-27	P05-11
205047-28	P05-15
205047-29	P05-20
205047-30	P05-24
205047-31	P06-04
205047-32	P06-07
205047-33	P06-11
205047-34	P06-14
205047-35	P06-19

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE (continued)

<u>Laboratory ID</u>	SoundEarth Strategies
205047-36	P06-24
205047-37	P07-04
205047-38	P07-08
205047-39	P07-11
205047-40	P07-14
205047-41	P07-20
205047-42	P07-24
205047-43	P08-08
205047-44	P08-11
205047-45	P08-14
205047-46	P08-16
205047-47	P08-19
205047-48	P08-28
205047-49	P09-03
205047-50	P09-08
205047-51	P09-12
205047-52	P09-15
205047-53	P09-20
205047-54	P09-24

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/22/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/16/12 Date Analyzed: 05/16/12

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	Benzene	<u>Toluene</u>	Ethyl Benzene	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
P03-20 205047-17	< 0.02	<0.02	<0.02	<0.06	<2	92
P06-19 205047-35	< 0.02	< 0.02	< 0.02	<0.06	<2	94
P08-19 205047-47	0.035	< 0.02	< 0.02	<0.06	7.5	93
Method Blank 02-0846 MB	< 0.02	< 0.02	< 0.02	<0.06	<2	91

ENVIRONMENTAL CHEMISTS

Date of Report: 05/22/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

Date Extracted: 05/15/12 Date Analyzed: 05/16/12

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	$rac{ ext{Diesel Range}}{ ext{(C}_{10} ext{-C}_{25})}$	$rac{ ext{Motor Oil Range}}{ ext{(C}_{25} ext{-C}_{36} ext{)}}$	Surrogate (% Recovery) (Limit 53-144)
P03-20. 205047-17	<50	<250	111
P06-19 205047-35	<50	<250	111
P08-19 205047-47	<50	<250	109
Method Blank 02-840 MB	<50	<250	109

ENVIRONMENTAL CHEMISTS

Date of Report: 05/22/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

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: 205047-35 (Duplicate)

·	` •	(Wet Wt) Sample	(Wet Wt) Duplicate	Relative Percent Difference
Analyte	Reporting Units	Result	Result	(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

Laboratory Code: Laboratory Control Sample

			Percent	
		Spike	Recovery	Acceptance
Analyte	Reporting Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	81	66-121
Toluene	mg/kg (ppm)	0.5	86	72 - 128
Ethylbenzene	mg/kg (ppm)	0.5	85	69-132
Xylenes	mg/kg (ppm)	1.5	87	69-131
Gasoline	mg/kg (ppm)	20	95	61 - 153

ENVIRONMENTAL CHEMISTS

Date of Report: 05/22/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205047

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

Laboratory Code: 205205-01 (Matrix Spike)

·			(Wet wt)	Percent	$\mathbf{Percent}$		
	Reporting	Spike	Sample	Recovery	Recovery MSD	Acceptance	RPD
Analyte	Units	Level	Result	MS		Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	94	93	64-133	1

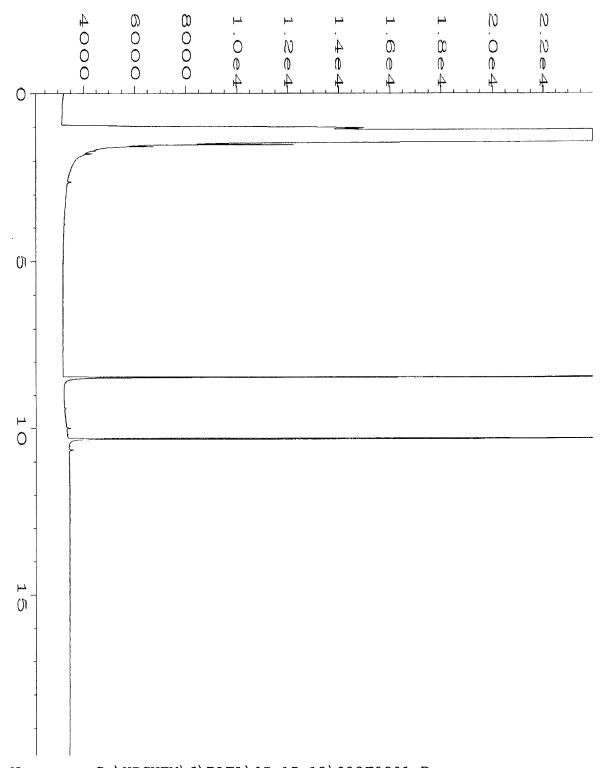
Laboratory Code: Laboratory Control Sample

			$\mathbf{Percent}$	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	58-147

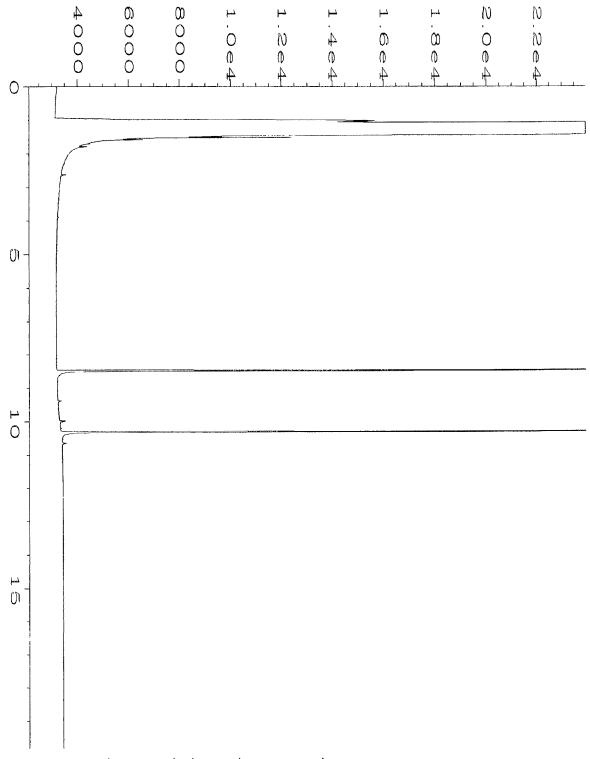
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

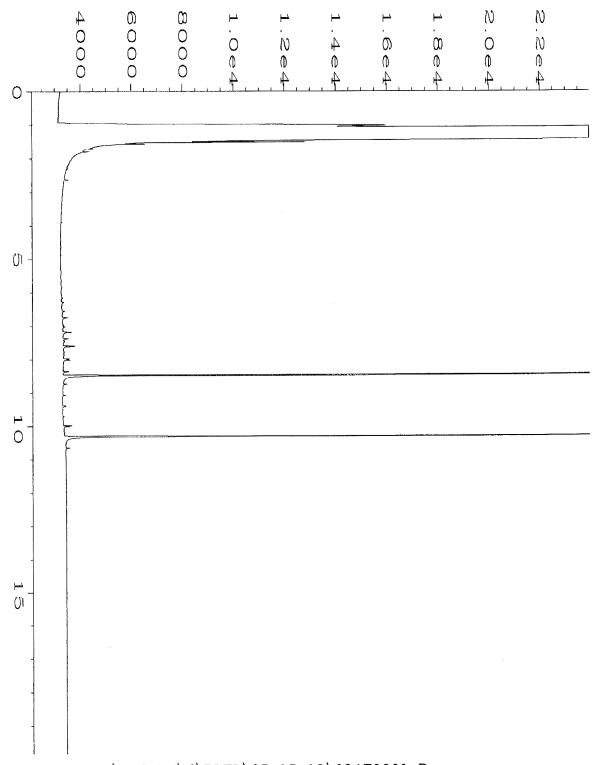
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level 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.
- dy 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.
- i 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.



Acquired on : 16 May 12 03:36 AM Instrument Method: TPHD.MTH
Report Created on: 16 May 12 09:30 AM Analysis Method : BAKEOUT.MTH

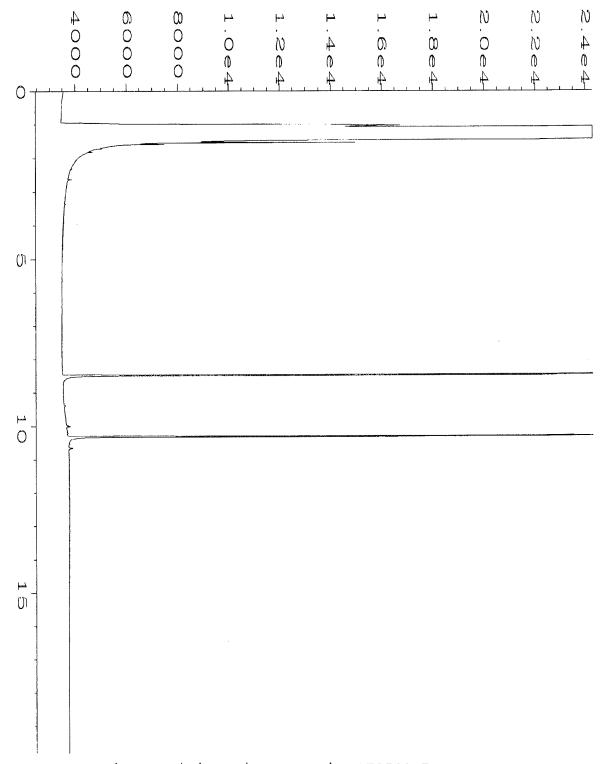


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Data File Name
                : C:\HPCHEM\6\DATA\05-15-12\033F0901.D
Operator
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                : mwdl
                                              Vial Number
Instrument
                : GC #6
                                              Injection Number: 1
Sample Name
                : 205047-35
Run Time Bar Code:
                                              Sequence Line
                                                               : 9
Acquired on : 16 May 12 04:02 AM
                                              Instrument Method: TPHD.MTH
Report Created on: 16 May 12 09:31 AM
                                              Analysis Method : BAKEOUT.MTH
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Operator
                 : mwdl
Instrument
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                                               Vial Number
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                                                Injection Number: 1
                : 205047-47
Sample Name
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Run Time Bar Code:
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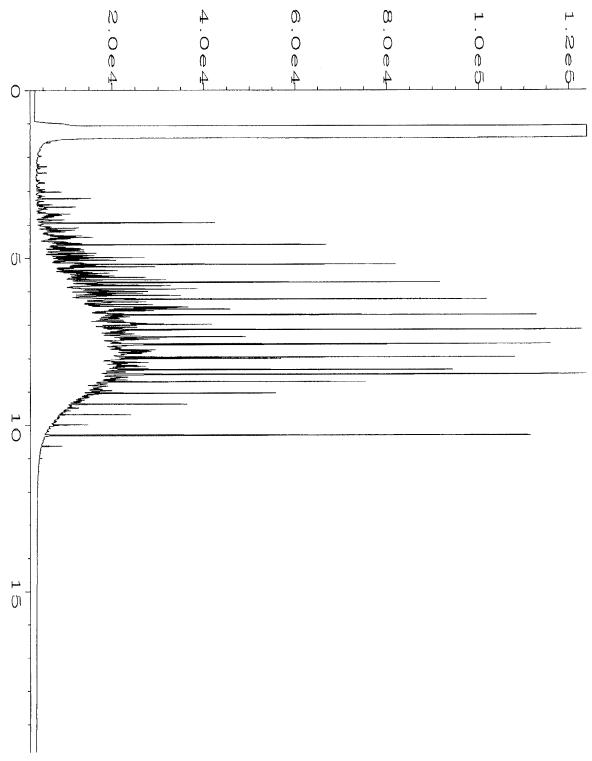
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Report Created on: 16 May 12 09:31 AM Analysis Method : BAKEOUT.MTH



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                                              Analysis Method : BAKEOUT.MTH
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09:30 AM

Report Created on: 16 May 12



Acquired on : 15 May 12 09:48 AM Instrument Method: TPHD.MTH
Report Created on: 16 May 12 09:30 AM Analysis Method : BAKEOUT.MTH

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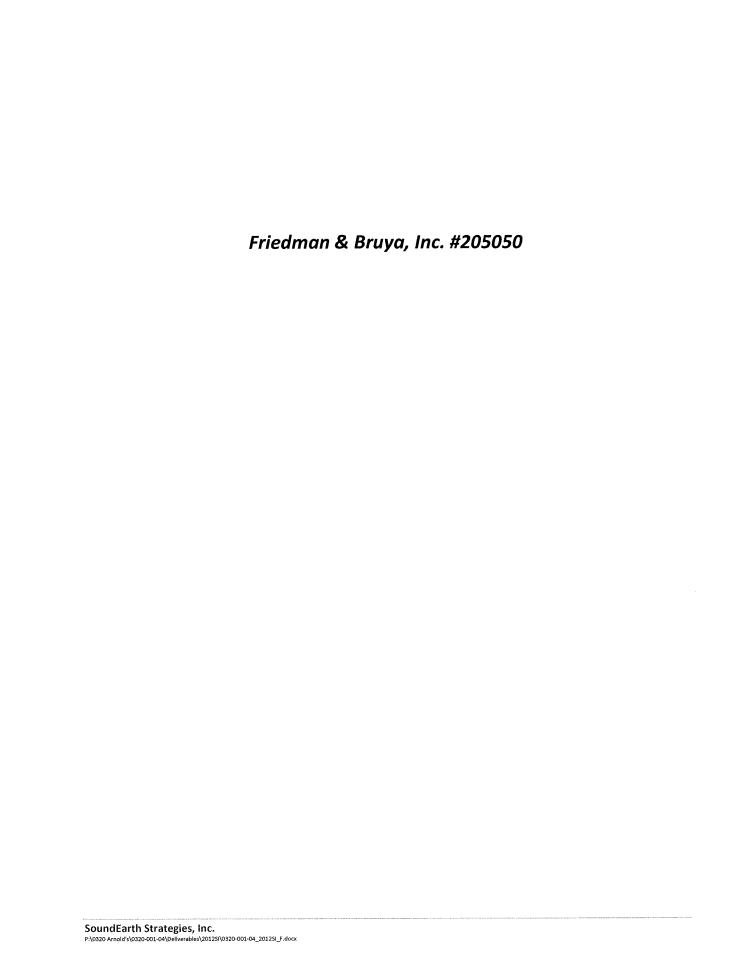
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. 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 e-mail: fbi@isomedia.com

May 10, 2012

Suzy Stumpf, Project Manager SoundEarth Strategies 2811 Fairview Ave. East, Suite 2000 Seattle, WA 98102

Dear Ms. Stumpf:

Included are the results from the testing of material submitted on May 3, 2012 from the SOU_0320_20120503, F&BI 205050 project. There are 7 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 SOU0510R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 3, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0320_20120503, F&BI 205050 project. Samples were logged in under the laboratory ID's listed below.

 $\begin{array}{cc} \underline{\text{Laboratory ID}} & \underline{\text{SoundEarth Strategies}} \\ 205050\text{-}01 & \underline{\text{Composite-20120502}} \end{array}$

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Composite-20120502	Client:	SoundEarth Strategies
Date Received:	05/03/12	Project:	SOU_0320_20120503, F&BI 205050
Date Extracted: Date Analyzed:	05/04/12	Lab ID:	205050-01
	05/04/12	Data File:	205050-01.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	96	60	125
Indium	95	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	13.9
Arsenic	1.51
Selenium	<1
Silver	<1
Cadmium	<1
Barium	42.6
Lead	4.32

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blank Not Applicable 05/04/12 05/04/12 Soil mg/kg (ppm)	Client: Project: Lab ID: Data File: Instrument: Operator:	SoundEarth Strategies SOU_0320_20120503, F&BI 205050 I2-288 mb I2-288 mb.015 ICPMS1 AP
Units:	mg/kg (ppm)	Operator:	AP

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	89	60	125
Indium	93	60	125
Holmium	93	60	125

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

ENVIRONMENTAL CHEMISTS

Date of Report: 05/10/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205050

Date Extracted: 05/04/12 Date Analyzed: 05/07/12

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
Composite-20120502 205050-01	<0.1
Method Blank	<0.1

ENVIRONMENTAL CHEMISTS

Date of Report: 05/10/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205050

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

Laboratory Code: 205050-01 (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	13.9	99 b	97 b	63-120	2 b
Arsenic	mg/kg (ppm)	10	1.51	99	98	56-125	1
Selenium	mg/kg (ppm)	5	<1	93	93	64-118	0
Silver	mg/kg (ppm)	10	<1	102	101	83-112	1
Cadmium	mg/kg (ppm)	10	<1	105	103	85-117	2
Barium	mg/kg (ppm)	50	42.6	111 b	121 b	65-132	9 b
Lead	mg/kg (ppm)	50	4.32	99	98	64-139	1

Laboratory Code: Laboratory Control Sample

	Percent								
		\mathbf{Spike}	Recovery	Acceptance					
Analyte	Reporting Units	Level	LCS	Criteria					
Chromium	mg/kg (ppm)	50	102	81-117					
Arsenic	mg/kg (ppm)	10	96	79 - 112					
Selenium	mg/kg (ppm)	5	99	83-113					
Silver	mg/kg (ppm)	10	100	85-113					
Cadmium	mg/kg (ppm)	10	10 3	88-114					
Barium	mg/kg (ppm)	50	101	87-113					
Lead	mg/kg (ppm)	50	101	83-118					

ENVIRONMENTAL CHEMISTS

Date of Report: 05/10/12 Date Received: 05/03/12

Project: SOU_0320_20120503, F&BI 205050

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

Laboratory Code: 205050-01 (Matrix Spike)

				Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)_
Mercury	mg/kg (ppm)	0.125	< 0.1	90	103	54-156	13

Laboratory Code: Laboratory Control Sample

			$\operatorname{Percent}$		
	Reporting Units	Spike	Recovery	Acceptance	
Analyte		Level	LCS	Criteria	
Mercury	mg/kg (ppm)	0.125	101	73-131	

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.
- ${
 m jr}$ 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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