
SUBSURFACE INVESTIGATION REPORT

BULK TERMINAL PROPERTY SOUTHERN PROPERTY LINE



Property:

Bulk Terminal Property
2737 West Commodore Way
Seattle, Washington

Prepared for:

TOC Holdings Co.
2737 West Commodore Way
Seattle, Washington

Report Date:

August 3, 2015

Subsurface Investigation Report Bulk Terminal Property Southern Property Line

Prepared for:


TOC Holdings Co.

2737 West Commodore Way
Seattle, Washington

Bulk Terminal Property
2737 West Commodore Way
Seattle, Washington


Project No.: 0440-004-37

Prepared by:

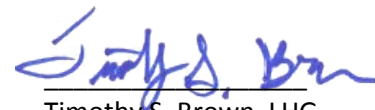


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	<i>Friedman & Bruya, Inc. #503484</i>
	<i>Friedman & Bruya, Inc. #503511</i>
	<i>Friedman & Bruya, Inc. #503539</i>
	<i>Friedman & Bruya, Inc. #504330</i>

ACRONYMS AND ABBREVIATIONS

AST	aboveground storage tank
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
Bulk Terminal Property	located at 2737 West Commodore Way, and encompasses King County Tax Parcel No. 112503-9050
DNR	Washington State Department of Natural Resources
DRPH	diesel-range petroleum hydrocarbons
EPA	U.S. Environmental Protection Agency
GRPH	gasoline-range petroleum hydrocarbons
MTCA	Washington State Model Toxics Control Act
NWTPH	Northwest Total Petroleum Hydrocarbon
ORPH	oil-range petroleum hydrocarbons
PCP	pentachlorophenol
PID	photoionization detector
PVC	polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
SoundEarth	SoundEarth Strategies, Inc.
TPH	total petroleum hydrocarbons
WAC	Washington Administrative Code

Subsurface Investigation Report

Bulk Terminal Property Southern Property Line

1.0 INTRODUCTION

SoundEarth Strategies, Inc. (SoundEarth) has prepared this report on behalf of TOC Holdings Co. to document the results of the subsurface investigation performed along the southern property line of the Bulk Terminal Property. The Bulk Terminal Property is located at 2737 West Commodore Way in Seattle, Washington (Figure 1).

The Bulk Terminal Property is part of the Seattle Terminal Properties. The Seattle Terminal Properties include four real properties (King County Tax Parcel Numbers 112503-9050 [Bulk Terminal Property], 112503-9120 [East Waterfront Property], 423790-0405 [ASKO Hydraulic Property], and 112503-9081 [West Waterfront Property]) and one parcel leased from the Washington State Department of Natural Resources (DNR; King County Tax Parcel Number 112503-9113). The Seattle Terminal Properties are identified as the Bulk Terminal Property, East Waterfront Property, ASKO Hydraulic Property, West Waterfront Property, and the DNR Aquatic Lease Land Property.

TOC Holdings Co. operated a petroleum bulk storage facility at the Bulk Terminal Property between 1941 and October 2001. Former features used at the Bulk Terminal Property as part of the petroleum bulk storage facility included aboveground storage tank (AST) yards, which included 14 former ASTs and associated piping located on the central and east portion of the parcel; a barreling shed located on the west portion of the parcel; a barreling shed located on the southwest portion of the parcel extending onto the ASKO Hydraulic Property; two overhead loading racks on the north portion of the parcel; the southern ends of two barrel inclines; and an underground pipeline utilidor, which extended north beneath the West Commodore Way right-of-way to the East Waterfront Property. The 14 former ASTs and associated infrastructure were removed in 2006, and the Bulk Terminal Property is currently occupied with an office building, marine retail, and warehouse space (Figure 2).

Previous subsurface investigations, interim remedial actions, and groundwater monitoring events conducted at the Bulk Terminal Property and within the West Commodore Way right-of-way indicated that pentachlorophenol (PCP) and total petroleum hydrocarbons (TPH) were detected in soil and groundwater, and polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans were detected in soil at concentrations exceeding the Washington State Model Toxics Control Act (MTCA) Cleanup Regulation cleanup levels, as established in Chapter 340 of Title 173 of the Washington Administrative Code (WAC 173-340).

Concentrations of diesel-range petroleum hydrocarbons (DRPH) and PCP were detected at concentrations exceeding the current applicable MTCA cleanup levels in groundwater samples collected from monitoring well 01MW17 in July 2001 and October 2001, respectively. Groundwater sample results for DRPH from October 2001 through April 2014 indicate that concentrations of DRPH do not exceed the applicable MTCA cleanup level, and groundwater sample results for PCP from January 2002 through April 2010 indicate that the concentrations of PCP do not exceed the applicable MTCA cleanup level. A detailed summary of remedial investigations and interim remedial actions performed at the Bulk Terminal Property is provided in the Remedial Investigation Report, dated June 13, 2014.

The subsurface investigation was performed in general accordance with SoundEarth's proposal dated January 20, 2015. This report describes the field activities performed during the subsurface

investigation, summarizes the observed soil conditions and analytical results reported by the laboratory, and provides conclusions.

1.1 PURPOSE

The purpose of the subsurface investigation was to assess the soil conditions along the southern property line in accessible areas at the Bulk Terminal Property, and to delineate the lateral and vertical extent of TPH in soil detected in the southeast corner of the Bulk Terminal Property in soil boring SB-22, between 5 and 10 feet below ground surface (bgs).

In addition, the subsurface investigation was performed to assess the groundwater conditions upgradient of monitoring well 01MW17. Groundwater samples collected from monitoring well 01MW17 (located at the southeast corner of the Bulk Terminal Property) had detectable concentrations of DRPH and PCP exceeding the applicable MTCA cleanup levels in 2001.

2.0 SUBSURFACE INVESTIGATION

Field activities for the subsurface investigation were conducted from March 25 through March 27, 2015, and April 17, 2015. Cascade Drilling, L.P. of Woodinville, Washington, performed the drilling and well installation activities using a limited-access, hollow-stem auger drill rig. Drilling and well installation activities were observed by a SoundEarth geologist. The scope of work associated with the subsurface investigation included the following:

- Performing a utility locate at the proposed boring locations using Bravo Environmental of Tukwila, Washington, and contacting the Northwest Utility Notification Center.
- Preparing a health and safety plan in accordance with MTCA and Part 1910.120 of Title 29 of the Code of Federal Regulations before initiating field activities.
- Preparing a work plan summary outlining specific field activities to be completed.
- Obtaining a City of Seattle street use permit.
- Advancing seven hollow-stem auger borings (B357 through B363) and installing monitoring wells 01MW99 and 01MW100 in borings B357 and B358, respectively.
- Submitting select soil samples collected from each boring for laboratory analysis.
- Conducting a baseline groundwater monitoring event for monitoring wells 01MW99 and 01MW100 and submitting groundwater samples for laboratory analysis.
- Surveying the elevation of the top of casing or boring to an established benchmark for borings B357/01MW99, B358/01MW100, and B359 through B363.
- Assisting client with management of generated waste from subsurface investigation activities.

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

2.1 SOIL SAMPLE COLLECTION

Borings B357 through B363 were sampled at 2.5-foot intervals to the maximum depths advanced ranging from 25.5 to 35.5 feet bgs using a California split-spoon sampler advanced 18 inches through hollow-stem augers with a 140-pound hammer. Blow counts and sample recovery percentages were logged at each sample interval (Appendix A). The borings were advanced at the following locations (Figure 2):

- Borings B357/01MW99 and B358/01MW100 were installed off property in the City of Seattle easement, approximately 20 feet south and directly upgradient, relative to monitoring well 01MW17 and boring SB-22.
- Boring B359 was advanced off property in the City of Seattle easement, adjacent to the east of the southeastern corner of the Bulk Terminal Property.
- Borings B360 and B361 were advanced approximately 95 feet apart just inside the southeastern Bulk Terminal Property boundary.
- Borings B362 and B363 were advanced approximately 85 feet apart just inside the southwestern Bulk Terminal Property boundary.

The soil samples were described in accordance with SoundEarth's *Standard Operating Procedure 005 – Soil Sampling*. Soil samples were screened in the field for potential evidence of 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. 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 Unified Soil Classification System symbol, visual and olfactory notations for the samples, and PID readings were recorded on boring log forms, which are provided in Appendix A.

Soil samples collected from borings B357 through B363 were transferred directly into laboratory-prepared sample containers. Soil samples to be analyzed for low-level volatile organic compounds were collected in accordance with U.S. Environmental Protection Agency (EPA) Method 5035A. Additional soil samples were collected using 4-ounce jars. Sample containers were labeled with unique sample identification and placed into an iced cooler. The soil samples were submitted to Friedman & Bruya, Inc. of Seattle, Washington, under standard chain-of-custody protocols for laboratory analysis. Three to four soil samples per boring were analyzed for DRPH and oil-range petroleum hydrocarbons (ORPH) by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Dx; gasoline-range petroleum hydrocarbons (GRPH) by Method NWTPH-Gx; benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B; and trace-level PCP by EPA Method 8270D SIM.

2.2 MONITORING WELL INSTALLATION AND DEVELOPMENT

Borings B357 and B358 were completed as monitoring wells 01MW99 and 01MW100. Monitoring wells 01MW99 and 01MW100 were screened from approximately 20 to 30 feet below the top of the casing, within the shallow water-bearing zone. The monitoring wells were constructed of 2-inch-diameter blank polyvinyl chloride (PVC) casing, flush-threaded to 0.010-inch slotted well screen. The bottom and top of each well were fitted with a threaded PVC bottom cap and a locking compression-fit well cap. The

annulus of each monitoring well was filled with #2/12 silica sand to approximately 1 foot above the top of the screened interval. A bentonite seal having a minimum thickness of 3 feet was installed above the sand pack. The wells were completed at the surface with a flush-mounted, traffic-rated well box set in concrete.

The monitoring wells were developed with a submersible pump and in accordance with SoundEarth's *Standard Operating Procedure 010 – Monitoring Well Development*. Monitoring well development consisted of surging the monitoring wells using a surge block and purging groundwater until a minimum of five submerged well volumes was removed. Following well installation, the boring and monitoring well locations and elevations were surveyed by Axis Survey and Mapping Consulting Engineers of Kirkland, Washington. The monitoring well top of casings and top of monument were surveyed to an accuracy of 0.01- to 0.02-foot, using a North American Vertical Datum 1988 benchmark.

2.3 GROUNDWATER MONITORING EVENT

A baseline groundwater monitoring event was conducted on April 17, 2015. The groundwater monitoring event was performed in accordance with SoundEarth's *Standard Operating Procedure 007 – Groundwater Sampling*. Depth-to-fluid measurements and groundwater samples were collected from monitoring wells 01MW99 and 01MW100. Fluid levels were measured to an accuracy of 0.01 feet relative to the top of each well casing using an oil/water interface probe.

Purging and sampling of monitoring wells 01MW99 and 01MW100 were performed using a peristaltic pump and dedicated polyethylene tubing at a rate of 180 milliliters per minute. The tubing intake was placed approximately 2 to 3 feet below the water table in each monitoring well. During purging, water quality was monitored using a water quality system equipped with a flow-through cell. A separate turbidimeter was utilized for turbidity readings. The water quality parameters monitored and recorded included temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container was labeled with unique sample identification, placed on ice in a cooler, and transported to the laboratory under standard chain-of-custody protocols for laboratory analysis. The groundwater samples were analyzed for DRPH and ORPH by Method NWTPH-Dx, GRPH by Method NWTPH-Gx, BTEX by EPA Method 8021B, trace-level PCP by EPA Method 8270D, and total and dissolved Resource Conservation and Recovery Act (RCRA) 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) by EPA Method 200.8.

2.4 WASTE MANAGEMENT

Soil cuttings generated during the subsurface investigation were stored in a U.S. Department of Transportation-approved vessel and placed into a temporary accumulation area on the Bulk Terminal Property in accordance with WAC 173-303. A waste profile is currently being created for the generated soil based on current and historical soil sample analytical results collected in the same area of the Bulk Terminal Property. If the generated soil is classified as hazardous waste, it will be transported and disposed of at a permitted treatment, storage, and disposal facility.

Purge water generated during the groundwater monitoring and well development activities was placed into the groundwater pretreatment system located on the Bulk Terminal Property. Water will be treated and discharged to the sanitary sewer system in accordance with the King County Industrial Waste Discharge Permit No. 7689-07.

3.0 RESULTS

This section summarizes the soil profile observed during soil sampling activities and the results of soil and groundwater samples analyzed for this subsurface investigation. Soil analytical results are presented on Figures 3A and 3B and in Table 1. Groundwater analytical results are presented on Figures 4A and 4B, and in Tables 2 and 3. Laboratory reports for the soil and groundwater samples analyzed as part of the subsurface investigation are included as Appendix B.

3.1 SOIL

Soil observed in the soil samples collected from the seven borings had a similar soil profile consisting of an upper silty sand/sandy silt layer ranging from ground surface to 5 to 10 feet bgs; underlain by a silt or clay layer ranging from 5 to 20 feet bgs; underlain by silty sand/sandy silt to the maximum depth advanced of 35.5 feet bgs. Boring B363, the northwesternmost boring, had the most variation in thickness and frequency of layers of silty sand and silt/clay, with a sand layer encountered at 25 feet bgs. No hydrocarbon odor was observed during drilling activities, with the exception of a faint hydrocarbon odor in the soil sample (B363-02.5), collected at 2.5 feet bgs in boring B363.

A total of 24 soil samples, collected between 2.5 to 22.5 feet bgs, were selected for laboratory analysis for DRPH, ORPH, GRPH, BTEX, and PCP. One soil sample (B362-02.5) collected from boring B362 at 2.5 feet bgs had detected concentrations of DRPH and ORPH, but the concentrations were below the MTCA Method A cleanup levels. Concentrations of GRPH, BTEX, and PCP were not detected in soil sample B362-02.5. The remaining 23 soil samples analyzed for DRPH, ORPH, GRPH, BTEX, and PCP were non-detect and below the applicable MTCA cleanup levels.

3.2 GROUNDWATER

Groundwater was encountered at depths between 15 and 25 feet bgs in the borings during drilling activities, with the exception of boring B363 where no measurable groundwater was observed. Groundwater was measured in monitoring wells 01MW99 and 01MW100 at 24.35 and 22.07 feet below the top of the monitoring well casing, respectively.

Groundwater samples were selected for laboratory analysis for DRPH, ORPH, GRPH, BTEX, PCP, and the RCRA 8 metals. The groundwater sample results indicated the following:

- Concentrations of DRPH, total and dissolved arsenic (well 01MW99 only), and total and dissolved barium were detected in the groundwater samples collected from monitoring wells 01MW99 and 01MW100, but the concentrations of DRPH, arsenic, and barium were below the applicable MTCA cleanup levels.
- Concentrations of total chromium were detected in the groundwater sample collected from monitoring well 01MW100, but were below the applicable MTCA Method A cleanup level.

- Concentrations of ORPH, GRPH, BTEX, PCP, and the other RCRA 8 metals analyzed were non-detect in the groundwater samples collected from wells 01MW99 and 01MW100, and the laboratory reporting limits were below the applicable MTCA cleanup levels.

4.0 CONCLUSIONS

The results from the subsurface investigation and historical subsurface investigations indicate the following:

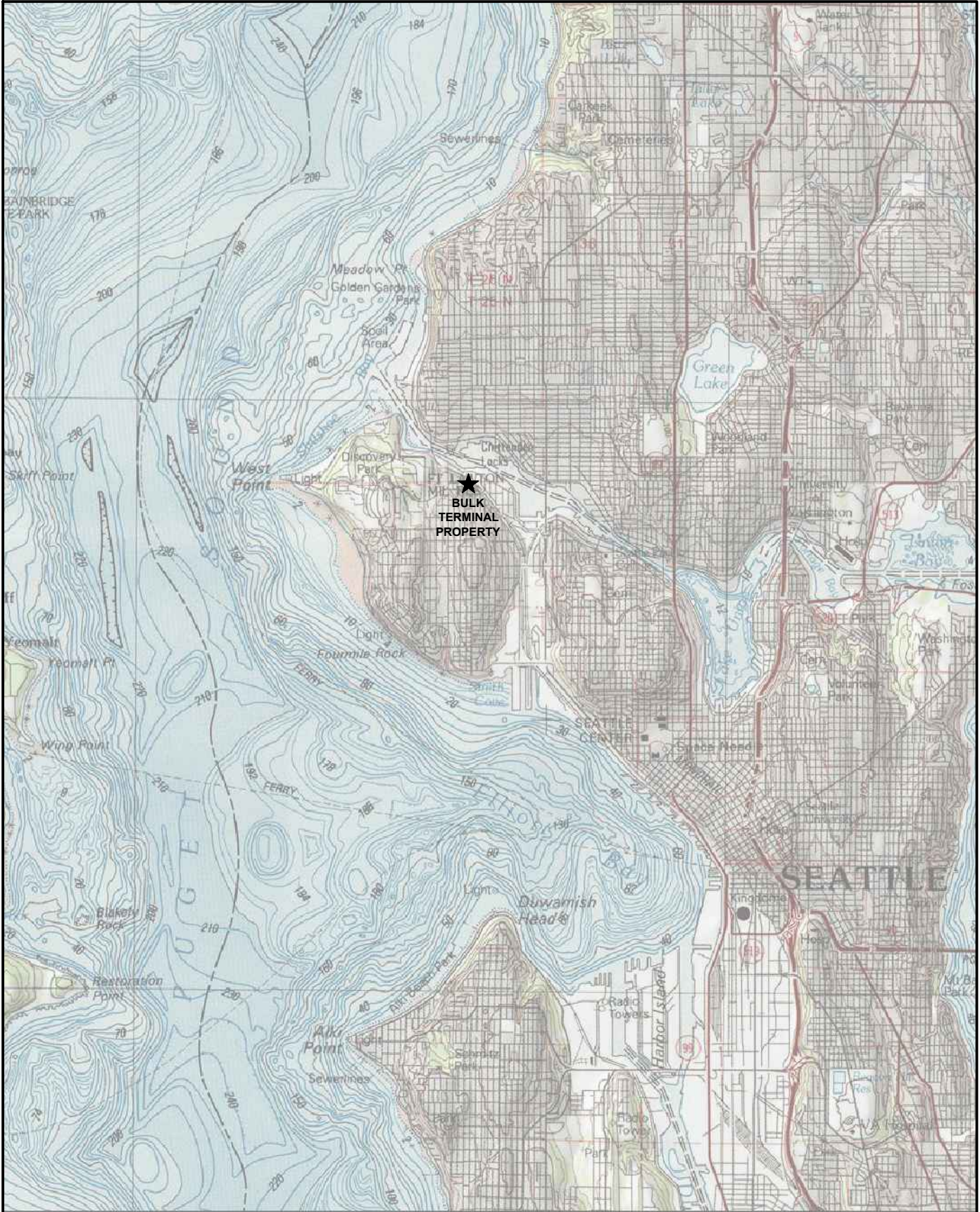
- The extent of TPH, including DRPH concentrations, in soil and groundwater exceeding the MTCA cleanup levels is limited and in close proximity to borings SB-22 and SB-61/01MW17.
- The groundwater conditions upgradient of monitoring well 01MW17 and boring SB-22 at monitoring wells 01MW99 and 01MW100 are below the applicable MTCA cleanup levels for DRPH, ORPH, GRPH, and PCP. These groundwater sample results are representative of the historical groundwater sample results from monitoring well 01MW17, indicating that concentrations of TPH and PCP in groundwater near the southeast corner of the Bulk Terminal Property does not exceed the applicable MTCA cleanup levels. In addition, concentrations of the RCRA 8 metals in groundwater near the southeast corner of the Bulk Terminal Property are below the applicable MTCA cleanup levels, indicating that groundwater does not require cleanup for metals in this area.
- The soil conditions west of monitoring well 01MW17 (along the southern property line) at borings B360 through B363 are below the applicable MTCA cleanup levels for DRPH, ORPH, GRPH, and PCP indicating that soil in the vicinity of the borings does not require cleanup. Additionally, the soil conditions along the southern property line between borings B360 through B363 do not appear to have been impacted significantly by historical operations.

5.0 LIMITATIONS

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

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

FIGURES



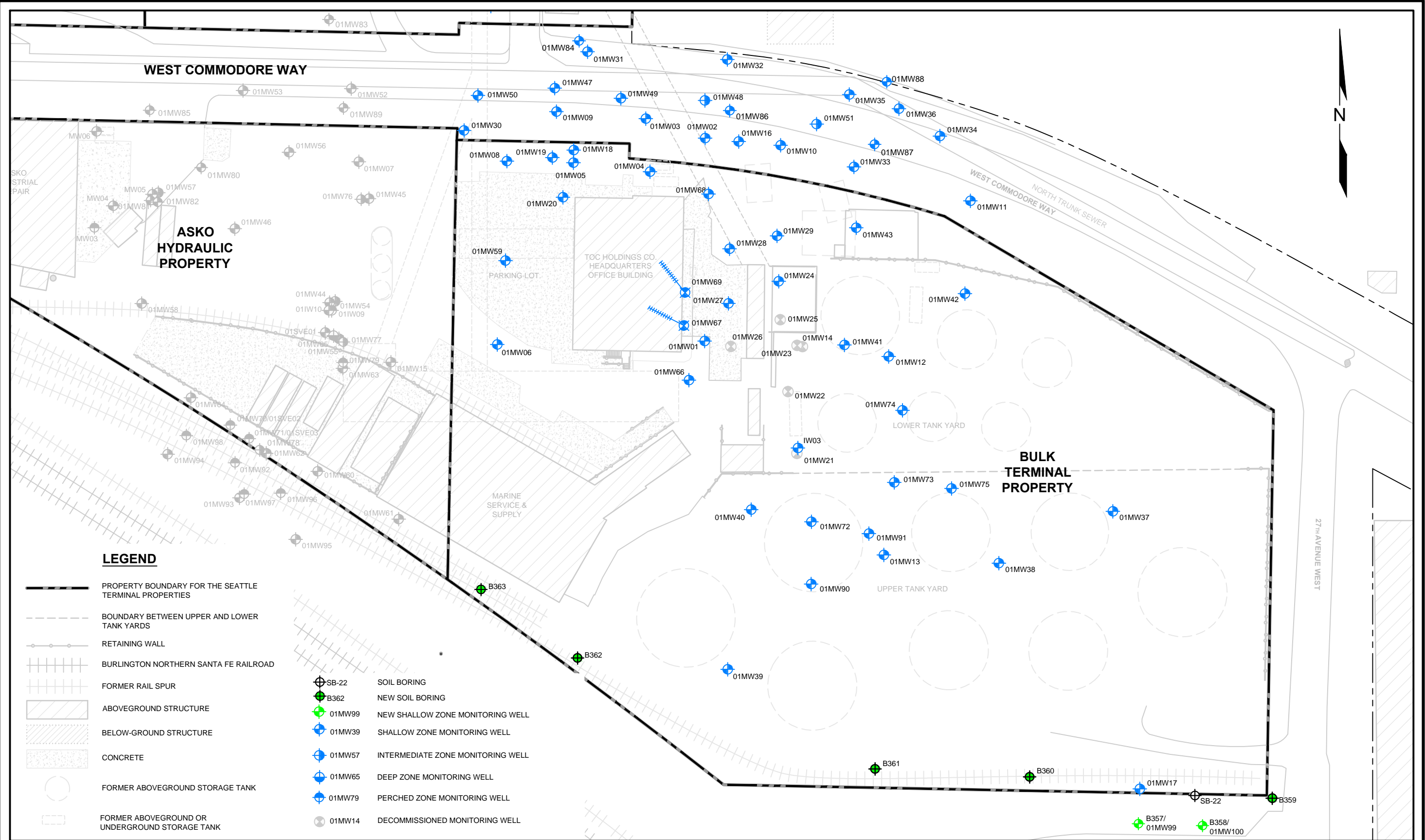
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 miles
 0 1 2 3 4 5 km
 Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)



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 CHECKED BY: _____JAB/TSB
 CAD FILE: _____0600_FIG1_VICINITY_BULK

PROJECT NAME: _____BULK TERMINAL PROPERTY
 PROJECT NUMBER: _____0440-004
 STREET ADDRESS: _____2737 WEST COMMODORE WAY
 CITY, STATE: _____SEATTLE, WASHINGTON

FIGURE 1
 PROPERTY LOCATION MAP



LEGEND

- PROPERTY BOUNDARY FOR THE SEATTLE TERMINAL PROPERTIES
- BOUNDARY BETWEEN UPPER AND LOWER TANK YARDS
- RETAINING WALL
- BURLINGTON NORTHERN SANTA FE RAILROAD
- FORMER RAIL SPUR
- ABOVEGROUND STRUCTURE
- BELOW-GROUND STRUCTURE
- CONCRETE
- FORMER ABOVEGROUND STORAGE TANK
- FORMER ABOVEGROUND OR UNDERGROUND STORAGE TANK

- SB-22 SOIL BORING
- B362 NEW SOIL BORING
- 01MW99 NEW SHALLOW ZONE MONITORING WELL
- 01MW39 SHALLOW ZONE MONITORING WELL
- 01MW57 INTERMEDIATE ZONE MONITORING WELL
- 01MW65 DEEP ZONE MONITORING WELL
- 01MW79 PERCHED ZONE MONITORING WELL
- 01MW14 DECOMMISSIONED MONITORING WELL



DATE: 4/14/15
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PROJECT NAME: TOC HOLDINGS CO. BULK TERMINAL PROPERTY
 PROJECT NUMBER: 0440-004
 STREET ADDRESS: 2737 WEST COMMODORE WAY
 CITY, STATE: SEATTLE, WASHINGTON

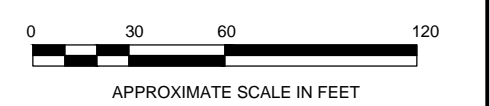
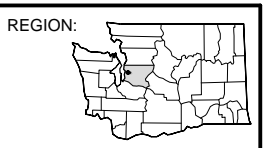
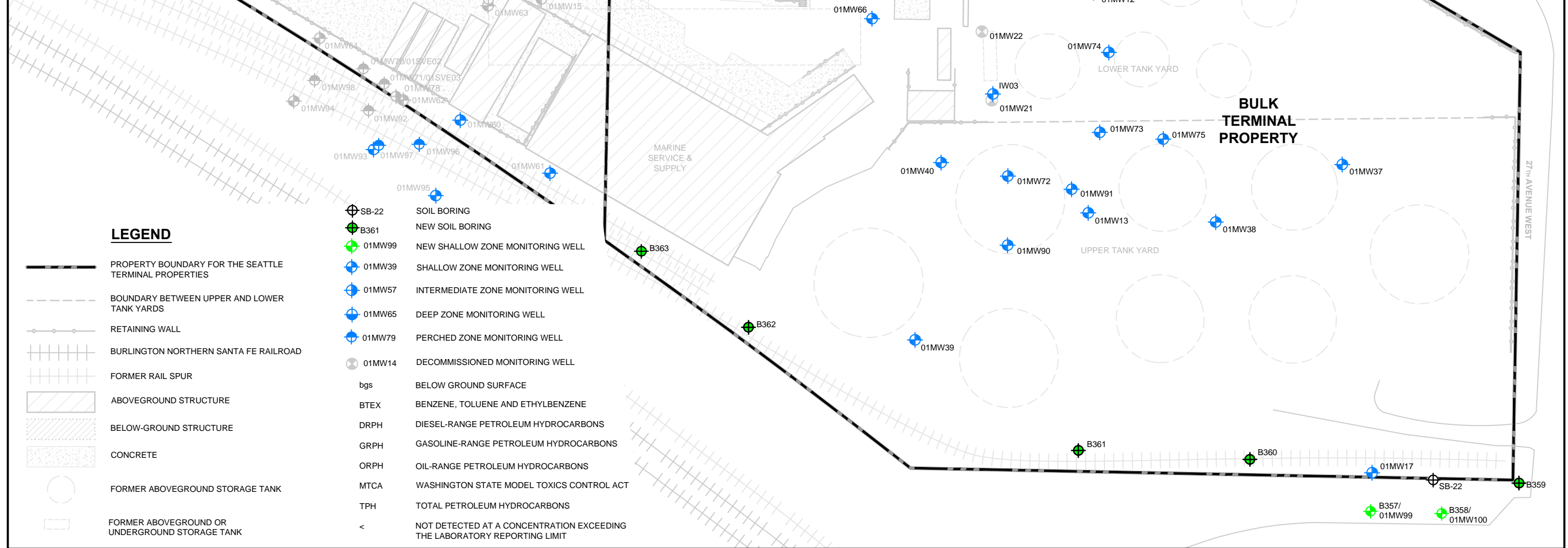


FIGURE 2
EXPLORATION LOCATION PLAN

7/28/2015 P:\0440 TOC HOLDINGS CO\01-600 SEATTLE TERMINAL\TECHNICAL\CAD\2015\BTP\SI\01-600 BTP_2015SI_FIG3A.DWG

Boring ID	Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results (milligrams per kilogram)						
				Benzene	Toluene	Ethylbenzene	Total Xylenes	GRPH	DRPH	ORPH
B357/ 01MW99	B357-07.5	3/25/2015	7.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B357-17.5		17.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B357-25		25	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
B358/ 01MW100	B358-05	3/25/2015	5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B358-15		15	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B358-22.5		22.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
B359	B359-02.5	3/26/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B359-10		10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B359-20		20	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
B360	B360-0-2.5	3/26/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B360-10		10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B360-17.5		17.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
B361	B361-02.5	3/26/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B361-10		10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B361-20		20	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B361-22.5		22.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
B362	B362-02.5	3/27/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	74	360
	B362-07.5		7.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B362-10		10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B362-15		15	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
B363	B363-02.5	3/27/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B363-05		5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B363-10		10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250
	B363-15		15	<0.02	<0.02	<0.02	<0.06	<2	<50	<250

MTCA Cleanup Level for Soil: Benzene 0.03, Toluene 7, Ethylbenzene 6, Total Xylenes 9, GRPH 30, DRPH 2,000, ORPH 2,000



DATE: 5/1/15
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 CAD FILE: 01-600_BTP_2015SI_FIG3B

PROJECT NAME: TOC HOLDINGS CO. BULK TERMINAL PROPERTY
 PROJECT NUMBER: 0440-004
 STREET ADDRESS: 2737 WEST COMMODORE WAY
 CITY, STATE: SEATTLE, WASHINGTON

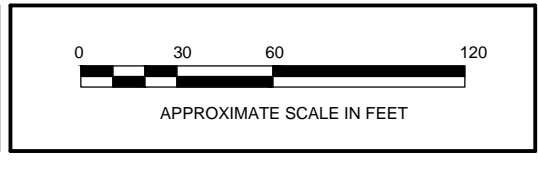
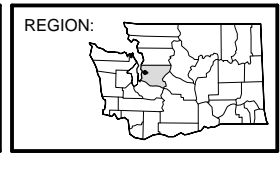
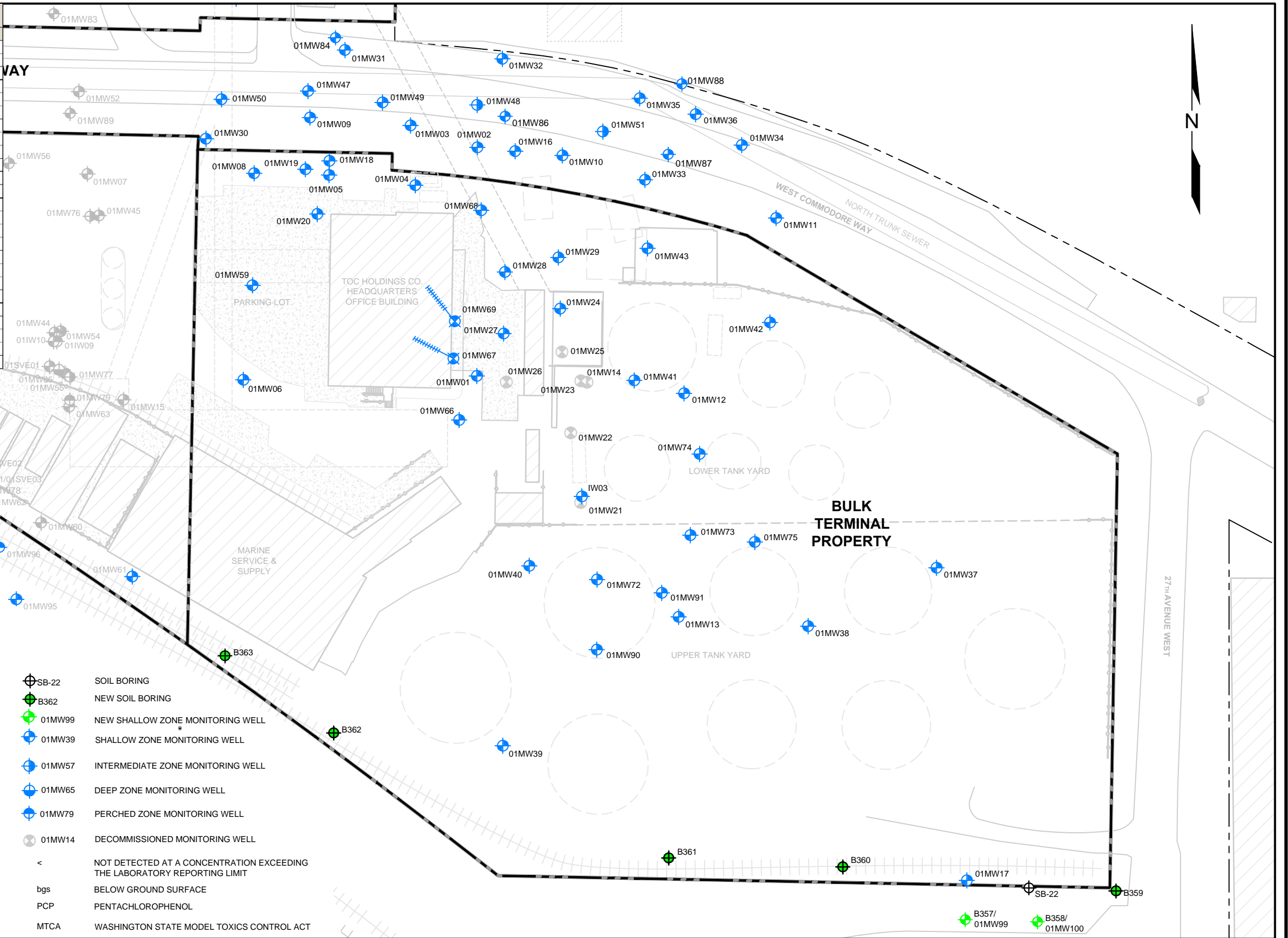


FIGURE 3A
 SOIL ANALYTICAL RESULTS -
 TPH AND BTEX

SOUND EARTH INC.

7/28/2015 P:\0440 TOC HOLDINGS CO\01-600 SEATTLE TERMINAL\TECHNICAL\2015\BTP\SI\01-600 BTP_2015SI_FIG3B.DWG

Boring ID	Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results (milligrams per kilogram)		
				Pentachlorophenol		
B357/ 01MW99	B357-07.5	3/25/2015	7.5	<0.1		
	B357-17.5		17.5	<0.1		
	B357-25		25	<0.1		
B358/ 01MW100	B358-05	3/25/2015	5	<0.1		
	B358-15		15	<0.1		
	B358-22.5		22.5	<0.1		
B359	B359-02.5	3/26/2015	2.5	<0.1		
	B359-10		10	<0.1		
	B359-20		20	<0.1		
B360	B360-0-2.5	3/26/2015	2.5	<0.1		
	B360-10		10	<0.1		
	B360-17.5		17.5	<0.1		
B361	B361-02.5	3/26/2015	2.5	<0.1		
	B361-10		10	<0.1		
	B361-20		20	<0.1		
B362	B362-02.5	3/27/2015	2.5	<0.1		
	B362-07.5		7.5	<0.1		
	B362-10		10	<0.1		
B363	B363-02.5	3/27/2015	2.5	<0.1		
	B363-05		5	<0.1		
	B363-10		10	<0.1		
B363	B363-15	3/27/2015	15	<0.1		
MTCA Cleanup Level for Soil				2.5		



DATE: 5/1/15
 DRAWN BY: NAC/JQC
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 CAD FILE: 01-600_BTP_2015SI_FIG3A

PROJECT NAME: TOC HOLDINGS CO. BULK TERMINAL PROPERTY
 PROJECT NUMBER: 0440-004
 STREET ADDRESS: 2737 WEST COMMODORE WAY
 CITY, STATE: SEATTLE, WASHINGTON

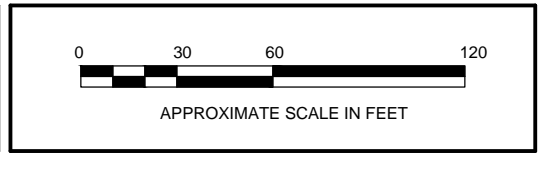
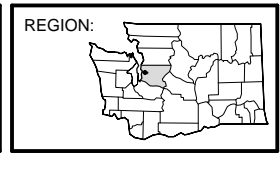
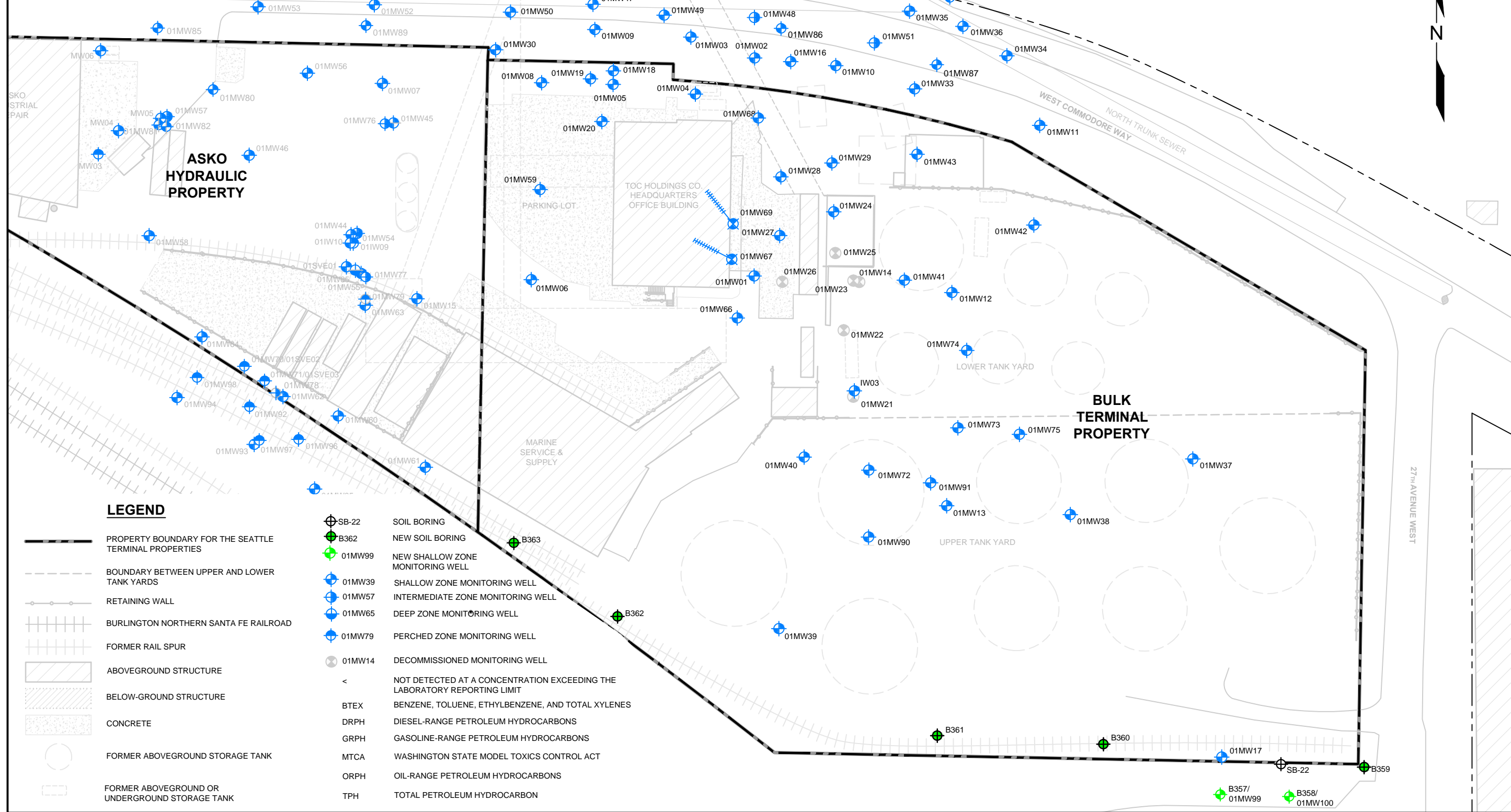


FIGURE 3B
 SOIL ANALYTICAL RESULTS- PCP

SOUND EARTH INC.

7/28/2015
P:\0440 TOC HOLDINGS CO\01-600 SEATTLE TERMINAL\TECHNICAL\2015\BTP\SI\01-600 BTP_2015SI_FIG4A.DWG

Well ID	Date Sampled	Analytical Results (micrograms per liter)																						
		Benzene, Toluene, Ethylbenzene, Total Xylenes, GRPH, DRPH, ORPH							Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver	
		Benzene	Toluene	Ethylbenzene	Total Xylenes	GRPH	DRPH	ORPH	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved		
01MW99	04/17/15	<1	<1	<1	<3	<100	410	<250	2.44	2.43	17.8	17.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
01MW100	04/17/15	<1	<1	<1	<3	<100	290	<250	<1	<1	14.8	11.9	<1	<1	1.41	<1	<1	<1	<1	<1	<1	<1		
MTCA CUL		5	1,000	700	1,000	800	500	500	5		3,200		5		50		15		2		80			



DATE: 4/30/15
 DRAWN BY: NAC/JQC
 CHECKED BY: JAB/TSB
 CAD FILE: 01-600_BTP_2015SI_FIG4B

PROJECT NAME: TOC HOLDINGS CO. BULK TERMINAL PROPERTY
 PROJECT NUMBER: 0440-004
 STREET ADDRESS: 2737 WEST COMMODORE WAY
 CITY, STATE: SEATTLE, WASHINGTON

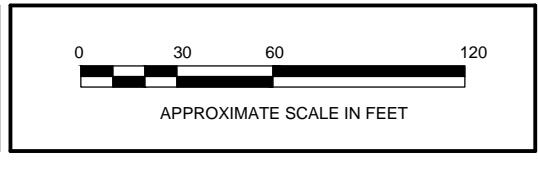
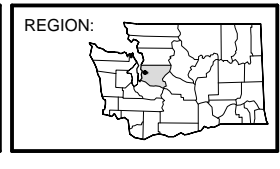
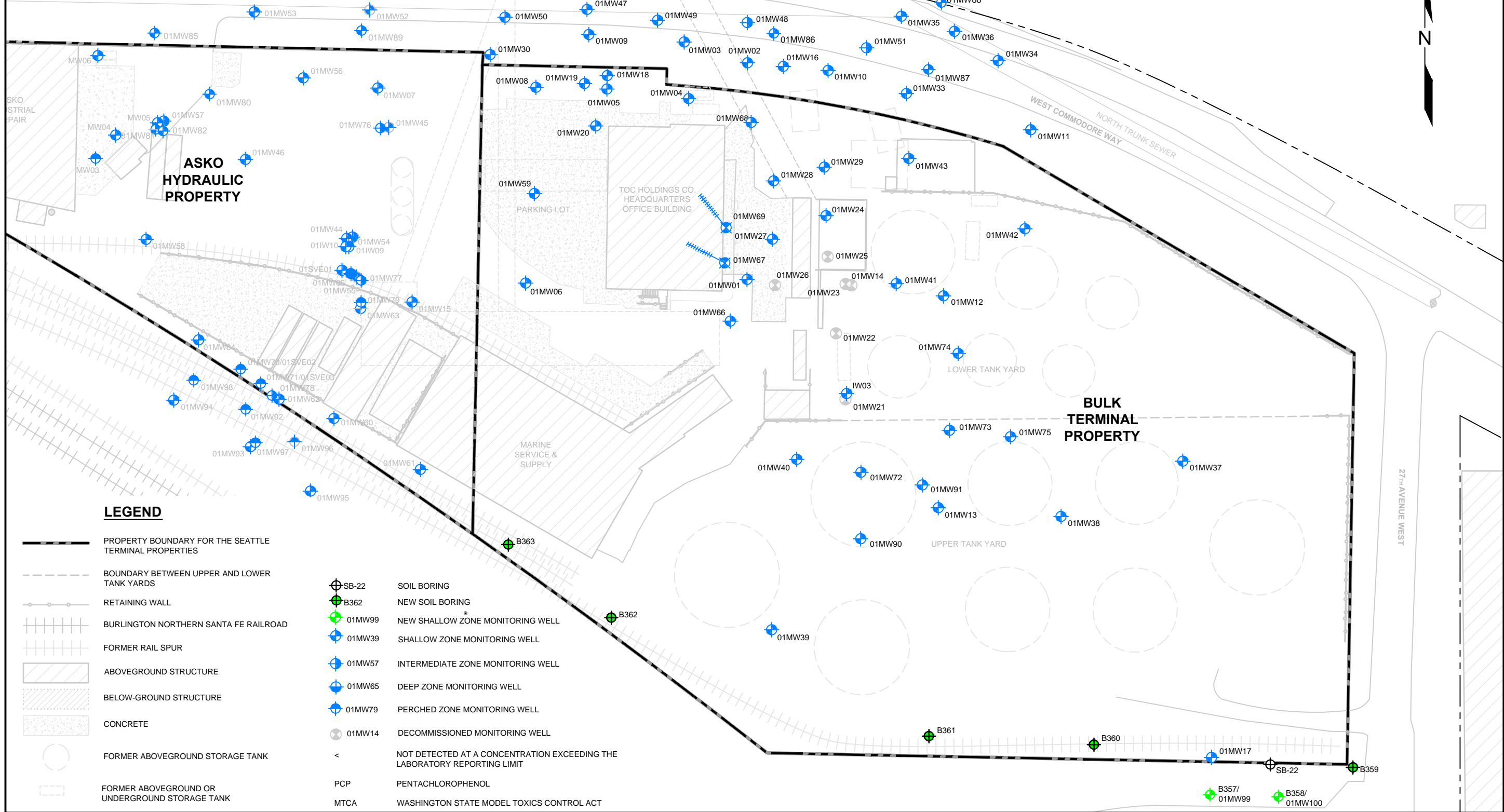


FIGURE 4A
 GROUNDWATER ANALYTICAL RESULTS
 - TPH, BTEX, AND METALS

SOUND EARTH INC.

7/28/2015 P:\0440 TOC HOLDINGS CO\01-600 SEATTLE TERMINAL\TECHNICAL\2015\BTP\SI\01-600 BTP_2015SI_FIG4B.DWG

Well Identification	Date Sampled	Analytical Results (micrograms per liter)
01MW99	04/17/15	PCP
01MW100		<0.2
MTCA CUL		0.22



DATE: 4/30/15
 DRAWN BY: NAC/JQC
 CHECKED BY: JAB/TSB
 CAD FILE: 01-600_BTP_2015SI_FIG4A

PROJECT NAME: TOC HOLDINGS CO. BULK TERMINAL PROPERTY
 PROJECT NUMBER: 0440-004
 STREET ADDRESS: 2737 WEST COMMODORE WAY
 CITY, STATE: SEATTLE, WASHINGTON

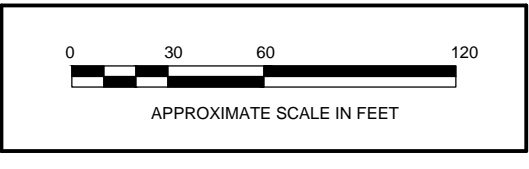
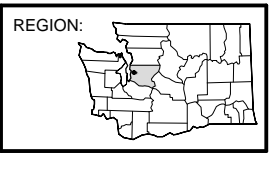


FIGURE 4B
 GROUNDWATER ANALYTICAL RESULTS - PCP

SOUND EARTH INC.

TABLES



Table 1
Summary of Soil Analytical Results
TOC Holdings Co.
Bulk Terminal Property
2737 West Commodore Way
Seattle, Washington

Boring ID	Sample ID	Sampled by	Date Sampled	Depth (feet bgs)	Analytical Results (milligrams per kilogram)							
					Benzene ⁽¹⁾	Toluene ⁽¹⁾	Ethylbenzene ⁽¹⁾	Total Xylenes ⁽¹⁾	GRPH ⁽²⁾	DRPH ⁽³⁾	ORPH ⁽³⁾	PCP ⁽⁴⁾
B357/ 01MW99	B357-07.5	SoundEarth	3/25/2015	7.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B357-17.5			17.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B357-25			25	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
B358/ 01MW100	B358-05	SoundEarth	3/25/2015	5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B358-15			15	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B358-22.5			22.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
B359	B359-02.5	SoundEarth	3/26/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B359-10			10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B359-20			20	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
B360	B360-0-2.5	SoundEarth	3/26/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B360-10			10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B360-17.5			17.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
B361	B361-02.5	SoundEarth	3/26/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B361-10			10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B361-20			20	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B361-22.5			22.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
B362	B362-02.5	SoundEarth	3/27/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	74 ^X	360	<0.1
	B362-07.5			7.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B362-10			10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B362-15			15	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
B363	B363-02.5	SoundEarth	3/27/2015	2.5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B363-05			5	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B363-10			10	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
	B363-15			15	<0.02	<0.02	<0.02	<0.06	<2	<50	<250	<0.1
MTCA Cleanup Level for Soil					0.03⁽⁵⁾	7⁽⁵⁾	6⁽⁵⁾	9⁽⁵⁾	30⁽⁵⁾	2,000⁽⁵⁾	2,000⁽⁵⁾	2.5⁽⁶⁾

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. of Seattle, Washington.

⁽¹⁾ Analyzed by EPA Method 8021B.

⁽²⁾ Analyzed by Method NWTPH-Gx.

⁽³⁾ Analyzed by Method NWTPH-Dx.

⁽⁴⁾ Analyzed by EPA Method 8270D SIM.

⁽⁵⁾ MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses.

⁽⁶⁾ MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Carcinogen, Standard Formula Value, CLARC Website <<https://fortress.wa.gov/ecy/clarc/CLARHome.aspx>>.

Laboratory Note:

*The pattern of peaks present is not indicative of diesel or the sample chromatographic pattern does not resemble the fuel standard used for quantitation.

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

DRPH = diesel-range petroleum hydrocarbons

EPA = United States Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

PCP = pentachlorophenol

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washington Administrative Code



Table 2
Summary of Groundwater Analytical Results for BTEX, TPH, and PCP
Bulk Terminal Property
2737 West Commodore Way
Seattle, Washington

Well Identification	Sample Identification	Sampled By	Date Sampled	Analytical Results (micrograms per liter)							
				Benzene ⁽¹⁾	Toluene ⁽¹⁾	Ethylbenzene ⁽¹⁾	Total Xylenes ⁽¹⁾	GRPH ⁽²⁾	DRPH ⁽³⁾	ORPH ⁽³⁾	PCP ⁽⁴⁾
01MW99	01MW99-20150417	SoundEarth	04/17/15	<1	<1	<1	<3	<100	410 ^x	<250	<0.2
01MW100	01MW100-20150417	SoundEarth	04/17/15	<1	<1	<1	<3	<100	290 ^x	<250	<0.2
MTCA Cleanup Level for Groundwater				5⁽⁵⁾	1,000⁽⁵⁾	700⁽⁵⁾	1,000⁽⁵⁾	800⁽⁵⁾	500⁽⁵⁾	500⁽⁵⁾	0.22⁽⁶⁾

NOTES:

⁽¹⁾Analyzed by EPA Method 8021B.

⁽²⁾Analyzed by Method NWTPH-Gx.

⁽³⁾Analyzed by Method NWTPH-Dx.

⁽⁴⁾Analyzed by EPA Method 8270D-SIM.

⁽⁵⁾MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

⁽⁶⁾MTCA Cleanup Regulation, CLARC, Ground Water, Method B, Carcinogen, Standard Formula Value, CLARC Website
 <<https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>>.

Laboratory Notes:

^xThe sample chromatographic pattern does not resemble the fuel standard used for quantitation.

< = not detected at a concentration exceeding the laboratory reporting limit

BTEX = benzene, toluene, ethylbenzene, and total xylenes

CLARC = Cleanup Levels and Risk Calculations

DRPH = diesel-range petroleum hydrocarbons

EPA = U. S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

PCP = pentachlorophenol

SoundEarth = SoundEarth Strategies, Inc.

TPH = total petroleum hydrocarbons

WAC = Washington Administrative Code



Table 3
Summary of Groundwater Analytical Results for RCRA 8 Metals
TOC Holdings Co.
Bulk Terminal Property
2737 West Commodore Way
Seattle, Washington

Well ID	Sample ID	Date Sampled	Analytical Results ⁽¹⁾ (micrograms per liter)																
			Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver		
			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	
01MW99	01MW99-20150417	4/17/15	2.44	2.43	17.8	17.8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
01MW100	01MW100-20150417	4/17/15	<1	<1	14.8	11.9	<1	<1	1.41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MTCA Cleanup Level for Groundwater			5⁽²⁾		3,200⁽³⁾		5⁽²⁾		50⁽²⁾		15⁽²⁾		2⁽²⁾		80⁽³⁾		80⁽³⁾		

NOTES:

⁽¹⁾Samples analyzed by U. S. Environmental Protection Agency Method 200.8.

⁽²⁾MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

⁽³⁾MTCA Cleanup Regulation, CLARC, Groundwater, Method B, Non-Carcinogen, Standard Formula Value, CLARC Website <<https://fortress.wa.gov/ecy/clarc/CLARHome.aspx>>.

< = not detected at a concentration exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

MTCA = Washington State Model Toxics Control Act

RCRA = Resource Conservation and Recovery Act

WAC = Washington Administrative Code

APPENDIX A
BORING LOGS



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/25/15
Surface Conditions: Grass
Well Location N/S: 17' S of SE Fence Corner
Well Location E/W: 79' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/25/15

BORING LOG | **B357**
 01MW99

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 25 feet bgs
 Water Depth After Completion 23.72 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
0								1" grass at surface.	
	5 10 11		80	0.2	B357-02.5	SM		Moist, loose, silty fine SAND, roots, brown with black streaks, no hydrocarbon odor (20-80-0).	
5	12 16 11		60	0.3	B357-05	SM		Wet, medium dense, silty medium SAND, brown, no hydrocarbon odor (15-85-0).	
	4 14 20		100	0.2	B357-07.5	ML		Moist, very stiff, sandy SILT with gravel, mottled gray/orange, no hydrocarbon odor (50-35-15).	
10	4 7 10		100	0.3	B357-10	ML		Moist, stiff, clayey SILT with some sand, mottled orange/gray, no hydrocarbon odor (90-10-0).	
	14 20 25		100	0.3	B357-12.5	CL		Moist, very stiff, silty CLAY with trace sand, gray, no hydrocarbon odor (95-5-0).	
15									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: 30 feet bgs
State Well ID No.: BJA 709

Well/Auger Diameter: 2"/4.25" inches
Well Screened Interval: 20 - 30 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: #2/12 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush Mount

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/25/15
Surface Conditions: Grass
Well Location N/S: 17' S of SE Fence Corner
Well Location E/W: 79' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/25/15

BORING LOG | **B357**
 01MW99

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 25 feet bgs
 Water Depth After Completion 23.72 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
15	14 21 21	100	0.5	B357-15	CL		Moist, very stiff, silty CLAY with trace sand, gray, no hydrocarbon odor (95-5-0).		
	14 21 25	100	0.5	B357-17.5	CL		Moist, very stiff, silty CLAY with trace sand, gray, no hydrocarbon odor (95-5-0).		
20	19 28 32	100	0.4	B357-20	SM		Moist, very stiff, sandy SILT, gray, no hydrocarbon odor (75-25-0).		
	50/6"	100	0.4	B357-22.5	SM		Moist, medium dense, silty SAND, mottled orange/gray, no hydrocarbon odor (20-80-0).		
25	50/6"	110	0.8	B357-25	SM		Moist to wet, medium dense, silty fine SAND, brown, no hydrocarbon odor (15-85-0).		
	50/6"	100	0.6	B357-27.5	SM		Wet, medium dense, silty SAND, brown, no hydrocarbon odor (15-85-0).		
30									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: 30 feet bgs
State Well ID No.: BJA 709

Well/Auger Diameter: 2"/4.25" inches
Well Screened Interval: 20 - 30 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: #2/12 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush Mount

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/25/15
Surface Conditions: Grass
Well Location N/S: 17' S of SE Fence Corner
Well Location E/W: 79' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/25/15

BORING LOG | **B357**
 01MW99

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 25 feet bgs
 Water Depth After Completion 23.72 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
30	36 50/6"	150	0.6	B357-30	SM		Wet, medium dense, silty medium SAND, brown, no hydrocarbon odor (10-90-0).		
	50/6"	300	0.3	B357-32.5	SM SP		Wet, medium dense, silty medium to coarse SAND, gray with brown lenses, no hydrocarbon odor (10-90-0).		
							Wet, medium dense, SAND with silt, gray, no hydrocarbon odor (5-95-0).		
35	50/6"	200	0.4	B357-35	SP		Wet, medium dense, SAND with silt, gray, no hydrocarbon odor (5-95-0).		
							Boring terminated at 35.5' bgs.		
40									
45									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: 30 feet bgs
State Well ID No.: BJA 709

Well/Auger Diameter: 2"/4.25" inches
Well Screened Interval: 20 - 30 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: #2/12 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush Mount

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/25/15
Surface Conditions: Grass
Well Location N/S: 16' S of SE Fence Corner
Well Location E/W: 39.5' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/25/15

BORING LOG | **B358**
 01MW100

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 25 feet bgs
 Water Depth After Completion 21.49 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
0								1" grass at surface.	
	12 7 9		100	0.4	B358-02.5	SM		Moist to wet, loose, silty medium SAND with organics, brown, no hydrocarbon odor (20-80-0).	
5	7 12 14		100	0.4	B358-05	SM		Moist to wet, loose, silty SAND, brown, no hydrocarbon odor (30-70-0) with 2"-thick sandy SILT bed.	
	7 14 22		100	0.5	B358-07.5	ML		Moist, very stiff, sandy SILT, mottled orange/gray, no hydrocarbon odor (75-25-0).	
10	7 12 19		100	0.5	B358-10	CL		Moist, very stiff, silty CLAY with sand, mottled orange/gray, no hydrocarbon odor (90-10-0).	
	20 25 39		100	0.5	B358-12.5	CL		Moist, very stiff, silty sandy CLAY, gray, no hydrocarbon odor (80-20-0).	
15									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: 30 feet bgs
State Well ID No.: BJA 710

Well/Auger Diameter: 2"/4.25" inches
Well Screened Interval: 20 - 30 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: #2/12 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush Mount

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/25/15
Surface Conditions: Grass
Well Location N/S: 16' S of SE Fence Corner
Well Location E/W: 39.5' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/25/15

BORING LOG | **B358**
 01MW100

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 25 feet bgs
 Water Depth After Completion 21.49 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
15	23 50/6"	150	0.6	B358-15	CL		Moist, very stiff, sandy silty CLAY, gray, no hydrocarbon odor (75-25-0).		
	23 40 40	100	0.6	B358-17.5	CL		Moist, hard, silty CLAY with trace sand, gray, no hydrocarbon odor (95-5-0).		
20	10 20 30	100	0.5	B358-20	ML		Moist, very stiff, sandy clayey SILT, gray, no hydrocarbon odor (75-25-0).		
	10 19 32	100	0.5	B358-22.5	SM		Moist, medium dense, silty SAND, mottled orange/gray, no hydrocarbon odor.		
25	50/6"	100	0.4	B358-25	SM		Wet, medium dense, silty medium SAND, brown, no hydrocarbon odor (15-85-0).		
	50/6"	100	0.5	B358-27.5	SM		Wet, medium dense, silty SAND, brown, no hydrocarbon odor (10-90-0).		
30									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: 30 feet bgs
State Well ID No.: BJA 710

Well/Auger Diameter: 2"/4.25" inches
Well Screened Interval: 20 - 30 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: #2/12 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush Mount

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/25/15
Surface Conditions: Grass
Well Location N/S: 16' S of SE Fence Corner
Well Location E/W: 39.5' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/25/15

BORING LOG | **B358**
 01MW100

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 25 feet bgs
 Water Depth After Completion 21.49 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
30	50/6"	200	0.5	B358-30	SM		Wet, medium dense, silty medium to coarse SAND, brown to gray-brown, no hydrocarbon odor (10-90-0).		
	50/6"	150	0.4	B358-32.5	SM		Wet, medium dense, silty coarse SAND, gray, no hydrocarbon odor (10-90-0).		
35	50/6"	200	0.5	B358-35	ML		Moist, very stiff, sandy SILT, gray, no hydrocarbon odor (85-15-0).		
Boring terminated at 35.5' bgs.									
40									
45									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: 30 feet bgs
State Well ID No.: BJA 710

Well/Auger Diameter: 2"/4.25" inches
Well Screened Interval: 20 - 30 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: #2/12 Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush Mount

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/26/15
Surface Conditions: Gravel
Well Location N/S: 4.5' N of SE Fence Corner
Well Location E/W: 6' E of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/26/15

BORING LOG | B359

Site Address: 2737 West Commodore Way
Seattle, Washington

Water Depth At Time of Drilling 20 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 Detail/ Water Depth
0								2" gravel at surface.	
	9 10 12		100	0.5	B359-02.5	ML		Moist, very stiff, clayey sandy SILT, mottled orange/gray, no hydrocarbon odor (75-25-0).	
5	9 19 26		75	0.9	B359-05	ML		Moist, very stiff, sandy SILT with some clay, mottled gray/orange, no hydrocarbon odor (60-30-0) with some layers of increased sand content.	
	14 24 26		100	0.5	B359-07.5	SM		Moist, medium dense, interbedded silty SAND and clayey SILT, mottled orange/gray, no hydrocarbon odor (80-20-0).	
10	9 12 14		100	0.6	B359-10	ML		Moist, very stiff, clayey SILT with sand, gray, no hydrocarbon odor (90-10-0).	
	8 10 14		100	0.3	B359-12.5	ML		Moist, stiff, clayey SILT with sand, gray, no hydrocarbon odor (90-10-0).	
15									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 25.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/26/15
Surface Conditions: Gravel
Well Location N/S: 4.5' N of SE Fence Corner
Well Location E/W: 6' E of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/26/15

BORING LOG | B359

Site Address: 2737 West Commodore Way
Seattle, Washington

Water Depth At Time of Drilling 20 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 Detail/ Water Depth
15	22 50/6"	150	0.4	B359-15	ML		Moist, very stiff, clayey SILT with sand, gray, no hydrocarbon odor (90-10-0).		
	12 22 32	100	0.5	B359-17.5	ML		Moist, very stiff, sandy SILT with clay, brown with some orange mottling, no hydrocarbon odor (80-20-0).		
20	17 35 42	80	0.5	B359-20	SM		Wet, dense, silty SAND, brown with orange streaks, no hydrocarbon odor (20-80-0).		
	16 25 30	90	0.5	B359-22.5	SP		Wet, medium dense, SAND with silt, brown to orange-brown, no hydrocarbon odor (10-90-0).		
25	50/6"	100	0.4	B359-25	SP		Wet, medium dense, SAND with silt, brown, no hydrocarbon odor (10-90-0).		
30							Boring terminated at 25.5' bgs and backfilled with bentonite.		

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 25.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/26/15
Surface Conditions: Grass
Well Location N/S: 9.5' N of SE Fence Corner
Well Location E/W: 150.5' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/26/15

BORING LOG | B360

Site Address: 2737 West Commodore Way
Seattle, Washington

Water Depth At Time of Drilling 20 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 Detail/ Water Depth
0								1" grass at surface.	
	12 22 28		40	0.4	B360-02.5	SM		Moist, very stiff, sandy SILT with gravel, brown, no hydrocarbon odor (75-25-5). Driller reports that sampler may be pushing a rock resulting in high blow counts and low recovery.	
5	14 23 30		100	0.3	B360-05	SM ML	 	Top of 5' sample wet, potentially due to rain infiltration. Moist, medium dense, silty SAND with some organics, brown, no hydrocarbon odor (30-70-0). Moist, very stiff, clayey SILT with sand, brown, no hydrocarbon odor (90-10-0).	
	16 17 30		100	0.6	B360-07.5	ML		Moist, very stiff, clayey SILT with some sand, gray, no hydrocarbon odor (95-5-0).	
10	17 20 24		100	0.5	B360-10	ML SM CL	 	3" layer of moist, very stiff, SILT with some sand, gray, no hydrocarbon odor (95-5-0). 2" layer of moist, medium dense, silty SAND, gray, no hydrocarbon odor (15-85-0). Moist, very stiff, silty CLAY with sand, gray, no hydrocarbon odor (95-5-0).	
	10 12 12		50	0.6	B360-12.5	CL		Moist, stiff, silty CLAY with some sand, gray, no hydrocarbon odor (95-5-0).	
15									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/26/15
Surface Conditions: Grass
Well Location N/S: 9.5' N of SE Fence Corner
Well Location E/W: 150.5' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/26/15

BORING LOG | B360

Site Address: 2737 West Commodore Way
Seattle, Washington

Water Depth At Time of Drilling 20 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 Detail/ Water Depth
15	14 18 23		100	0.4	B360-15	SM		Moist, medium dense, silty SAND to sandy SILT, gray from 15 to 16' bgs and brown with gray streaks from 16 to 16.5' bgs, no hydrocarbon odor (30-70-0) to (70-30-0).	
	10 19 30		100	0.7	B360-17.5	ML		Moist, very stiff, sand SILT, gray, no hydrocarbon odor (75-25-0). 2" layer of moist, medium dense, silty SAND, brown, no hydrocarbon odor (25-75-0).	
20	12 19 28		100	0.6	B360-20	SM		Wet, medium dense, silty medium SAND, brown, no hydrocarbon odor (20-80-0).	
	13 16 22		100	0.5	B360-22.5	SM		Wet, medium dense, silty medium to coarse SAND, brown with gray and orange streaks, no hydrocarbon odor (15-85-0).	
25	17 28 35		50	0.4	B360-25	SM		Wet, medium dense, silty medium to coarse SAND, brown grading into gray for the last 2", no hydrocarbon odor (10-90-0).	
								Boring terminated at 26.5' bgs and backfilled with bentonite.	
30									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/26/15
Surface Conditions: Grass
Well Location N/S: 9.5' N of SE Fence Corner
Well Location E/W: 252.5' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/26/15

BORING LOG | B361

Site Address: 2737 West Commodore Way
Seattle, Washington

Water Depth At Time of Drilling 21.5 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 Detail/ Water Depth
0								1" grass at surface.	
	22-26		80	0.4	B361-02.5	SM		Moist, medium dense, silty SAND, brown, no hydrocarbon odor (20-80-0).	
						ML		3" layer of moist, very stiff, clayey SILT with sand, brown with some mottled gray and orange, no hydrocarbon odor (85-15-0).	
5	6-15		100	0.4	B361-05	CL		Moist, very stiff, silty CLAY with sand, gray, no hydrocarbon odor (90-10-0).	
						ML		Moist, stiff, clayey SILT with sand, gray, no hydrocarbon odor (95-5-0).	
10	6-10		60	0.4	B361-10	ML		Moist to wet, stiff, sandy SILT with some clay, gray, no hydrocarbon odor (65-35-0).	
						ML		Moist, stiff, clayey SILT with sand, mottled gray and orangish-brown, no hydrocarbon odor (90-10-0).	
						CL		Moist, very stiff, silty CLAY, gray, no hydrocarbon odor (100-0-0).	
15	15-20		100	0.4	B361-12.5	CL		Moist, very stiff, silty CLAY, gray, no hydrocarbon odor (100-0-0).	

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/26/15
Surface Conditions: Grass
Well Location N/S: 9.5' N of SE Fence Corner
Well Location E/W: 252.5' W of SE Fence Corner
Reviewed by: JAB
Date Completed: 3/26/15

BORING LOG | B361

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 21.5 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 Detail/ Water Depth
15	7 8 15		100	0.5	B361-15	CL		Moist, stiff, silty CLAY, gray, no hydrocarbon odor (100-0-0). Silt content higher than above.	
	18 38 24		90	0.6	B361-17.5	CL		Moist, very stiff, sandy CLAY with silt, gray, no hydrocarbon odor (70-30-0). 4" layer of moist, very stiff, silty CLAY, gray, no hydrocarbon odor (100-0-0).	
20	11 12 24		100	0.5	B361-20	CL		Moist, very stiff, silty CLAY, gray, no hydrocarbon odor (100-0-0).	
	12 24 27		100	0.5	B361-22.5	SM		3" layer of moist, very stiff, sandy SILT with clay, gray, no hydrocarbon odor (80-20-0). 3" layer of wet, medium dense, silty SAND, gray, no hydrocarbon odor (20-80-0).	
	18 22 30		100	0.3	B361-25	SM		Wet, medium dense, silty medium SAND, gray, no hydrocarbon odor (15-85-0). Wet, medium dense, silty medium to coarse SAND, gray, no hydrocarbon odor (10-90-0). Increase water content with depth.	
								Boring terminated at 26.5' bgs and backfilled with bentonite.	
30									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/27/15
Surface Conditions: Grass
Well Location N/S: 24' S of SE corner of shed
Well Location E/W: 31' E of SE corner of shed
Reviewed by: JAB
Date Completed: 3/27/15

BORING LOG | B362

Site Address: 2737 West Commodore Way
Seattle, Washington

Water Depth At Time of Drilling 15 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 Detail/ Water Depth
0								1" grass at surface.	
	50/6"		10	0.2	B362-02.5	SM		Driller reports rock in sampler resulting in high blow counts and low recovery. Moist, very stiff, sandy SILT with organics, brown, no hydrocarbon odor (80-20-0) (FILL). Moist, medium dense, silty coarse SAND, brown, no hydrocarbon odor (10-90-0) (FILL).	
5			0						
	50/6"		175	0.2	B362-07.5	ML		Moist, very stiff, sandy SILT with clay, gray, no hydrocarbon odor (90-10-0). Rock in sampler.	
10		8 10 14	100	0.2	B362-10	ML		Moist, stiff, sandy SILT with clay, gray, no hydrocarbon odor (90-10-0). Thin layers with higher sand content (70-30-0).	
	10 20 30		60	0.2	B362-12.5	SM		Moist, medium dense, silty fine SAND, grayish-brown, no hydrocarbon odor (30-70-0).	
15									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/27/15
Surface Conditions: Grass
Well Location N/S: 24' S of SE corner of shed
Well Location E/W: 31' E of SE corner of shed
Reviewed by: JAB
Date Completed: 3/27/15

BORING LOG | **B362**

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling 15 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 Detail/ Water Depth
15	19 15 30		100	0.3	B362-15	SM		Wet, very stiff, sandy SILT with clay, mottled orange and gray, no hydrocarbon odor (80-20-0).	
						ML		Wet, very stiff, clayey SILT with trace sand, gray, no hydrocarbon odor (95-5-0).	
	13 21 28		100	0.3	B362-17.5	ML		Wet, very stiff, SILT with trace sand, gray, no hydrocarbon odor (95-5-0).	
20	15 21 28		100	0.2	B362-20	SM		Wet, medium dense, silty fine SAND, brownish-gray, no hydrocarbon odor (35-65-0).	
	14 18 23		70	0.3	B362-22.5	SM		Wet, medium dense, silty SAND, brownish-gray, no hydrocarbon odor, sand grain size increase with depth (20-80-0).	
25	29 50/6"		100	0.3	B362-25	SM		Wet, medium dense, silty SAND, gray, no hydrocarbon odor (10-90-0).	
								Boring terminated at 26' bgs and backfilled with bentonite.	
30									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/27/15
Surface Conditions: Grass
Well Location N/S: 16.5' S of SE corner of shed
Well Location E/W: 47' W of SE corner of shed
Reviewed by: JAB
Date Completed: 3/27/15

BORING LOG | B363

Site Address: 2737 West Commodore Way
 Seattle, Washington

Water Depth At Time of Drilling -- 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 Detail/ Water Depth
0								1" grass at surface.	
	6 17 22		100	0.8	B363-02.5	ML		1" layer of moist, very stiff, sandy SILT with organics, brown, no hydrocarbon odor (80-20-0). Wet, very stiff, sandy SILT, gray, faint hydrocarbon odor (70-30-0). 2" layer of moist, very stiff, sandy/clayey SILT, gray, no hydrocarbon odor (95-5-0). Lenses with higher sand content (30-70-0).	
5	9 13 19		100	0.4	B363-05	ML		Moist, very stiff, sandy/clayey SILT, gray no hydrocarbon odor (95-5-0). Lenses with higher sand content (30-70-0).	
	13 18 20		100	0.2	B363-07.5	ML		Moist, very stiff, clayey SILT with trace sand, gray, no hydrocarbon odor (95-5-0).	
10	10 19 28		100	0.2	B363-10	SM		Moist, very stiff, sandy SILT, gray, no hydrocarbon odor (80-20-0). Sand content increases with depth.	
	10 14 29		100	0.3	B363-12.5	ML		Moist, very stiff, SILT with trace sand, gray, no hydrocarbon odor (95-5-0).	
15									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:



Project: TOC-BTP
Project Number: 0440-004-37
Logged by: CMP
Date Started: 3/27/15
Surface Conditions: Grass
Well Location N/S: 16.5' S of SE corner of shed
Well Location E/W: 47' W of SE corner of shed
Reviewed by: JAB
Date Completed: 3/27/15

BORING LOG | B363

Site Address: 2737 West Commodore Way
Seattle, Washington

Water Depth At Time of Drilling -- 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 Detail/ Water Depth
15	10 12 15		50	0.4	B363-15	SM		Moist, medium dense, silty fine SAND, gray, no hydrocarbon odor (20-80-0).	
	6 10 15		75	0.4	B363-17.5	ML		Moist, stiff, clayey/sandy SILT with lenses of higher sand content, gray, no hydrocarbon odor (90-10-0).	
20	10 16 20		100	0.3	B363-20	ML		Moist, very stiff, sandy/clayey SILT, gray, no hydrocarbon odor (90-10-0).	
	10 14 13		100	0.3	B363-22.5	SM		Wet, medium dense, silty SAND, gray, no hydrocarbon odor (30-70-0).	
25	10 15 30		75	0.3	B363-25	SP		Moist, medium dense, fine to medium SAND with trace silt, gray, no hydrocarbon odor (5-95-0).	
								Boring terminated at 26.5' bgs and backfilled with bentonite.	
30									

Drilling Co./Driller: Cascade/Aaron
Drilling Equipment: HSA Limited Access
Sampler Type: Dames & Moore
Hammer Type/Weight: 140 lbs
Total Boring Depth: 26.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/4.25 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: --
Annular Seal: --
Monument Type: --

Notes/Comments:

APPENDIX B
LABORATORY ANALYTICAL REPORTS

Friedman & Bruya, Inc. #503484

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 14, 2015

Tim Brown, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Brown:

Included is the amended report from the testing of material submitted on March 25, 2015 from the TOC_01-600_20150325 WORFDB8, F&BI 503484 project. Per your request, the sample IDs have been amended.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Jessica Brown, Courtney Porter, Jennifer Cyr, Clare Tochilin
SOU0407R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 7, 2015

Tim Brown, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on March 25, 2015 from the TOC_01-600_20150325 WORFDB8, F&BI 503484 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Jessica Brown, Courtney Porter, Jennifer Cyr
SOU0407R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 25, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-600_20150325 WORFDB8, F&BI 503484 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
503484 -01	B357-02.5
503484 -02	B357-05
503484 -03	B357-07.5
503484 -04	B357-10
503484 -05	B357-12.5
503484 -06	B357-15
503484 -07	B357-17.5
503484 -08	B357-20
503484 -09	B357-22.5
503484 -10	B357-25
503484 -11	B357-27.5
503484 -12	B357-30
503484 -13	B357-32.5
503484 -14	B357-35
503484 -15	B358-02.5
503484 -16	B358-05
503484 -17	B358-07.5
503484 -18	B358-10
503484 -19	B358-12.5
503484 -20	B358-15
503484 -21	B358-17.5
503484 -22	B358-20
503484 -23	B358-22.5
503484 -24	B358-25
503484 -25	B358-27.5
503484 -26	B358-30
503484 -27	B358-32.5
503484 -28	B358-35

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/25/15

Project: TOC_01-600_20150325 WORFDB8, F&BI 503484

Date Extracted: 03/30/15

Date Analyzed: 03/30/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B357-07.5 503484-03	<0.02	<0.02	<0.02	<0.06	<2	89
B357-17.5 503484-07	<0.02	<0.02	<0.02	<0.06	<2	77
B357-25 503484-10	<0.02	<0.02	<0.02	<0.06	<2	90
B358-05 503484-16	<0.02	<0.02	<0.02	<0.06	<2	90
B358-15 503484-20	<0.02	<0.02	<0.02	<0.06	<2	90
B358-22.5 503484-23	<0.02	<0.02	<0.02	<0.06	<2	77
Method Blank 05-0603 MB	<0.02	<0.02	<0.02	<0.06	<2	79

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/25/15

Project: TOC_01-600_20150325 WORFDB8, F&BI 503484

Date Extracted: 03/30/15

Date Analyzed: 03/30/15

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 56-165)
B357-07.5 503484-03	<50	<250	105
B357-17.5 503484-07	<50	<250	101
B357-25 503484-10	<50	<250	102
B358-05 503484-16	<50	<250	105
B358-15 503484-20	<50	<250	104
B358-22.5 503484-23	<50	<250	102
Method Blank 05-652 MB	<50	<250	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B357-07.5	Client:	SoundEarth Strategies
Date Received:	03/25/15	Project:	TOC_01-600_20150325, F&BI 503484
Date Extracted:	03/31/15	Lab ID:	503484-03 1/5
Date Analyzed:	04/01/15	Data File:	040107.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	96	50	150
Phenol-d6	89	50	150
2,4,6-Tribromophenol	95	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B357-17.5	Client:	SoundEarth Strategies
Date Received:	03/25/15	Project:	TOC_01-600_20150325, F&BI 503484
Date Extracted:	03/31/15	Lab ID:	503484-07 1/5
Date Analyzed:	04/01/15	Data File:	040108.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	64	50	150
Phenol-d6	87	50	150
2,4,6-Tribromophenol	88	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B357-25	Client:	SoundEarth Strategies
Date Received:	03/25/15	Project:	TOC_01-600_20150325, F&BI 503484
Date Extracted:	03/31/15	Lab ID:	503484-10 1/5
Date Analyzed:	04/01/15	Data File:	040109.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	70	50	150
Phenol-d6	88	50	150
2,4,6-Tribromophenol	84	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B358-05	Client:	SoundEarth Strategies
Date Received:	03/25/15	Project:	TOC_01-600_20150325, F&BI 503484
Date Extracted:	03/31/15	Lab ID:	503484-16 1/5
Date Analyzed:	04/01/15	Data File:	040110.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	50	150
Phenol-d6	86	50	150
2,4,6-Tribromophenol	88	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B358-15	Client:	SoundEarth Strategies
Date Received:	03/25/15	Project:	TOC_01-600_20150325, F&BI 503484
Date Extracted:	03/31/15	Lab ID:	503484-20 1/5
Date Analyzed:	04/01/15	Data File:	040111.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	99	50	150
Phenol-d6	86	50	150
2,4,6-Tribromophenol	86	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B358-22.5	Client:	SoundEarth Strategies
Date Received:	03/25/15	Project:	TOC_01-600_20150325, F&BI 503484
Date Extracted:	03/31/15	Lab ID:	503484-23 1/5
Date Analyzed:	04/01/15	Data File:	040112.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	94	50	150
Phenol-d6	87	50	150
2,4,6-Tribromophenol	92	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20150325, F&BI 503484
Date Extracted:	03/31/15	Lab ID:	05-668 mb 1/5
Date Analyzed:	04/01/15	Data File:	040106.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	87	50	150
Phenol-d6	92	50	150
2,4,6-Tribromophenol	85	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/25/15

Project: TOC_01-600_20150325 WORFDB8, F&BI 503484

**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: 503484-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	87	69-120
Toluene	mg/kg (ppm)	0.5	86	70-117
Ethylbenzene	mg/kg (ppm)	0.5	85	65-123
Xylenes	mg/kg (ppm)	1.5	84	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/25/15

Project: TOC_01-600_20150325 WORFDB8, F&BI 503484

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

Laboratory Code: 503484-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	106	103	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	108	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/25/15

Project: TOC_01-600_20150325 WORFDB8, F&BI 503484

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: 503511-29 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Pentachlorophenol	mg/kg (ppm)	0.42	<0.1	82	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	mg/kg (ppm)	0.42	85	84	70-130	1

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.

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 the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. 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 laboratory control sample(s) percent recovery and/or RPD were 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 analyte 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 with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.

503484

SAMPLE CHAIN OF CUSTODY

ME 03-25-15

Send Report To: Tim Brown, cc: Jessica Brown, Courtney Porter, Jennifer Cyr

Company: SoundEarth Strategies, Inc.

Address: 2811 Fairview Ave E, Suite 2000

City, State, ZIP: Seattle, WA 98102

SAMPLERS (signature) [Signature] Page # 1

PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal PO # 01-600

REMARKS Hotel EM Y / N

X-per se 3/23/15

TURNAROUND TIME

Standard (2 Weeks) RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days Return samples Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRAPH by NHTPH-Gx	DWPH and ORPH by NHTPH-Gx	BTEX by 8021B	PCP's	BZFD	PCAS	Notes
B357	B357													
B357-02.5	B357	02.5	02	3/25/15	1030	Soil	6							
B357-05	B357	05	02		1035	Soil	6							(X) - per JB
B357-07.5		07.5	03		1050		6	X	X	X	X			3/23/15
B357-10		10	04		1105		6							MS
B357-12.5		12.5	05		1110		6							
B357-15		15	06		1115		6							
B357-17.5		17.5	07		1125		6	X	X	X	X			
B357-20		20	08		1130		6							
B357-22.5		22.5	09		1135		6							
B357-25		25	10		1140		6	X	X	X	X			
B357-27.5		27.5	11		1240		6							
B357-30		30	12		1245		6							
B357-32.5		32.5	13		1250		6							Sampler received at 4

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	G. Cass	SoundEarth	3/25/15	1655
Received by: <u>[Signature]</u>	HONG NEUMEN	FBI	✓	✓
Relinquished by:				
Received by:				

503484

SAMPLE CHAIN OF CUSTODY ME 03-25-15

Send Report To Tim Brown, cc: Jessica Brown, Courtney Porter, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) *[Signature]*

PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal

PO # 01-600

REMARKS *[Handwritten]*

EIM Y / N

Page # 2

TURNAROUND TIME
Standard (2 Weeks)
RUSH _____
Rush charges authorized by: _____

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRAPH by NHTPH-Gx	GRAPH and GRAPH by NHTPH-Dx	BTEX by 8021B	PCP by 8021D	PCPA B	Notes
B357	B357												
B327-3.5	B327	3.5	14	03/25/15	1255	Soil	6						
B328-02.5	B328	02.5	15	03/25/15	1455	Soil	6					(X)	
B328-0.5	B328	1.5	16		1505		6	X	X	X	X		
B328-0.75		0.75	17		1510		6						
B328-1.0		1.0	18		1515		6						
B328-12.5		12.5	19		1520		6						
B328-1.5		1.5	20		1525		6	X	X	X	X		
B328-2.0		2.0	21		1530		6						
B328-2.25		2.25	22		1535		6						
B328-2.5		2.5	23		1540		6	X	X	X	X		
B328-2.75		2.75	24		1555		6						
B328-2.5		2.5	25		1600		6						
B328-3.0		3.0	26		1605		6						

Samples received at 4:00

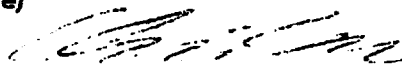
Friedman Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 283-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>[Signature]</i>	Chris Cass	SoundEarth	3/25/15	1655
<i>[Signature]</i>	HONG NGUYEN	FBI	✓	✓
Relinquished by:				
Received by:				

503484

SAMPLE CHAIN OF CUSTODY ME 03-25-15

Send Report To Tim Brown, cc: Jessica Brown, Courtney Porter, Jennifer Cyr
 Company SoundEarth Strategies, Inc.
 Address 2811 Fairview Ave E, Suite 2000
 City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) 	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS <u>Hold</u>	EIM Y / N

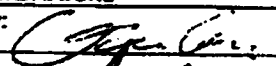

Page # 3 of 3

TURNAROUND TIME Standard (2 Weeks) RUSH _____ Rush charges authorized by: _____
SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRPH by NWTPH-Cx	DRPH and CRPH by NWTPH-Dx	BTX by 8021B	Notes
B328-35	CT 7/1/15	8358	21A	03/25/15	1610	Soil	6				
B328-35	CT 7/1/15	8358	287	03/25/15	1615	Soil	6				
03/25/15											

Samples received at 4 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Chris Cassi	SoundEarth	3/25/15	1655
Received by: 	HONG NGUYEN	FBI	✓	✓
Relinquished by:				
Received by:				

Friedman & Bruya, Inc. #503511

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 14, 2015

Tim Brown, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Brown:

Included is the amended report from the testing of material submitted on March 26, 2015 from the TOC_01-600_20150326 WORFDB8, F&BI 503511 project. Per your request, the sample IDs have been amended.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Jessica Brown, Courtney Porter, Jennifer Cyr, Clare Tochilin
SOU0407R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
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fbi@isomedia.com
www.friedmanandbruya.com

April 7, 2015

Tim Brown, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on March 26, 2015 from the TOC_01-600_20150326 WORFDB8, F&BI 503511 project. There are 18 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Jessica Brown, Courtney Porter, Jennifer Cyr
SOU0407R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 26, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-600_20150326 WORFDB8, F&BI 503511 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
503511 -01	B359-02.5
503511 -02	B359-5
503511 -03	B359-07.5
503511 -04	B359-10
503511 -05	B359-12.5
503511 -06	B359-15
503511 -07	B359-17.5
503511 -08	B359-20
503511 -09	B359-22.5
503511 -10	B359-25
503511 -11	B360-02.5
503511 -12	B360-05
503511 -13	B360-07.5
503511 -14	B360-10
503511 -15	B360-12.5
503511 -16	B360-15
503511 -17	B360-17.5
503511 -18	B360-20
503511 -19	B360-22.5
503511 -20	B360-25
503511 -21	B361-02.5
503511 -22	B361-05
503511 -23	B361-07.5
503511 -24	B361-10
503511 -25	B361-12.5
503511 -26	B361-15
503511 -27	B361-17.5
503511 -28	B361-20
503511 -29	B361-22.5
503511 -30	B361-25

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/26/15

Project: TOC_01-600_20150326 WORFDB8, F&BI 503511

Date Extracted: 03/30/15

Date Analyzed: 03/30/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
B359-02.5 503511-01	<0.02	<0.02	<0.02	<0.06	<2	91
B359-10 503511-04	<0.02	<0.02	<0.02	<0.06	<2	91
B359-20 503511-08	<0.02	<0.02	<0.02	<0.06	<2	90
B360-02.5 503511-11	<0.02	<0.02	<0.02	<0.06	<2	78
B360-10 503511-14	<0.02	<0.02	<0.02	<0.06	<2	90
B360-17.5 503511-17	<0.02	<0.02	<0.02	<0.06	<2	77
B361-02.5 503511-21	<0.02	<0.02	<0.02	<0.06	<2	89
B361-10 503511-24	<0.02	<0.02	<0.02	<0.06	<2	90
B361-20 503511-28	<0.02	<0.02	<0.02	<0.06	<2	90
B361-22.5 503511-29	<0.02	<0.02	<0.02	<0.06	<2	78
Method Blank 05-0603 MB	<0.02	<0.02	<0.02	<0.06	<2	79

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/26/15

Project: TOC_01-600_20150326 WORFDB8, F&BI 503511

Date Extracted: 03/30/15

Date Analyzed: 03/30/15

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 56-165)
B359-02.5 503511-01	<50	<250	110
B359-10 503511-04	<50	<250	92
B359-20 503511-08	<50	<250	95
B360-02.5 503511-11	<50	<250	93
B360-10 503511-14	<50	<250	93
B360-17.5 503511-17	<50	<250	100
B361-02.5 503511-21	<50	<250	94
B361-10 503511-24	<50	<250	93
B361-20 503511-28	<50	<250	103
B361-22.5 503511-29	<50	<250	103
Method Blank 05-652 MB	<50	<250	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B359-02.5	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-01 1/5
Date Analyzed:	04/01/15	Data File:	040113.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	74	50	150
Phenol-d6	88	50	150
2,4,6-Tribromophenol	87	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B359-10	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-04 1/5
Date Analyzed:	04/01/15	Data File:	040114.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	74	50	150
Phenol-d6	91	50	150
2,4,6-Tribromophenol	90	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B359-20	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-08 1/5
Date Analyzed:	04/01/15	Data File:	040115.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	70	50	150
Phenol-d6	85	50	150
2,4,6-Tribromophenol	79	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B360-02.5	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-11 1/5
Date Analyzed:	04/01/15	Data File:	040116.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	72	50	150
Phenol-d6	84	50	150
2,4,6-Tribromophenol	85	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B360-10	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-14 1/5
Date Analyzed:	04/01/15	Data File:	040117.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	95	50	150
Phenol-d6	87	50	150
2,4,6-Tribromophenol	82	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B360-17.5	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-17 1/5
Date Analyzed:	04/01/15	Data File:	040118.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	93	50	150
Phenol-d6	85	50	150
2,4,6-Tribromophenol	86	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B361-02.5	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-21 1/5
Date Analyzed:	04/01/15	Data File:	040119.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	95	50	150
Phenol-d6	86	50	150
2,4,6-Tribromophenol	89	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B361-10	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-24 1/5
Date Analyzed:	04/01/15	Data File:	040120.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	97	50	150
Phenol-d6	83	50	150
2,4,6-Tribromophenol	86	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B361-20	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-28 1/5
Date Analyzed:	04/01/15	Data File:	040121.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	98	50	150
Phenol-d6	85	50	150
2,4,6-Tribromophenol	90	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B361-22.5	Client:	SoundEarth Strategies
Date Received:	03/26/15	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	503511-29 1/5
Date Analyzed:	04/01/15	Data File:	040122.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	97	50	150
Phenol-d6	83	50	150
2,4,6-Tribromophenol	85	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20150326, F&BI 503511
Date Extracted:	03/31/15	Lab ID:	05-668 mb 1/5
Date Analyzed:	04/01/15	Data File:	040106.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	87	50	150
Phenol-d6	92	50	150
2,4,6-Tribromophenol	85	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/26/15

Project: TOC_01-600_20150326 WORFDB8, F&BI 503511

**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: 503484-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	87	69-120
Toluene	mg/kg (ppm)	0.5	86	70-117
Ethylbenzene	mg/kg (ppm)	0.5	85	65-123
Xylenes	mg/kg (ppm)	1.5	84	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/26/15

Project: TOC_01-600_20150326 WORFDB8, F&BI 503511

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

Laboratory Code: 503484-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	106	103	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	108	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15

Date Received: 03/26/15

Project: TOC_01-600_20150326 WORFDB8, F&BI 503511

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: 503511-29 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Pentachlorophenol	mg/kg (ppm)	0.42	<0.1	82	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	mg/kg (ppm)	0.42	85	84	70-130	1

FRIEDMAN & BRUYA, INC.

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.

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 the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. 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 laboratory control sample(s) percent recovery and/or RPD were 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 analyte 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 with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.

(503511)

SAMPLE CHAIN OF CUSTODY ME 03-26-15

Page # 1/23

Send Report To: Tim Brown, cc: Jessica Brown, Courtney Porter, Jennifer Cox

Company: SoundEarth Strategies, Inc.

Address: 2811 Fairview Ave E, Suite 2000

City, State, ZIP: Seattle, WA 98102

SAMPLERS (signature) <i>[Signature]</i>	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO # 01-600
REMARKS <i>Hold</i>	EIM Y / N

TURNAROUND TIME Standard (2 Weeks) RUSH _____ Rush charges authorized by: _____
SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

Sample ID CST 7/1/15	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	DEPTH by MPTP-Dx	DEPTH and GPH by MPTP-Dx	STEX by GPH	PCPB, G230B	ECEAB	Addition Methods	2.46 TCP	2.45 TCP	2.44 TCP	Notes	
B359	B399	0.5	01A-F	03/21/15	0805	Soil	6	X	X	X	X	(X)	/					1- per JB 6/12/15 MA
B359-0.5		0.5	02		0810		6											
B359-0.5		0.5	03		0815		6											
B359-1.0		1.0	04		0820		6	X	X	X	X		/					
B359-1.25		1.25	05		0830		6											
B359-1.5		1.5	06		0845		6											
B359-1.75		1.75	07		0915		6											
B359-2.0		2.0	08		0920		6	X	X	X	X		/					
B359-2.25		2.25	09		0925		6											
B359-2.5		2.5	10		0930		6											
B359-2.75	B360	2.75	11		1035		6	X	X	X	X	(X)	/					Sample received at 3:00
B359-3.0		3.0	12		1040		6											
B359-3.25		3.25	13		1045		6											

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>	Chris Cox	SoundEarth	3/26/15	15:20
Received by: <i>[Signature]</i>	DOU	F+BI	11	15:20
Relinquished by:				
Received by:				

(503511)

SAMPLE CHAIN OF CUSTODY ME 03-26-15

BILL / JWH 3
Page # 3

Send Report To Jim Brown, CG; Jessica Brown, Courtney Porter, Jennifer Cyr
 Company SoundEarth Strategies, Inc.
 Address 2811 Fairview Ave E, Suite 2000
 City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) <i>[Signature]</i>	
PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal	PO# 01-600
REMARKS <u>Hold</u>	EM Y / N

TURNAROUND TIME Standard (2 Weeks) RUSH Rush charges authorized by:
SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRAPH by NHTPH-Cx	DEPTH and GRAPH by NHTPH-Cx	BTX by 8021B	PC 4, 8110	RCFA D	Phunds	Notes
B360	B360													
B330-10	B330	10	14	3/26/15	1050	Soil	6	X	X	X	X		✓	
B330-12.5	B330	12.5	15		1655									
B330-15		15	16		1100									
B330-17.5		17.5	17		1105			X	X	X	X		✓	
B330-20		20	18		1110									
B330-22.5		22.5	19		1115									
B330-25		25	20		1120									
B331-02.5	B331	02.5	21		1240			X	X	X	X	(X)	✓	
B331-05	B360	05	22		1245									
B331-07.5		07.5	23		1300									
B331-10		10	24		1305			X	X	X	X		✓	
B331-12.5		12.5	25		1310									
B331-15		15	26		1315									

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>	Chris Cost	SoundEarth	3/26/15	15:20
Received by: <i>[Signature]</i>	DO VO	FBI	4	15:20
Relinquished by:				
Received by:				

(503511)
 Send Report To Tim Brown, cc: Jessica Brown, Courtney Porter, Jennifer Cox
 Company SoundEarth Strategies, Inc.
 Address 2811 Fairview Ave E, Suite 2000
 City, State, ZIP Seattle, WA 98102

SAMPLE CHAIN OF CUSTODY ME 03-26-15

Page # 3 of 3 BDV/
3/1

SAMPLERS (signature) [Signature]

PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal PO # 01-600

REMARKS (Held) EIM Y / N

TURNAROUND TIME
 Standard (2 Weeks)
 RUSH _____
 Rush charges authorized by: _____

SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRPH by NHTPH-GK	DRPH and GRPH by NHTPH-GK	BTXK by NHTPH	POP by NHTPH	Plumb	Notes
<u>B361</u>	<u>B361</u>												
B331-17.5	B331	<u>17.5</u>	<u>28</u>	<u>3/26/15</u>	<u>1320</u>	<u>Soil</u>	<u>6</u>						
<u>B331-20</u>		<u>20</u>	<u>28</u>	<u>3/26/15</u>	<u>1320</u>		<u>6</u>	X	X	X	X		
<u>B331-22.5</u>		<u>22.5</u>	<u>28</u>		<u>1320</u>		<u>6</u>	X	X	X	X		
<u>B331-25</u>		<u>25</u>	<u>28</u>		<u>1335</u>		<u>6</u>	X	X	X	X		

Sample received at 2 15

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Chris Cross</u>	<u>SoundEarth</u>	<u>3/26/15</u>	<u>1520</u>
Received by: <u>[Signature]</u>	<u>DDW</u>	<u>FERI</u>	<u>"</u>	<u>15:20</u>
Relinquished by:				
Received by:				

Friedman & Bruya, Inc. #503539

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 14, 2015

Tim Brown, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Brown:

Included is the amended report from the testing of material submitted on March 27, 2015 from the TOC_01-600_20150327 WORFDB8, F&BI 503539 project. Per your request, the sample IDs have been amended.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Jessica Brown, Courtney Porter, Jennifer Cyr, Clare Tochilin
SOU0410R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 10, 2015

Tim Brown, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Brown:

Included are the results from the testing of material submitted on March 27, 2015 from the TOC_01-600_20150327 WORFDB8, F&BI 503539 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Jessica Brown, Courtney Porter, Jennifer Cyr
SOU0410R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 27, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-600_20150327, F&BI 503539 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
503539 -01	B362-02.5
503539 -02	B362-07.5
503539 -03	B362-10
503539 -04	B362-12.5
503539 -05	B362-15
503539 -06	B362-17.5
503539 -07	B362-20
503539 -08	B362-22.5
503539 -09	B362-25
503539 -10	B363-02.5
503539 -11	B363-05
503539 -12	B363-07.5
503539 -13	B363-10
503539 -14	B363-12.5
503539 -15	B363-15
503539 -16	B363-17.5
503539 -17	B363-20
503539 -18	B363-22.5
503539 -19	B363-25

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/27/15

Project: TOC_01-600_20150327 WORFDB8, F&BI 503539

Date Extracted: 04/02/15

Date Analyzed: 04/02/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-132)
B362-02.5 503539-01	<0.02	<0.02	<0.02	<0.06	<2	98
B362-07.5 503539-02	<0.02	<0.02	<0.02	<0.06	<2	98
B362-10 503539-03	<0.02	<0.02	<0.02	<0.06	<2	102
B362-15 503539-05	<0.02	<0.02	<0.02	<0.06	<2	102
B363-02.5 503539-10	<0.02	<0.02	<0.02	<0.06	<2	102
B363-05 503539-11	<0.02	<0.02	<0.02	<0.06	<2	109
B363-10 503539-13	<0.02	<0.02	<0.02	<0.06	<2	101
B363-15 503539-15	<0.02	<0.02	<0.02	<0.06	<2	105
Method Blank 05-0661 MB	<0.02	<0.02	<0.02	<0.06	<2	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/27/15

Project: TOC_01-600_20150327 WORFDB8, F&BI 503539

Date Extracted: 03/31/15

Date Analyzed: 03/31/15

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 48-168)
B362-02.5 503539-01	74 x	360	107
B362-07.5 503539-02	<50	<250	100
B362-10 503539-03	<50	<250	99
B362-15 503539-05	<50	<250	100
B363-02.5 503539-10	<50	<250	99
B363-05 503539-11	<50	<250	99
B363-10 503539-13	<50	<250	98
B363-15 503539-15	<50	<250	94
Method Blank 05-653 MB2	<50	<250	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B362-02.5	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-01 1/5
Date Analyzed:	04/07/15	Data File:	040718.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	104	50	150
Phenol-d6	99	50	150
2,4,6-Tribromophenol	123	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B362-07.5	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-02 1/5
Date Analyzed:	04/07/15	Data File:	040717.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	102	50	150
Phenol-d6	100	50	150
2,4,6-Tribromophenol	113	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B362-10	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-03 1/5
Date Analyzed:	04/07/15	Data File:	040710.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	105	50	150
Phenol-d6	97	50	150
2,4,6-Tribromophenol	101	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B362-15	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-05 1/5
Date Analyzed:	04/07/15	Data File:	040711.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	95	50	150
Phenol-d6	100	50	150
2,4,6-Tribromophenol	100	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B363-02.5	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-10 1/5
Date Analyzed:	04/07/15	Data File:	040712.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	99	50	150
Phenol-d6	94	50	150
2,4,6-Tribromophenol	105	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B363-05	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-11 1/5
Date Analyzed:	04/07/15	Data File:	040713.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	99	50	150
Phenol-d6	103	50	150
2,4,6-Tribromophenol	107	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B363-10	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-13 1/5
Date Analyzed:	04/07/15	Data File:	040714.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	99	50	150
Phenol-d6	92	50	150
2,4,6-Tribromophenol	102	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	B363-15	Client:	SoundEarth Strategies
Date Received:	03/27/15	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	503539-15 1/5
Date Analyzed:	04/07/15	Data File:	040715.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	98	50	150
Phenol-d6	95	50	150
2,4,6-Tribromophenol	106	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20150327 WORFDB8
Date Extracted:	04/06/15	Lab ID:	05-706 mb 1/5
Date Analyzed:	04/07/15	Data File:	040709.D
Matrix:	Soil	Instrument:	GCMS10
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	101	50	150
Phenol-d6	96	50	150
2,4,6-Tribromophenol	96	50	150

Compounds:	Concentration mg/kg (ppm)
Pentachlorophenol	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/27/15

Project: TOC_01-600_20150327 WORFDB8, F&BI 503539

**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: 503539-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	91	66-121
Toluene	mg/kg (ppm)	0.5	94	72-128
Ethylbenzene	mg/kg (ppm)	0.5	96	69-132
Xylenes	mg/kg (ppm)	1.5	96	69-131
Gasoline	mg/kg (ppm)	20	110	61-153

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/27/15

Project: TOC_01-600_20150327 WORFDB8, F&BI 503539

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

Laboratory Code: 503559-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	320	86	90	73-135	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/27/15

Project: TOC_01-600_20150327 WORFDB8, F&BI 503539

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: 503539-15 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Pentachlorophenol	mg/kg (ppm)	0.42	<0.1	89	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	mg/kg (ppm)	0.42	103	109	70-130	6

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.

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 the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. 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 laboratory control sample(s) percent recovery and/or RPD were 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 analyte 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 with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.

503539

SAMPLE CHAIN OF CUSTODY ME 03-27-15 CI9/VB3

Send Report To: John P. Jones, Inc.
 Company: Stratco, Inc.
 Address: 2811 E. 4th Ave. Ken. 5414 2001
 City, State, ZIP: Seattle, WA 98143
 Phone: 206-366-1900 Fax: 206-366-1907

SAMPLING INFORMATION
 PROJECT NAME/NO.: 01-600
 JOB NO.: 01-600
 REMARKS: A total of 6 pits
EMD
1
1

TO BE COMPLETED BY THE USER
 Standard @ Work
 HOME
 Fresh changes collected by:
SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED										Notes		
								Asst. Metals	Asst. Volatiles	Asst. PCBs	Asst. PAHs	Asst. Pesticides	Asst. Organics	Asst. Inorganics	Asst. Metals	Asst. Volatiles	Asst. PCBs		Asst. PAHs	
B363	B363																			
B333-12.5	B333	12.5	4P	03/27/15	1035	Soil	6													
B333-15		15	1ST		1040			X	X	X										
B333-17.5		17.5	16		1045															
B333-20		20	17		1050															
B333-22.5		22.5	18		1055															
B333-25	VO	25	19		1100															

Minerals & Drugs, Inc.
 3012 14th Avenue West
 Seattle, WA 98119
 Ph. (206) 266-0900
 Fax (206) 266-0044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<i>Chris Cass</i>	Chris Cass	Stratco	3/27/15	12:15
<i>[Signature]</i>	DR [Name]	FOUR	11	12:15

Friedman & Bruya, Inc. #504330

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 24, 2015

Jessica Brown, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Brown:

Included are the results from the testing of material submitted on April 17, 2015 from the TOC_01-600_20150417 WORFDB8, F&BI 504330 project. There are 18 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Courtney Porter, Jennifer Cyr
SOU0424R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-600_20150417 WORFDB8, F&BI 504330 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>SoundEarth Strategies</u>
504330 -01	01MW99-20140417
504330 -02	01MW100-20140417

The 8270D surrogate phenol-d6 did not pass the acceptance criteria. It is not associated with pentachlorophenol, therefore the results were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15

Date Received: 04/17/15

Project: TOC_01-600_20150417 WORFDB8, F&BI 504330

Date Extracted: 04/20/15

Date Analyzed: 04/20/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
01MW99-20140417 504330-01	<1	<1	<1	<3	<100	103
01MW100-20140417 504330-02	<1	<1	<1	<3	<100	98
Method Blank 05-758 MB	<1	<1	<1	<3	<100	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15

Date Received: 04/17/15

Project: TOC_01-600_20150417 WORFDB8, F&BI 504330

Date Extracted: 04/20/15

Date Analyzed: 04/21/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
01MW99-20140417 504330-01	410 x	<250	98
01MW100-20140417 504330-02	290 x	<250	75
Method Blank 05-805 MB	<50	<250	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW99-20140417	Client:	SoundEarth Strategies
Date Received:	04/17/15	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	504330-01
Date Analyzed:	04/20/15	Data File:	504330-01.154
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Indium	90	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	2.44
Barium	17.8
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	01MW100-20140417	Client:	SoundEarth Strategies
Date Received:	04/17/15	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	504330-02
Date Analyzed:	04/20/15	Data File:	504330-02.157
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	89	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	14.8
Cadmium	<1
Chromium	1.41
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	I5-230 mb
Date Analyzed:	04/20/15	Data File:	I5-230 mb.152
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	92	60	125
Indium	95	60	125
Holmium	98	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	01MW99-20140417	Client:	SoundEarth Strategies
Date Received:	04/17/15	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	504330-01
Date Analyzed:	04/21/15	Data File:	504330-01.011
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	83	60	125
Indium	83	60	125
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	2.43
Barium	17.8
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	01MW100-20140417	Client:	SoundEarth Strategies
Date Received:	04/17/15	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	504330-02
Date Analyzed:	04/21/15	Data File:	504330-02.012
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	81	60	125
Indium	84	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	11.9
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	I5-231 mb
Date Analyzed:	04/21/15	Data File:	I5-231 mb.009
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	99	60	125
Indium	99	60	125
Holmium	101	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW99-20140417	Client:	SoundEarth Strategies
Date Received:	04/17/15	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	504330-01
Date Analyzed:	04/21/15	Data File:	042107.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	69	50	150
Phenol-d6	45 vo	50	150
2,4,6-Tribromophenol	117	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	01MW100-20140417	Client:	SoundEarth Strategies
Date Received:	04/17/15	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	504330-02
Date Analyzed:	04/21/15	Data File:	042108.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	65	50	150
Phenol-d6	45 vo	50	150
2,4,6-Tribromophenol	100	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis for Semivolatile Phenols By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	TOC_01-600_20150417 WORFDB8
Date Extracted:	04/20/15	Lab ID:	05-823 mb
Date Analyzed:	04/21/15	Data File:	042106.D
Matrix:	Water	Instrument:	GCMS10
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	55	50	150
Phenol-d6	37 vo	50	150
2,4,6-Tribromophenol	93	50	150

Compounds:	Concentration ug/L (ppb)
Pentachlorophenol	<0.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15

Date Received: 04/17/15

Project: TOC_01-600_20150417 WORFDB8, F&BI 504330

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

Laboratory Code: 504327-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	84	65-118
Toluene	ug/L (ppb)	50	85	72-122
Ethylbenzene	ug/L (ppb)	50	88	73-126
Xylenes	ug/L (ppb)	150	84	74-118
Gasoline	ug/L (ppb)	1,000	102	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15

Date Received: 04/17/15

Project: TOC_01-600_20150417 WORFDB8, F&BI 504330

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	85	70	61-133	19

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15

Date Received: 04/17/15

Project: TOC_01-600_20150417 WORFDB8, F&BI 504330

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

Laboratory Code: 504330-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	2.44	110	104	60-150	6
Barium	ug/L (ppb)	50	17.8	104	99	79-126	5
Cadmium	ug/L (ppb)	5	<1	105	100	80-124	5
Chromium	ug/L (ppb)	20	<1	111	105	64-132	6
Lead	ug/L (ppb)	10	<1	101	98	79-121	3
Mercury	ug/L (ppb)	10	<1	98	97	50-150	1
Selenium	ug/L (ppb)	5	<1	115	108	68-142	6
Silver	ug/L (ppb)	5	<1	99	96	60-121	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	99	80-111
Barium	ug/L (ppb)	50	96	83-117
Cadmium	ug/L (ppb)	5	99	83-113
Chromium	ug/L (ppb)	20	100	80-119
Lead	ug/L (ppb)	10	97	83-115
Mercury	ug/L (ppb)	10	97	70-130
Selenium	ug/L (ppb)	5	104	81-119
Silver	ug/L (ppb)	5	95	75-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15

Date Received: 04/17/15

Project: TOC_01-600_20150417 WORFDB8, F&BI 504330

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

Laboratory Code: 504330-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	97	99	60-150	2
Barium	ug/L (ppb)	50	11.9	103	105	79-126	2
Cadmium	ug/L (ppb)	5	<1	99	102	80-124	3
Chromium	ug/L (ppb)	20	<1	103	105	64-132	2
Lead	ug/L (ppb)	10	<1	103	106	79-121	3
Mercury	ug/L (ppb)	10	<1	105	108	50-150	3
Selenium	ug/L (ppb)	5	<1	103	101	68-142	2
Silver	ug/L (ppb)	5	<1	95	98	60-121	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	102	80-111
Barium	ug/L (ppb)	50	103	83-117
Cadmium	ug/L (ppb)	5	103	83-113
Chromium	ug/L (ppb)	20	106	80-119
Lead	ug/L (ppb)	10	104	83-115
Mercury	ug/L (ppb)	10	101	70-130
Selenium	ug/L (ppb)	5	106	81-119
Silver	ug/L (ppb)	5	100	75-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15

Date Received: 04/17/15

Project: TOC_01-600_20150417 WORFDB8, F&BI 504330

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR SEMIVOLATILE PHENOLS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

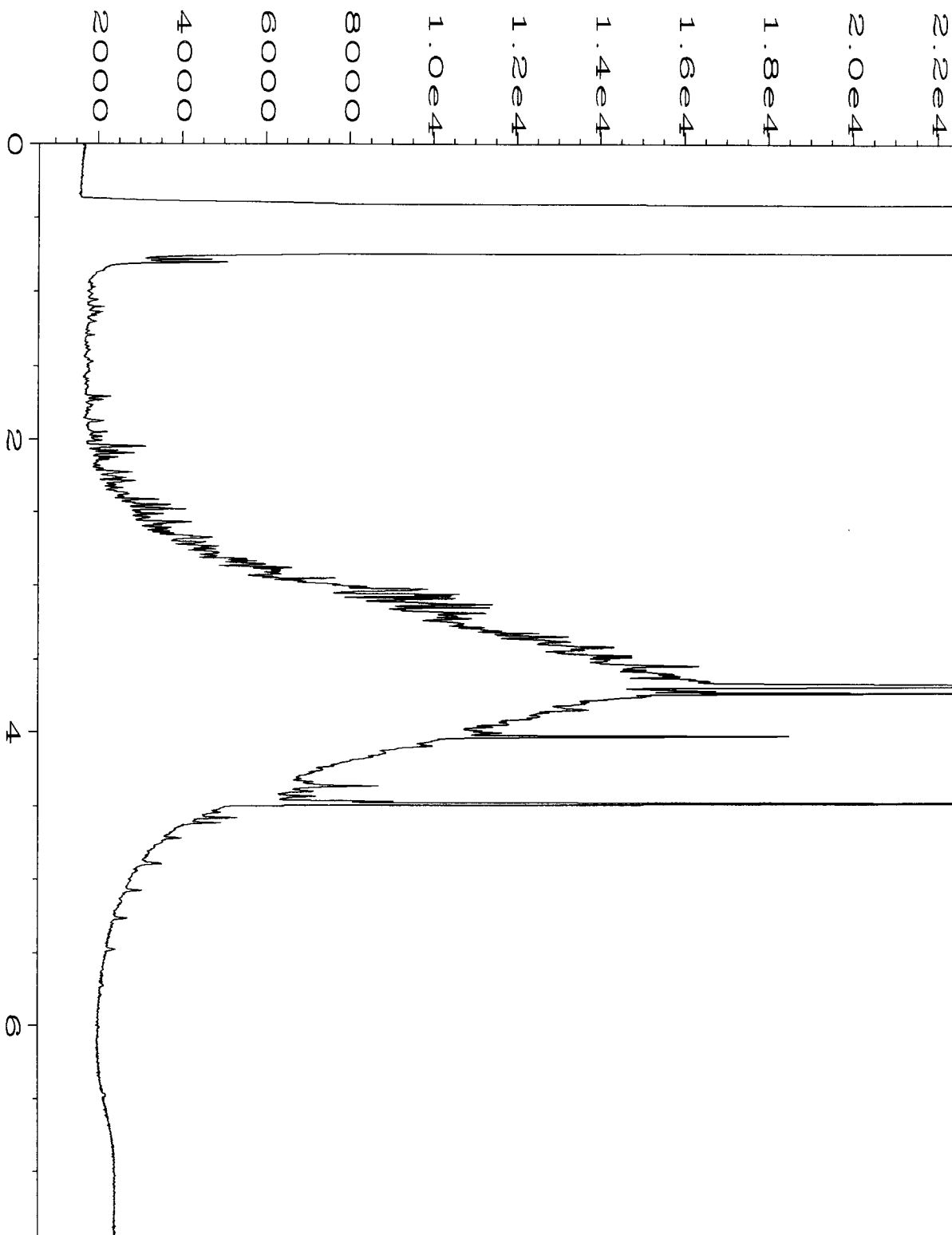
Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 30)
Pentachlorophenol	ug/L (ppb)	2.5	88	99	70-130	12

FRIEDMAN & BRUYA, INC.

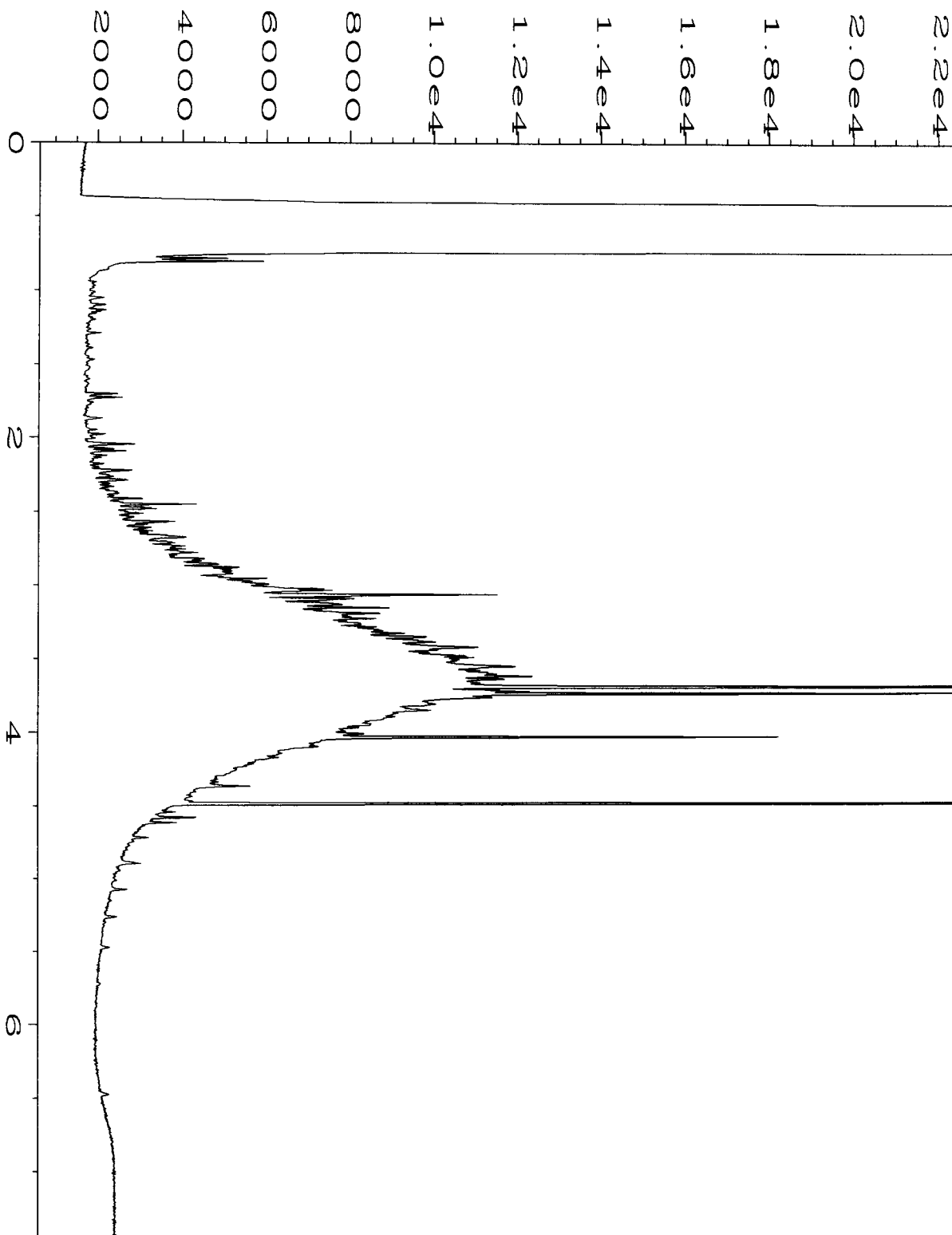
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

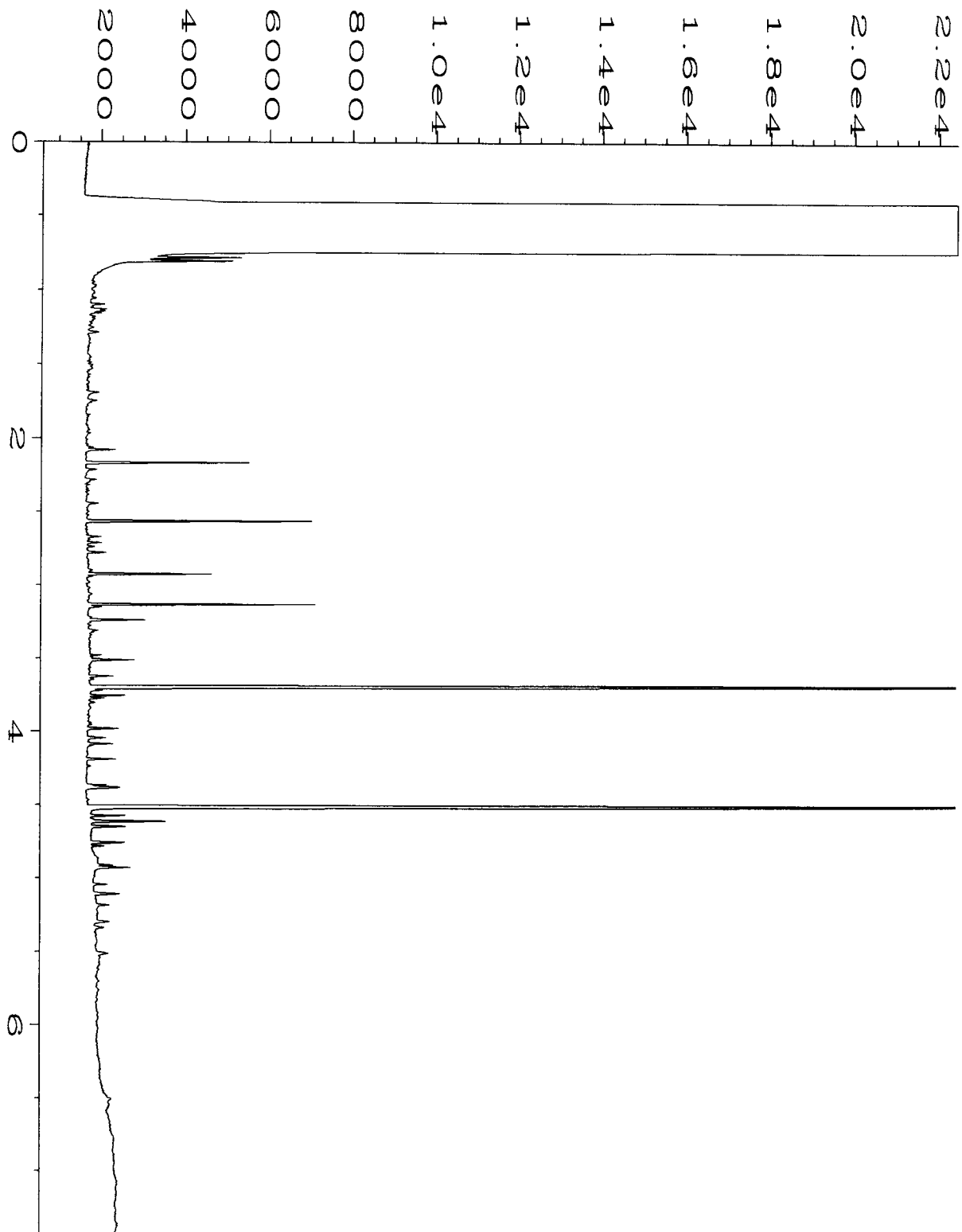
- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- 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. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. 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 laboratory control sample(s) percent recovery and/or RPD were 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 analyte 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 with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- 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.



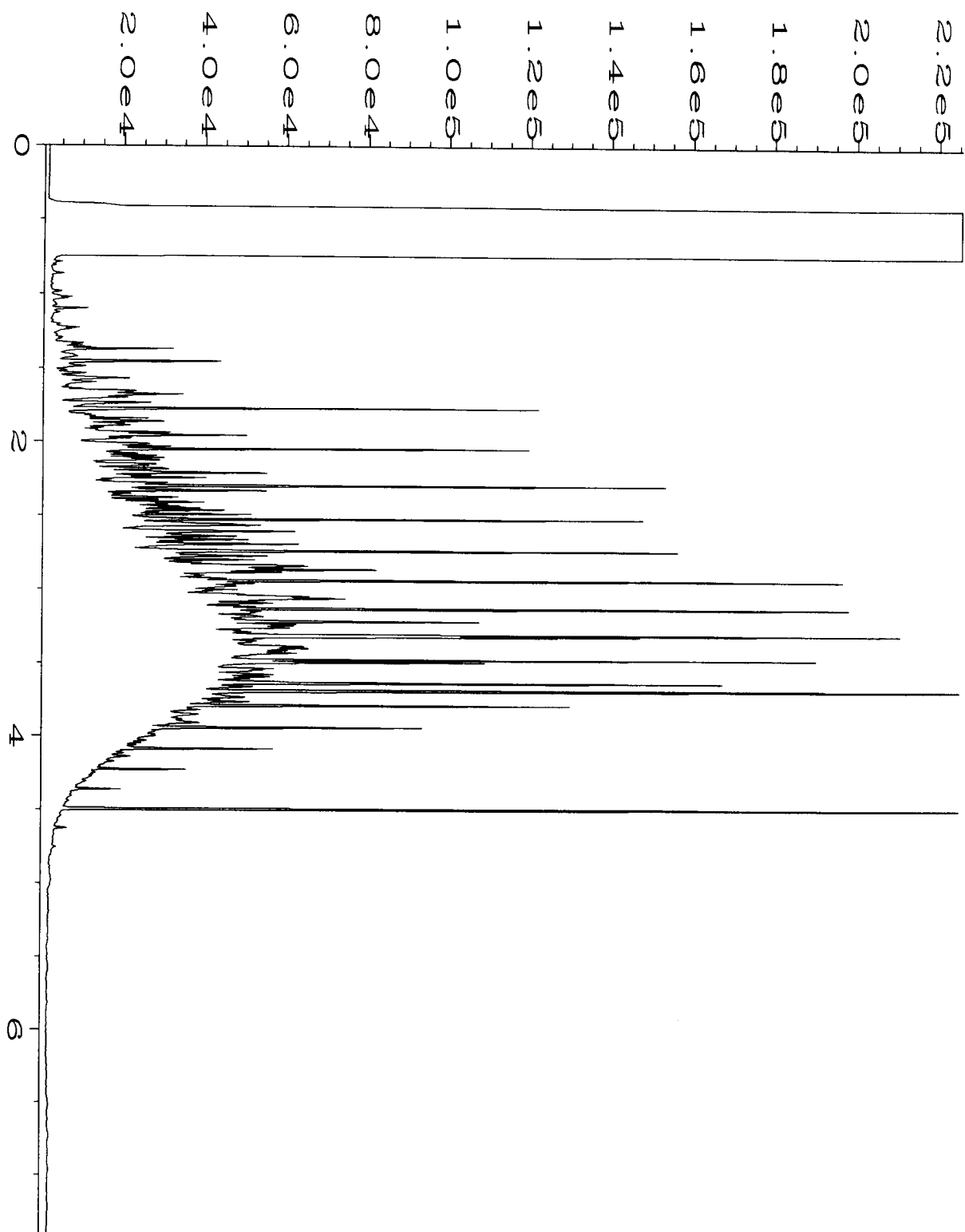
Data File Name	: C:\HPCHEM\4\DATA\04-21-15\009F0301.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 9
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 504330-01	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 21 Apr 15 09:45 AM	Analysis Method	: DX.MTH
Report Created on:	22 Apr 15 10:18 AM		



Data File Name	: C:\HPCHEM\4\DATA\04-21-15\010F0301.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 10
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 504330-02	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 21 Apr 15 09:56 AM	Analysis Method	: DX.MTH
Report Created on:	22 Apr 15 10:18 AM		



Data File Name	: C:\HPCHEM\4\DATA\04-21-15\006F0301.D	Page Number	: 1
Operator	: mwd1	Vial Number	: 6
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 05-805 mb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 21 Apr 15 09:12 AM	Analysis Method	: DX.MTH
Report Created on:	22 Apr 15 10:18 AM		



Data File Name	: C:\HPCHEM\4\DATA\04-21-15\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 44-94C	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 21 Apr 15 08:46 AM	Analysis Method	: DX.MTH
Report Created on:	22 Apr 15 10:18 AM		

504330

SAMPLE CHAIN OF CUSTODY

ME 4/17/15

DOY, A13, V2

Send Report To Jessica Brown, Courtney Porter, Jennifer Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Ave E, Suite 2000

City, State, ZIP Seattle, WA 98102

SAMPLERS (signature) [Signature]

PROJECT NAME/NO. TOC Holdings Co. Facility No. 01-600 Seattle Terminal PO # 01-600

REMARKS Sample for RCRA 8 dissolved metals was filtered in the field with 0.45 micron in-line filter. EIM Y / N

Page # 1 of 1

TURNAROUND TIME
~~Standard (2 Weeks)~~
 RUSH 48 hours 4/17/15 me
 Rush charges authorized by: M JB me

SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	GRPH by NWTPH-Gx	DRPH and ORPH by NWTPH-Dx	BTEX by 8021B	PCP by Method 8290D	RCRA 8 metals by 200.8/1631E (Total)	RCRA 8 Metals by 8116 SIP * Dissolved	Notes
01MW99-2050417	01MW99	27	01A-G	04/17/15	1353	Water	7	X	X	X	X	X	X	
01MW00-2050417	01MW00	25	02A-G	04/17/15	1505	Water	7	X	X	X	X	X	X	

Collected 04/17/15

Samples received at 5 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Chris Cass</u>	<u>SoundEarth Strategies</u>	<u>04/17/15</u>	<u>1607</u>
Received by: <u>[Signature]</u>	<u>Neil Kayster</u>	<u>F-RTc</u>	<u>4/17/15</u>	<u>1607</u>
Relinquished by:				
Received by:				