Operations & Maintenance Report, Third Quarter 2013

TOC Holdings Co.
Facility No. 01-176
24205 56th Avenue West
Mountlake Terrace, WA 98043

now

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v.2

Sign-off Sheet

Please note that effective May 9, 2014, the employees of **JBR Environmental Consultants, Inc. (JBR)** have joined **Stantec Consulting Services Inc. (Stantec)**. You will continue to see the same people, doing business with you the same way, and with the same goal: to safely deliver the highest level of service while always striving to exceed your expectations.

This document entitled ***Operations and Maintenance Report, Third Quarter 2013,*** was prepared by JBR (now Stantec) on behalf of **TOC Holdings Co. (TOC)** for specific application to TOC Facility No. 01-176 in Mountlake Terrace, Washington. A draft document was previously submitted to Ecology by the prior consultant, SoundEarth Strategies, Inc. (SES), but was not approved. Services conducted by JBR (now Stantec) for this project were conducted in accordance with the Environmental Services Contract between **Anderson Environmental Contracting, LLC (AEC)** and JBR. Stantec will be entering into a contract with AEC in the near future for the project. Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule, and other limitations stated in the document and in the contract between JBR and AEC. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Revision Note: *This Report (initially submitted May 28, 2014) includes revisions to Section 3.1 and Figure 3 to incorporate corrected outfall information for the State Waste Discharge Permit.*

This document was prepared under the supervision and direction of the key staff below.

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Abbreviations & Acronyms

µg/L	micrograms per liter
AEC	Anderson Environmental Contracting, LLC
AO	Agreed Order
AWS	Air/Water Separator
BTEX	Benzene, Toluene, Ethylbenzene, and Total Xylenes
City	City of Mountlake Terrace, Washington
DMR	Discharge Monitoring Report
DPE	Dual-Phase Extraction
Ecology	Washington State Department of Ecology
GAC	Granular-Activated Carbon
gallons/day	gallons per day
gallons/minute	gallons per minute
GRPH	Gasoline-Range Petroleum Hydrocarbons
JBR	JBR Environmental Consultants, Inc.
lb/day	pounds per day
LNAPL	Light Nonaqueous-Phase Liquid
mg/m^3	milligrams per cubic meter
MPE	Multi-Phase Extraction
MTCA	Model Toxics Control Act
NOC	Notice of Construction
O&M	Operation and Maintenance
OWS	Oil/Water Separator
ppm_v	parts per million vapor
PSCAA	Puget Sound Clean Air Agency
ROW	Right-of-Way
SEPA	State Environmental Policy Act
SES	SoundEarth Strategies, Inc.
Stantec	Stantec Consulting Services Inc.
SUP	Special Use Permit
SVE	Soil Vapor Extraction
SWD	State Waste Discharge
TOC	TOC Holdings Co.
VOC	Volatile Organic Compound

Properties

TOC Property	24205 56th Avenue West; Mountlake Terrace, WA
TOC/Farmasonis Property	24225 56th Avenue West; Mountlake Terrace, WA
Drake Property	24309 56th Avenue West; Mountlake Terrace, WA

Executive Summary

This report documents the **Third Quarter 2013** operation and maintenance (O&M) activities from July through September 2013 associated with interim remedial actions currently being implemented at TOC Holdings Co. (TOC) Facility No. 01-176 located in Mountlake Terrace, Washington. The interim remedial actions are being implemented within the Interim Remedial Action Project Area, which encompasses the following properties, as defined in the Agreed Order (AO) No. DE 8661 between the Washington Department of Ecology (Ecology) and TOC: 1) TOC Property, located at 24205 56th Avenue West, 2) TOC/Farmasonis Property, located at 24225 56th Avenue West, 3) Drake Property, located at 24309 56th Avenue West, and 4) portions of the 56th Avenue West right-of-way (ROW). These properties constitute the TOC Site, as defined by the AO.

This report was originally submitted to Ecology by SoundEarth Strategies (SES) on December 30, 2013 but did not meet the reporting requirements, as indicated in an email from David South from Ecology, dated January 30, 2014. Since that time, JBR Environmental Consultants, Inc. (now Stantec Consulting Services Inc. [Stantec]) has been hired by TOC to take over environmental consulting responsibilities on the project. This report has been modified by Stantec to meet the reporting requirements, in response to Ecology's comments, but the work was conducted by SES during this Quarter.

Three multi-phase extraction systems have been installed within the Interim Remedial Action Project Area for remediation of petroleum hydrocarbon-contaminated groundwater, vapor, and free product (where present). Unit 1 is located on and performs remediation for the TOC Property and Units 2 and 3 are located on the TOC/Farmasonis Property and perform remediation for the TOC/Farmasonis and Drake Properties, respectively. This report includes a description of the multi-phase extraction systems, permit compliance, performance, and optimization efforts. A summary of the multi-phase extraction system performance and maintenance activities during this Quarter is provided below:

- A combined total of 148.8 pounds of vapor-phase hydrocarbons was removed during this reporting period, and a cumulative total of 1,644.2 pounds since startup in October 2012. In addition, a volume of 275,022 gallons of groundwater was extracted, treated, and discharged during this period. The total volume of water processed since system startup is approximately 636,530 gallons.

- There was no recovered light nonaqueous-phase liquid (LNAPL) from the three multi-phase extraction systems. Also, the oil/water separator (OWS) for each system was inspected, and no LNAPL or sheen was visible on the liquid contents.

- System optimization activities during this reporting period focused on balancing the flow of water through the OWS and addressing issues associated with the granular-activated carbon (GAC) canisters. These activities are described in more detail in the following sections.

1.0 INTRODUCTION

This report documents the **Third Quarter 2013** O&M activities from July through September 2013 associated with interim remedial actions currently being implemented at TOC Facility No. 01-176 located in Mountlake Terrace, Washington. The interim remedial actions are being implemented within the Interim Remedial Action Project Area, which encompasses the following properties, as defined in the AO No. DE 8661 between Ecology and TOC: 1) TOC Property, located at 24205 56th Avenue West, 2) TOC/Farmasonis Property, located at 24225 56th Avenue West, 3) Drake Property, located at 24309 56th Avenue West, and 4) portions of the 56th Avenue West ROW. These properties constitute the TOC Site, as defined by the AO.

This report was originally submitted to Ecology by SES on December 30, 2013, but did not meet the reporting requirements, as indicated in an email from David South from Ecology, dated January 30, 2014. Since that time, Stantec has been hired by TOC to take over environmental consulting responsibilities on the project. This report has been modified by Stantec to meet the reporting requirements, in response to Ecology's comments, but the work was conducted by SES during this Quarter. As such, figures and tables prepared by SES are included in this report and not modified by Stantec.

Three multi-phase extraction systems have been installed within the Interim Remedial Action Project Area for remediation of petroleum hydrocarbon-contaminated groundwater, vapor, and free product (where present). Unit 1 is located on and performs remediation for the TOC Property and Units 2 and 3 are located on the TOC/Farmasonis Property and perform remediation for the TOC/Farmasonis and Drake Properties, respectively. This report includes a description of the multi-phase extraction systems, permit compliance, performance, and optimization efforts.

2.0 SYSTEM DESCRIPTION

The following is a brief description of the remedial system history, current system configurations, and a description of system modifications.

2.1 SYSTEM BACKGROUND

TOC (formerly Time Oil Co.) operated a retail gasoline station on the TOC Property between 1968 and 1990. One 8,000-gallon and two 6,000-gallon underground storage tanks were removed from the TOC Property in 1991. The TOC Property is currently vacant. A dual-phase extraction remediation system (former DPE system) was installed at the TOC Property in 1996 and operated until October 2004. In 2006, SES confirmed that gasoline contamination extended downgradient of the TOC Property to the south and west based on groundwater monitoring results. In October 2011, the AO between TOC and Ecology became effective. In accordance with the AO, SES initiated a remedial investigation at the TOC site. Additionally, the former DPE system was removed and three multi-phase extraction (MPE) systems were installed between November 2011 and August 2012. The three MPE systems (Units 1, 2, and 3) began operating in October 2012.

MPE is an in situ remedial technology that simultaneously extracts multiple fluid phases from remediation wells. The phases generally include vapor phase, dissolved phase (i.e. groundwater), and LNAPL or free product.

2.2 CURRENT SYSTEM

Each MPE system consists of a self-contained, aboveground equipment enclosure. The MPE system for the TOC Property (Unit 1) is located within a fenced enclosure on the TOC Property. The MPE systems for the TOC/Farmasonis Property (Unit 2) and Drake Property (Unit 3) are co-located within a single fenced enclosure located on the eastern side of the TOC/Farmasonis Property. The three MPE systems are basically identical, with the exception of their orientation, mirror-image layouts, and the number of remediation wells serving each MPE system. A total of 24 remediation wells serve the three MPE systems: 9 wells at the TOC Property, 6 wells at the TOC/Farmasonis Property, and 9 wells at the Drake Property (**Figure 1**). The individual MPE equipment enclosures were custom fabricated in accordance with the Washington State Department of Labor and Industry requirements for factory-assembled structures.

Each of the remediation wells is equipped with a down-hole pneumatic pump to extract petroleum-impacted groundwater (dissolved-phase petroleum hydrocarbons) and recoverable LNAPL. In addition, each MPE system is equipped with a soil vapor extraction (SVE) blower. The SVE blowers are intended to extract soil vapors (vapor-phase petroleum hydrocarbons) from the remediation wells. Process piping is utilized to convey recovered fluids (groundwater, LNAPL and vapor) from the remediation wells to the MPE system enclosures. The piping and instrumentation diagram presented on **Figure 2** illustrates the process flow and major mechanical equipment associated with treatment systems.

Extracted groundwater is conveyed to each MPE system for phase separation, treatment, and permitted discharge to the sanitary sewer in accordance with Ecology State Waste Discharge Permit No. ST0007384. The extracted groundwater is processed through an OWS which is designed to process up to 10 gallons per minute (gallons/minute). The effluent from the OWS is pumped through three 55-gallon GAC canisters to remove dissolved phase volatile organic compounds (VOCs) prior to being discharged to the sanitary sewer. When present, LNAPL recovered with the OWS is temporarily stored in a 55-gallon product drum prior to disposal or recycling at an offsite facility.

The SVE blower(s) creates the vacuum pressure necessary to extract soil vapors from the remediation wells. The extracted soil vapors are processed through an air/water separator (AWS) and a catalytic oxidizer. The AWS removes particulate and liquids from the air stream to prevent damage to the SVE blower and ancillary equipment. The vapors are thermally treated by the catalytic oxidizer prior to being discharged to the atmosphere, in accordance with the Puget Sound Clean Air Agency (PSCCA) Notice of Construction (NOC) No. 10384.

2.3 SYSTEM MODIFICATIONS

During this Quarter, system modifications included: 1) installation of totalizing flow meters, 2) adjustment of the GAC spill pans, and 3) installation of bag filter housing for Unit 3.

The City of Mountlake Terrace (the City) required the installation of flow meters to monitor volume of water discharged to the sewer. These meters were equipped with telemetry compatible with the City's remote meter monitoring system. The flow meters were installed on the exterior of the remedial system enclosures. Heat trace and insulation were added to the piping and meter to provide freeze protection.

The GAC spill pans were modified to lift the GAC canisters above the floor of the spill pan to prevent electrolysis, which was assumed to be causing pinhole leaks in the canisters. This will be an ongoing modification to the spill pans until all GAC canisters are lifted and placed on a non-conductive, nonmetal drum platform.

A bag filter housing was installed on the Drake Property system (Unit 3) to prevent sediment from accumulating in the lead GAC canister.

3.0 PERMITS

State, regional, and local permit requirements apply to the interim remedial action. Pursuant to the Revised Code of Washington 70.105D.090(1), TOC's interim remedial actions under the AO are exempt from the procedural requirements of any laws requiring or authorizing local government permits or approvals; however, TOC must comply with the substantive requirements of such permits or approvals.

Local requirements for clearing, grading, and erosion control activities were addressed through review under the State Environmental Policy Act (SEPA), which included public comment period through September 26, 2011. State and regional permit requirements beyond the jurisdiction of the AO are discussed below in Sections 3.1 (State Waste Discharge Permit), 3.2 (PSCAA Order of Approval), and 3.3 (Special Use Permit).

3.1 STATE WASTE DISCHARGE PERMIT

State Waste Discharge Permit ST0007384 (SWD Permit) authorizes and regulates operation of and discharges from the three MPE systems on the TOC Site, effective July 2, 2012 through June 19, 2017. Ecology's Water Quality Program administers the wastewater discharge permit, wastewater compliance sampling, record-keeping, and submittal schedule. Discharge Monitoring Reports (DMRs) are submitted to Ecology monthly. The DMR is a summary report which presents the monitoring data obtained during the reporting period. A summary of the maximum daily effluent limits established by the permit are summarized below:

- The maximum daily volumes of water to be discharged to Outfalls 001 and 002 shall be 7,000 and 14,000 gallons per day (gallons/day), respectively.
- pH shall be between 6 and 10 Standard Units.
- Benzene concentrations shall not exceed 5 micrograms per liter (µg/L).
- Benzene, toluene, ethylbenzene, and total xylene (BTEX) cumulative concentration shall not exceed 100 µg/L.
- Gasoline-Range Petroleum Hydrocarbons (GRPH) shall not exceed 1,000 µg/L.
- Total lead shall not exceed 1,090 µg/L.

The SWD Permit identifies two outfall locations where compliance with the maximum daily effluent limits must be attained: the MPE system for the TOC Property (Unit 1) discharges to Outfall 001; the MPE systems for the TOC/Farmasonis Property (Unit 2) and the Drake Property (Unit 3) discharge to Outfall 002. Effluent from each of the three MPE systems is sampled on a monthly basis at points adjacent to each MPE system (**Figure 3**). Discharges from Units 2 and 3 combine after the effluent sampling points at approximately the location of Outfall 002. The minimum, maximum and average effluent concentrations are reported in the DMR submitted to Ecology.

Based on recent field measurements, the latitude and longitude for the designated Outfall 001 location in the SWD Permit is incorrect. The outfall locations designated in the SWD Permit and the corrected location for Outfall 001 is shown on **Figure 3**. The corrected coordinates for Outfall 1 are as follows:

Outfall 001 (MPE Unit 1)
Latitude: 47.7790381° North
Longitude: -122.3079532° West
WA State Plane North: 389498.11 M East
87673.575 M North

A letter documenting the change to the outfall locations in the SWD Permit was provided to Ecology's Water Quality Program.

3.2 PSCAA ORDER OF APPROVAL

Puget Sound Clean Air Agency (PSCAA) issued an Order of Approval for NOC 10384 on May 13, 2012, which establishes the conditions and restrictions for the operation of the catalytic oxidizers. The key conditions and restrictions are summarized below:

- All emissions from each of the three SVE blowers shall be routed through their associated catalytic oxidizer.
- The flow through each catalytic oxidizer shall not exceed 350 standard cubic feet per minute. The flow rate shall be monitored monthly.
- The temperature of the vapor entering the catalytic bed shall be at least 240 degrees Celsius (464 degrees Fahrenheit), and the temperature of the vapor exiting the oxidizer bed shall not exceed 620 degrees Celsius (1148 degrees Fahrenheit).
- The destruction and removal efficiency of the GRPH flowing into and out of the catalytic oxidizer shall be 95 percent unless the concentration of GRPH in the vapor exiting the catalytic oxidizer does not exceed 50 parts per million vapor (ppm_v).
- The catalytic oxidizers may be removed and SVE emissions can be vented directly to the atmosphere through a stack provided the benzene and GRPH concentrations remain below 0.5 and 50 ppm_v, respectively, for a period of 3 consecutive months. The catalytic oxidizer shall be reactivated if concentrations of benzene or GRPH exceed 0.5 or 50 ppm_v, respectively.

3.3 SPECIAL USE PERMIT

The Special Use Permit (SUP) executed between TOC and the City addresses interim remedial activities that extend into City ROWs. Specifically, the SUP (1) allows the discharge of treated wastewater to the City sanitary sewer network for conveyance to the City of Edmonds publicly owned treatment works under the State Waste Discharge Permit and (2) retroactively administers the installation, maintenance, sampling, repair and/or decommissioning of Interim Remedial Action Project Area monitoring wells that are located within the City ROWs.

4.0 SYSTEM PERFORMANCE

Prior to system startup, concentrations of BTEX and/or GRPH in groundwater exceeded their respective Washington State Model Toxics Control Act (MTCA) Method A cleanup levels in 17 out of 68 Intermediate Zone wells (including Intermediate Zone wells that intersect Shallow Zone conditions) located within the Interim Remedial Action Project Area. Thirteen of these wells are connected to one of the three remediation systems.

4.1 TOC PROPERTY

The following is a summary of the **Third Quarter 2013** system O&M at the TOC Property:

- The MPE operation time this Quarter was approximately 76 percent (**Table 1A**). System down time is attributed to GAC canister fouling and OWS high level alarms.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 138 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was approximately 3.12 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal to date is approximately 1,111 pounds (**Tables 1A, 2A, and 3A**).
- The volume of groundwater extracted during this reporting period was 83,540.3 gallons (**Tables 1A and 3A**). The average flow rate of groundwater recovery was 918 gallons/day (**Tables 1A and 3A**).
- No LNAPL was recovered from the OWS. Also, the OWS was inspected, and no LNAPL or sheen was visible on the liquid contents.
- The SVE daily mass removal rate ranged from 0.21 to 4.31 pounds per day (lb/day) during this Quarter (**Table 2A**).
- The effluent concentration of GRPH exiting the catalytic oxidizer was not detected at concentrations above the laboratory's lower reporting limit of 10 milligrams per cubic meter (mg/m3; 2.329 ppm_v; **Table 4A**).
- All system operations were in compliance with Ecology's Water Quality Program and PSCAA permits (**Tables 4A and 5A**).

4.2 TOC / FARMASONIS PROPERTY

The following is a summary of the **Third Quarter 2013** system O&M at the TOC/Farmasonis Property:

- The MPE operation time this Quarter was approximately 82.2 percent (**Table 1B**). System down time is attributed to maintenance on the GAC canisters due to fouling.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 6.2 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process

was 0.05 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal was approximately 498 pounds (**Tables 1B, 2B, and 3B**).

- The volume of groundwater extracted during this reporting period was approximately 123,303 gallons (**Tables 1B and 3B**). The average flow rate of groundwater recovery was 1,355 gallons/day (**Tables 1B and 3B**).
- No LNAPL was recovered from the OWS. Also, the OWS was inspected, and no LNAPL or sheen was visible on the liquid contents.
- The daily vapor mass removal rate ranged from 0.07 to 0.08 lb/day during this Quarter (**Table 2B**).
- The effluent concentration of GRPH exiting the catalytic oxidizer was not detected at concentrations above the laboratory's lower reporting limit of 10 mg/m^3 (2.329 ppm$_v$; **Table 4B**).
- All system operations were in compliance with Ecology's Water Quality Program and PSCAA permits (**Tables 4B and 5B**).

4.3 DRAKE PROPERTY

The following is a summary of the **Third Quarter 2013** system O&M at the Drake Property:

- The MPE operation time this Quarter was approximately 64 percent (**Table 1C)**. System down time was attributed to GAC canister maintenance and installation of a bag filter between the OWS and the lead GAC canister.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 4.6 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was approximately 0.16 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal to date is approximately 43.6 pounds (**Tables 1C, 2C, and 3C**).
- The volume of groundwater extracted during this reporting period was approximately 68,179 gallons (**Tables 1C and 3C**). The average flow rate of groundwater recovery was 749 gallons/day (**Tables 1C and 3C**).
- No LNAPL was recovered from the OWS. Also, the OWS was inspected, and no LNAPL or sheen was visible on the liquid contents.
- The average daily vapor mass removal rate was 0.1 lb/day during this Quarter (**Table 2C**).
- The effluent concentration of GRPH exiting the catalytic oxidizer was not detected at concentrations above the laboratory's lower reporting limit of 10 mg/m^3 (2.329 ppm$_v$; **Table 4C**).
- All system operations were in compliance with PSCAA and Ecology's Water Quality Program permits (**Tables 4C and 5C**).

5.0 SYSTEM OPTIMIZATION & FUTURE RECOMMENDATIONS

The following is a summary of the **Third Quarter 2013** system optimization and future recommendations for each of the MPE systems.

The MPE remediation systems will continue to operate until the terms and conditions of the AO have been satisfied in accordance with Section IX (Satisfaction of Order), or until the work to be performed has been amended in accordance with Section VIII.L (Amendment of Order). Specifically, "the provisions of [the Agreed] Order shall be deemed satisfied upon TOC's receipt of written notification from Ecology that TOC has completed the remedial activity required by [the Agreed] Order, as amended by any modifications, and that TOC has complied with all other provisions of [the Agreed] Order."

System optimization activities during this reporting period focused on balancing the flow of water through the OWS and addressing issues associated with the GAC canisters. These activities, any system modifications, and observations are summarized below. These activities are described in more detail below.

- Field crews modified the operational control logic programs to balance the flow rate of the OWS. This modification is intended to minimize high level conditions, which would trigger the systems to shut down. Basically, the program modification stopped the flow of water to the OWS for a brief period of time while the OWS transfer pumps discharge water to the GAC canisters.

- Some minor leaks and back pressure issues associated with the GAC canisters were encountered during this Quarter. Two leaking canisters were replaced at the Drake System. The new GAC canisters were placed upon drum platforms to prevent electrolysis/corrosion, which was assumed to be the cause of the pinhole leaks.

- Sand, silt, and biological byproducts continue to accumulate within the lead GAC canisters. The majority of this loading has been observed at the Drake system. This buildup of materials restricts the discharge of wastewater from the OWS and eventually causing the systems to shut down.

- A bag filter was installed on the Drake system to remove sediment from the water stream before it accumulates in the lead GAC canister. The installation of bag filters is currently being evaluated for the other two systems.

6.0 LIMITATIONS

This document, ***Operations and Maintenance Report, Third Quarter 2013*** was prepared by JBR, (now Stantec) on behalf of TOC. The material presented reflects Stantec's best judgment in light of the information available at the time of preparation. Any use which a third party makes of this document, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this document.

List of Tables

Table 1A
Summary of System Performance
TOC Holdings Co. Facility No. 01-176
24205 56th Ave West
Mountlake Terrace, Washington

Reporting Period		Duration of Reporting Period (days)	System Run Time (days)	System Run Time (%)	Volume of Treated Groundwater Discharged (gallons)	Average Groundwater Recovered Flow Rate (gallons/day)	GRPH Aqueous-Phase Removal (lb)	GRPH Vapor-Phase Removal (lb)
Start Date	**End Date**							
10/02/12	12/05/12	64	30	46%	35,204.9	550.1	2.522	917.8
12/05/12	03/04/13	89	36	40%	7,655.9	86.0	0.918	42.1
03/04/13	06/05/13	93	29	31%	4,915.8	52.9	0.609	6.0
06/05/13	09/04/13	91	69	76%	83,540.3	918.0	3.121	138.0
Average				**48%**				
Totals		**337**	**163**		**131,316.9**		**7.169**	**1,103.9**

NOTES:

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

Table 1B
Summary of System Performance
TOC Holdings Co. Facility No. 01-176
24225 56th Ave West
Mountlake Terrace, Washington

Reporting Period		Duration of Reporting Period (days)	System Run Time (days)	System Run Time (%)	Volume of Groundwater Discharged (gallons)	Average Groundwater Recovered Flow Rate (gallons/day)	GRPH Aqueous-Phase Removal (lb)	GRPH Vapor-Phase Removal (lb)
Start Date	**End Date**							
10/03/12	12/05/12	63.0	51.7	82%	12,858	204	0.005	477.4
12/05/12	03/04/13	89	52.5	59%	18,758	211	0.002	9.1
03/04/13	06/05/13	93	67.1	72%	106,670	1,147	0.235	4.9
06/05/13	09/04/13	91	82.2	90%	123,303	1,355	0.051	6.2
Average				**75%**				
Totals		**336**	**253**		**261,589.3**		**0.29**	**497.6**

NOTES:

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

Table 1C
Summary of System Performance
TOC Holdings Co. Facility No. 01-176
24309 56th Ave West
Mountlake Terrace, Washington

Reporting Period		Duration of Reporting Period (days)	System Run Time (days)	System Run Time (%)	Volume of Groundwater Discharged (gallons)	Average Groundwater Recovered Flow Rate (gallons/day)	GRPH Aqueous-Phase Removal (lb)	GRPH Vapor-Phase Removal (lb)
Start Date	**End Date**							
10/02/12	12/05/12	64.0	58.6	92%	71,160	1,112	0.029	30.7
12/05/12	03/04/13	89.0	73.3	82%	30,268.8	340	0.258	4.7
03/04/13	06/05/13	93.0	39.6	43%	74,015.9	796	0.491	2.7
06/05/13	09/04/13	91.0	58.1	64%	68,178.7	749	0.158	4.6
Average				**70%**				
Totals		**337.0**	**229.5**		**243,623.6**		**0.937**	**42.7**

NOTES:

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

SoundEarth Strategies

Table 2A
Vapor Stream - System Performance Monitoring Data
TOC Holdings Co. Facility No. 01-176
24205 56th Ave West
Mountlake Terrace, Washington

Site Visit	Run Time		SVE Parameters		Catalytic Oxidizer		GRPH Removal		
	SVE Hour Meter	Total Time in Operation	SVE Pre-Filter Vacuum	Air Flow Rate[1]	Catalyst Entrance Temp.	Catalyst Exit Temp.	Influent Concentration[2]	Daily Mass Recovery Rate[3] [4]	Cumulative Recovered[5]
Date	(hours)	(days)	(iow)	(scfm)	(°C)	(°C)	(mg/m^3)	(lb/day)	(lb)
10/02/12	5.0	0.21	70.0	146.8	330	380	1,600	21.1	0.000
10/10/12	70.2	2.93	69.0	149.2	330	419	2,600	27.9	75.906
10/17/12	237.7	9.90	69.0	149.2	330	410	3,400	40.2	356.743
10/24/12	406.9	16.95	68.0	144.4	330	385	2,400	38.3	626.562
11/07/12	638.2	26.59	73.0	140.7	330	384	1,700	26.3	879.751
12/05/12	714.2	29.76	67.0	148.0	330	344	150	12.0	917.763
01/08/13	1,482.9	61.79	65.0	153.8	330	342	35	1.3	957.955
01/17/13	1,533.7	63.90	76.0	153.0	330	350	--	--	--
02/05/13	1,537.6	64.07	64.0	148.6	330	342	53	0.60	959.318
03/04/13	1,569.4	65.39	27.0	173.0	330	342	<10	0.42	959.873
04/03/13	1,587.2	66.13	60.0	157.4	330	342	14	0.14	959.978
05/08/13	1,595.4	66.48	17.0	175.2	330	341	22	0.27	960.070
06/05/13	2,267.7	94.49	36.0	166.0	330	340	<10	0.21	965.870
07/02/13	2,789.8	116.24	39.0	168.0	330	340	26	0.23	970.932
08/06/13	3,227.4	134.48	47.0	162.1	330	341	31	0.42	978.643
08/09/13	3,302.8	137.62	64.0	157.1	330	345	--	--	--
09/04/13	3,924.4	163.52	66.0	152.0	330	351	580	4.31	1,103.908
PSCAA NOC-10384 Restrictions and Conditions				**max. 350**	**min. 240**	**max. 620**			

NOTES:

[1]Air flow rates calculated using an averaging flow sensor (Dwyer Model DS).

[2]Influent vapor-phase samples collected from SVE sample port prior to air treatment.

[3]Daily removal rate (lb/day) = average concentration (mg/m^3) x average flow rate (scfm) x conversion ($8.99x10^{-5}$ lb-m^3-min/mg-ft^3-day).

[4]Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics.*

[5]Cumulative mass of GRPH removed (lb) = daily removal rate (lb/day) x time in operation (days) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

< = not detected at concentration above the laboratory's lower reporting limit

° C = degrees Celsius

ft = feet

GRPH = gasoline-range petroleum hydrocarbons

iow = inches of water

lb = pounds

lb/day = pounds per day

m^3 = cubic meter

max. = maximum

mg = milligrams

min. = minimum

NOC = Notice of Construction

PSCAA = Puget Sound Clean Air Agency

scfm = standard cubic feet per meter

SVE = soil vapor extraction

Temp. = temperature

SoundEarth Strategies

Table 2B
Vapor Stream - System Performance Monitoring Data
TOC Holdings Co. Facility No. 01-176
24225 56th Ave West
Mountlake Terrace, Washington

Site Visit	Run Time		SVE Parameters		Catalytic Oxidizer		GRPH Removal		
	SVE Hour Meter	Total Time in Operation	SVE Pre-Filter Vacuum	Air Flow Rate[1]	Catalyst Entrance Temp.	Catalyst Exit Temp.	Influent Concentration[2]	Daily Mass Recovery Rate[3] [4]	Cumulative Recovered[5]
Date	(hours)	(days)	(iow)	(scfm)	(°C)	(°C)	(mg/m^3)	(lb/day)	(lb)
10/03/12	15.6	0.7	68	149.1	330	350	340	4.56	0.00
10/10/12	73.7	3.1	86	134.1	330	363	1,300	*10.44*	25.26
10/17/12	242.0	10.1	76	135.8	330	376	1,300	*15.77*	135.86
10/24/12	410.7	17.1	72	137.2	330	355	1,100	*14.73*	239.37
10/25/12	434.7	18.1	73	139.2	330	354	--	--	--
11/06/12	722.8	30.1	74	137.8	330	358	--	--	--
11/07/12	748.2	31.2	74	138.6	330	352	660	*10.91*	392.78
12/05/12	1,257.4	52.4	74	124.3	330	338	15	*3.99*	477.40
12/06/12	1,266.4	52.8	75	135.6	--	--	--	--	--
01/08/13	1,989.7	82.9	27	164.7	330	344	15	0.19	483.35
01/09/13	2,012.1	83.8	32	163.5	330	336	--	--	--
01/17/13	2,037.9	84.9	27	166.5	331	336	--	--	--
02/05/13	2,490.2	103.8	33	159.5	330	335	<10	*0.15*	486.39
02/06/13	2,514.5	104.8	38	157.5	330	335	--	--	--
03/04/13	2,517.2	104.9	31	162.9	330	335	<10	*0.07*	486.47
03/12/13	2,705.4	112.7	32	161.7	330	335	--	--	--
04/03/13	3,230.7	134.6	33	166.8	330	335	<10	*0.07*	488.67
05/08/13	3,454.7	143.9	33	164.5	330	338	<10	*0.07*	489.37
06/05/13	4,127.1	172.0	36	158.9	330	335	<10	*0.07*	491.40
06/19/13	4,438.7	184.9	34	166.7	330.0	335.0	--	--	--
07/02/13	4,746.1	197.8	32	164.2	330.0	335.0	<10	*0.07*	493.28
08/06/13	5,403.6	225.2	10	175.5	330.0	335.0	<10	*0.08*	495.37
08/09/13	5,475.4	228.1	20	168.6	330.0	335.0	--	--	--
09/04/13	6,098.7	254.1	20	170.1	330.0	335.0	<10	*0.08*	497.62
PSCAA NOC-10384 Restrictions and Conditions				**max. 350**	**min. 240**	**max. 620**			

NOTES:

[1]Air flow rates calculated using an averaging flow sensor (Dwyer Model DS).

[2]Influent vapor-phase samples collected from SVE sample port prior to air treatment.

[3]Daily removal rate (lb/day) = average concentration (mg/m^3) x average flow rate (scfm) x conversion ($8.99x10^{-5}$ lb-m^3-min/mg-ft^3-day).

[4]Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics.*

[5]Cumulative mass of GRPH removed (lb) = daily removal rate (lb/day) x time in operation (days) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

< = not detected at concentration above the laboratory's lower reporting limit

° C = degrees Celsius

ft = feet

GRPH = gasoline-range petroleum hydrocarbons

iow = inches of water

lb = pounds

lb/day = pounds per day

m^3 = cubic meter

max. = maximum

mg = milligrams

min. = minimum

NOC = Notice of Construction

PSCAA = Puget Sound Clean Air Agency

scfm = standard cubic feet per meter

SVE = soil vapor extraction

Temp. = temperature

Table 2C
Vapor Stream - System Performance Monitoring Data
TOC Holdings Co. Facility No. 01-176
24309 56th Ave West
Mountlake Terrace, Washington

Site Visit	Run Time		SVE Parameters		Catalytic Oxidizer		GRPH Removal		
	SVE Hour Meter	Total Time in Operation	SVE Pre-Filter Vacuum	Air Flow Rate[1]	Catalyst Entrance Temp.	Catalyst Exit Temp.	Influent Concentration[2]	Daily Mass Recovery Rate[3] [4]	Cumulative Recovered[5]
Date	(hours)	(days)	(iow)	(scfm)	(°C)	(°C)	(mg/m^3)	(lb/day)	(lb)
10/02/12	11.2	0.47	70.0	143.8	330	340	13.0	*0.2*	0.00
10/10/12	75.7	3.15	73.0	140.4	330	338	12.0	*0.2*	0.43
10/17/12	243.7	10.15	74.0	141.7	330	337	<10	*0.1*	1.18
10/24/12	411.9	17.16	74.0	139.9	330	338	<10	*0.1*	1.63
10/25/12	436.7	18.20	74.0	142.8	330	338	--	--	--
11/06/12	724.8	30.20	77.0	137.6	330	337	--	--	--
11/07/12	750.3	31.3	76	139.1	330	338	<10	*0.1*	1.69
12/05/12	1,417.6	59.1	76	141.9	330	340	160.0	*1.0*	30.67
01/08/13	2,231.8	93.0	83	137.3	330	337	<10	*0.1*	32.80
02/05/13	2,731.0	113.8	70	144.2	330	337	<10	*0.1*	34.11
03/04/13	3,177.5	132.4	71	144.6	330	338	<10	*0.1*	35.32
04/03/13	3,894.4	162.3	64	152.4	330	338	<10	*0.1*	37.31
05/15/13	4,059.7	169.2	27	173.5	330.0	301.0	<10	*0.1*	37.82
06/05/13	4,126.8	172.0	27	172.9	330.0	338.0	<10	*0.1*	38.04
07/02/13	4,400.3	183.3	17	171.7	330	338	<10	*0.1*	38.92
08/06/13	5,055.3	210.6	10	182.6	330	338	<10	*0.1*	41.09
09/04/13	5,520.0	230.0	13	181.6	330	338	<10	*0.1*	42.68
PSCAA NOC-10384 Restrictions and Conditions				**max. 350**	**min. 240**	**max. 620**			

NOTES:

[1]Air flow rates calculated using an averaging flow sensor (Dwyer Model DS).

[2]Influent vapor-phase samples collected from SVE sample port prior to air treatment.

[3]Daily removal rate (lb/day) = average concentration (mg/m^3) x average flow rate (scfm) x conversion ($8.99x10^{-5}$ lb-m^3-min/mg-ft^3-day).

[4]Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics.*

[5]Cumulative mass of GRPH removed (lb) = daily removal rate (lb/day) x time in operation (days) + previous cumulative total (lb).

-- = not analyzed/not tested

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

° C = degrees Celsius

ft = feet

GRPH = gasoline-range petroleum hydrocarbons

iow = inches of water

lb = pounds

lb/day = pounds per day

m^3 = cubic meter

max. = maximum

mg = milligrams

min. = minimum

NOC = Notice of Construction

PSCAA = Puget Sound Clean Air Agency

scfm = standard cubic feet per meter

SVE = soil vapor extraction

Temp. = temperature

Table 3A
Liquid Stream - System Performance Monitoring Data
TOC Holdings Co. Facility No. 01-176
24205 56th Ave West
Mountlake Terrace, Washington

Site Visit	Extracted Groundwater			Hydrocarbon Recovery - Aqueous-Phase		
Date	Flow Totalizer (gallons)	Treated Between Visits (gallons)	Average Flow Rate (gallons/day)	Influent GRPH Concentration (µg/L)	GRPH Removed[(1) (2) (3)] (lb)	Cumulative GRPH Removed[(3) (4)] (lb)
10/02/12	636.3	0	0	--	--	--
10/10/12	5,761.0	5,124.7	641	18,000	0.770	0.770
10/17/12	14,898.1	9,137.1	1,305	--	--	--
10/24/12	21,888.4	6,990.3	999	--	--	--
11/07/12	31,361.8	9,473.4	677	6,100	1.303	2.073
12/05/12	35,204.9	3,843.1	137	14,000	0.449	2.522
01/08/13	38,076.5	2,871.6	84	19,000	0.455	2.977
01/17/13	40,712.0	2,635.5	293	--	--	--
02/05/13	41,363.4	651.4	34	8,200	0.225	3.202
03/04/13	42,860.8	1,497.4	55	19,000	0.237	3.439
04/03/13	44,190.2	1,329.4	44	11,000	0.122	3.561
05/08/13	46,979.7	2,789.5	80	20,000	0.466	4.027
06/05/13	47,776.6	796.9	28	3,200	0.021	4.048
07/02/13	63,869.9	16,093.3	596	17,000	2.283	6.331
08/06/13	89,987.5	26,117.6	746	<100	0.011	6.342
08/09/13	95,562.8	5,575.3	1,858	--	--	--
09/04/13	131,316.9	35,754.2	1,375	2,400	0.828	7.169
State Waste Discharge Permit Number ST0007384 Maximum Daily Limits			**7,000**			

NOTES:

[(1)] Influent samples collected prior to discharging to the City of Mountlake Terrace sanitary sewer.

[(2)] Mass removal weight (lb) = gallons recovered x concentration (µg/L) x conversion factor (8.344E-9 lb-L/µg-gallon).

[(3)] Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics.*

[(4)] Cumulative mass of GRPH removed (lb) = GRPH mass removal between sampling visits (lb) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

µg/L = micrograms per liter

µg-gallon = micrograms - gallon conversion

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

lb-L = pounds - liter conversion

Table 3B
Liquid Stream - System Performance Monitoring Data
TOC Holdings Co. Facility No. 01-176
24225 56th Ave West
Mountlake Terrace, Washington

Site Visit	Extracted Groundwater			Hydrocarbon Recovery - Aqueous-Phase		
Date	Flow Totalizer (gallons)	Treated Between Visits (gallons)	Average Flow Rate (gallons/day)	Influent GRPH Concentration (µg/L)	GRPH Removed[(1) (2) (3)] (lb)	Cumulative GRPH Removed[(3) (4)] (lb)
10/03/12	397.8	0	0	--	--	--
10/10/12	562.6	164.8	24	<100	0.000	0.000
10/17/12	5,392.6	4,830.0	690	--	--	--
10/24/12	8,170.9	2,778.3	397	--	--	--
10/25/12	8,580.4	409.5	410	--	--	--
11/06/12	10,624.2	2,043.8	170	--	--	--
11/07/12	10,630.5	6.3	6	<100	0.004	0.004
12/05/12	12,858.4	2,227.9	80	<100	0.001	0.005
12/06/12	14,221.5	1,363.1	1,363	--	--	--
01/08/13	18,643.2	4,421.7	134	<100	*0.002*	0.008
01/09/13	18,651.6	8.4	8	--	--	--
01/17/13	18,753.9	102.3	13	--	--	--
02/05/13	18,753.9	0.0	0	<100	*0.000*	0.008
03/13/13	18,758.0	4.1	0	1,100	*0.000*	0.008
03/12/13	18,758.0	0.0	0	--	--	--
04/03/13	24,667.4	5,909.4	269	740	*0.036*	0.044
05/08/13	90,733.6	66,066.2	1,888	<100	*0.028*	0.072
06/05/13	125,427.8	34,694.2	1,239	590	*0.171*	0.243
06/19/13	131,990.5	6,562.7	469	--	--	--
07/02/13	172,454.5	40,464.0	3,113	<100	*0.020*	0.262
08/06/13	223,496.3	51,041.8	1,458	<100	*0.021*	0.283
08/09/13	226,651.9	3,155.6	1,052	--	--	--
09/04/13	248,730.9	22,079.0	849	<100	*0.011*	0.294
State Waste Discharge Permit Number ST0007384 Maximum Daily Limits			**7,000**			

NOTES:

[(1)]Effluent samples collected prior to discharging to the City of Mountlake Terrace sanitary sewer.

[(2)]Mass removal weight (lb) = gallons recovered x concentration (µg/L) x conversion factor (8.344E-9 lb-L/µg-gallon).

[(3)]Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics.*

[(4)]Cumulative mass of GRPH removed (lb) = GRPH mass removal between sampling visits (lb) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

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

µg/L = micrograms per liter

µg-gallon = micrograms - gallon conversion

GRPH = gasoline-range petroleum hydrocarbons

gallons/day = gallons per day

lb = pound(s)

lb-L = pounds - liter conversion

Table 3C
Liquid Stream - System Performance Monitoring Data
TOC Holdings Co. Facility No. 01-176
24309 56th Ave West
Mountlake Terrace, Washington

Site Visit	Extracted Groundwater			Hydrocarbon Recovery - Aqueous-Phase		
Date	Flow Totalizer (gallons)	Treated Between Visits (gallons)	Average Flow Rate (gallons/day)	Influent GRPH Concentration (µg/L)	GRPH Removed[1] [2] [3] (lb)	Cumulative GRPH Removed[3] [4] (lb)
10/02/12	1,178.0	--	--	--	--	--
10/10/12	5,075.9	3,897.9	487	<100	*0.002*	*0.002*
10/17/12	15,755.8	10,679.9	1,526	--	--	--
10/24/12	27,288.0	11,532.2	1,647	--	--	--
10/25/12	28,809.6	1,521.6	1,522	--	--	--
11/06/12	36,398.8	7,589.2	632	--	--	--
11/07/12	38,565.1	2,166.3	2,166	<100	*0.014*	*0.016*
12/05/12	71,160.2	32,595.1	1,164	<100	*0.014*	*0.029*
01/08/13	71,627.1	466.9	14	<100	*0.000*	*0.029*
02/06/13	84,429.4	12,802.4	441	160	0.017	0.046
03/04/13	101,429.0	16,999.6	654	1,700	0.241	0.288
04/03/13	119,013.8	17,584.8	586	<100	*0.007*	*0.295*
05/08/13	157,058.4	38,044.6	1,087	1,500	*0.476*	*0.771*
06/05/13	175,444.9	18,386.5	657	<100	*0.008*	*0.779*
07/02/13	175,445.7	0.8	0	--	--	--
08/06/13	181,799.7	6,354.0	182	2,500	*0.133*	*0.911*
09/04/13	243,623.6	61,823.9	2,132	<100	*0.026*	*0.937*
State Waste Discharge Permit Number ST0007384 Maximum Daily Limits			**7,000**			

NOTES:

[1] Effluent samples collected prior to discharging to the City of Mountlake Terrace sanitary sewer.

[2] Mass removal weight (lb) = gallons recovered x concentration (µg/L) x conversion factor (8.344E-9 lb-L/µg-gallon).

[3] Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are shown in *italics.*

[4] Cumulative mass of GRPH removed (lb) = GRPH mass removal between sampling visits (lb) + previous cumulative total (lb).

-- = not analyzed, measured, or calculated

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

µg/L = micrograms per liter

µg-gallon = micrograms - gallon conversion

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

lb-L = pounds - liter conversion

Table 4A
Vapor Stream Analytical Results
TOC Holdings Co. Facility No. 01-176
24205 56th Ave West
Mountlake Terrace, Washington

	Analytical Results (mg/m^3)										
	Influent Vapor Samples[1]					Effluent Vapor Samples[2]					GRPH
	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	DRE [5]
Sample Date	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	%
10/02/12	1,600	2.0	10	5.5	26	<10	<0.1	<0.1	<0.1	<0.3	*99.7*
10/10/12	2,600	2.3	13	8.7	37	<10	<0.1	0.20	<0.1	<0.3	*99.8*
10/17/12	3,400	3.0	9.4	11	42	<10	<0.1	<0.1	<0.1	<0.3	*99.9*
10/24/12	2,400	1.5	7.0	9.4	39	<10	<0.1	<0.1	<0.1	<0.3	*99.8*
11/07/12	1,700	<0.5	7.0	7.3	37	<10	<0.1	<0.1	<0.1	<0.3	*99.7*
12/05/12	150	<0.1	0.23	<0.1	3.5	<10	<0.1	<0.1	<0.1	<0.3	*96.7*
01/08/13	35	<0.1	0.19	0.18	0.86	<10	<0.1	0.16	<0.1	<0.3	*85.7*
02/05/13	53	<0.1	0.30	0.13	0.78	<10	<0.1	<0.1	<0.1	<0.3	*90.6*
03/04/13	<10	<0.1	0.10	0.10	0.69	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
04/03/13	14	<0.1	0.18	0.14	0.90	<10	<0.1	<0.1	<0.1	<0.3	*64.3*
05/08/13	22	<0.1	0.23	<0.1	0.35	<10	<0.1	<0.1	<0.1	<0.3	*77.3*
06/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
07/02/13	26	<0.1	0.24	<0.1	0.48	<10	<0.1	<0.1	<0.1	<0.3	*80.8*
08/06/13	31	<0.1	0.21	0.14	0.79	<10	<0.1	<0.1	<0.1	<0.3	*83.9*
09/04/13	580	<0.1	5.0	<0.1	22	<10	<0.1	<0.1	<0.1	<0.3	*99.1*
PSCAA NOC-10384 Restrictions and Conditions						**min. 214.7 [5]**					**95% [5] [6]**

NOTES:

[1]Influent vapor-phase samples collected from SVE sample port on the pressure side of the blower.

[2]Effluent vapor-phase samples collected from sample port on the effluent stack.

[3]Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

[4]Analyzed by U.S. Environmental Protection Agency Method 8021B.

[5]DRE shall be at least 95% unless effluent GRPH vapor leaving the catox does not exceed 50 ppmv (214.7 mg/m^3 assuming a molecular weight of 105).

[6]DRE = $(1-(GRPH_{influent}/GRPH_{effluent}))$ x 100; non-detected influent concentrations assumed to be 50% of the laboratory's reporting limit. DRE % based on this assumption are shown in *italics* .

< = not detected at concentration above the laboratory's lower reporting limit

% = percent

DRE = destruction and removal efficiency

GRPH = gasoline-range petroleum hydrocarbons

mg/m^3 = milligrams per cubic meter

min. = minimum

NOC = Notice of Construction

ppmv = part per million volume

PSCAA = Puget Sound Clean Air Agency

SVE = soil vapor extraction

Table 4B
Vapor Stream Analytical Results
TOC Holdings Co. Facility No. 01-176
24225 56th Ave West
Mountlake Terrace, Washington

	Analytical Results (mg/m^3)										
	Influent Vapor Samples[1]					Effluent Vapor Samples[2]					GRPH
	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	DRE[5]
Sample Date	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	%
10/03/12	340	0.44	1.6	0.96	1.7	<10	<0.1	0.17	<0.1	<0.3	*98.5*
10/10/12	1,300	0.77	<0.5	4.0	9.6	<10	<0.1	0.21	<0.1	<0.3	*99.6*
10/17/12	1,300	0.55	<0.5	3.7	7.9	<10	<0.1	<0.1	<0.1	<0.3	*99.6*
10/24/12	1,100	0.50	3.1	<0.1	11	<10	<0.1	<0.1	<0.1	<0.3	*99.5*
11/07/12	660	<0.1	2.7	<0.1	7.1	<10	<0.1	<0.1	<0.1	<0.3	*99.2*
12/05/12	15	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*66.7*
01/08/13	15	<0.1	<0.1	<0.1	<0.3	<10	<0.1	0.10	<0.1	<0.3	*66.7*
02/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
03/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
04/03/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
05/08/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
06/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
07/02/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
08/06/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
09/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
PSCAA NOC-10384 Restrictions and Conditions						**min. 214.7 [5]**					**95% [5] [6]**

NOTES:

[1]Influent vapor-phase samples collected from SVE sample port on the pressure side of the blower.

[2]Effluent vapor-phase samples collected from sample port on the effluent stack.

[3]Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

[4]Analyzed by U.S. Environmental Protection Agency Method 8021B.

[5]DRE shall be at least 95% unless effluent GRPH vapor leaving the catox does not exceed 50 ppmv (214.7 mg/m^3 assuming a molecular weight of 105).

[6]DRE = $(1-(GRPH_{influent}/GRPH_{effluent}))$ x 100; non-detected influent concentrations assumed to be 50% of the laboratory's reporting limit. DRE % based on this assumption are shown in *italics* .

< = not detected at concentration above the laboratory's lower reporting limit

% = percent

DRE = destruction and removal efficiency

GRPH = gasoline-range petroleum hydrocarbons

mg/m^3 = milligrams per cubic meter

min. = minimum

NOC = Notice of Construction

ppmv = part per million volume

PSCAA = Puget Sound Clean Air Agency

SVE = soil vapor extraction

Table 4C
Vapor Stream Analytical Results
TOC Holdings Co. Facility No. 01-176
24309 56th Ave West
Mountlake Terrace, Washington

	Analytical Results (mg/m^3)										
	Influent Vapor Samples[1]					Effluent Vapor Samples[2]					GRPH
	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	DRE [5]
Sample Date	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	(mg/m^3)	%
10/02/12	13	<0.1	0.13	0.12	0.35	<10	<0.1	<0.1	<0.1	<0.3	*61.5*
10/10/12	12	<0.1	0.10	<0.1	<0.3	<10	<0.1	0.18	<0.1	<0.3	*58.3*
10/17/12	<10	<0.1	0.17	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
10/24/12	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
11/07/12	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
12/05/12	160	<0.1	<0.1	1.50	0.99	<10	<0.1	<0.1	<0.1	<0.3	*96.9*
01/08/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	0.12	<0.1	<0.3	*0.0*
02/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
03/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
04/03/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
05/15/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
06/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
07/02/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
08/06/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
09/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
PSCAA NOC-10384 Restrictions and Conditions						**min. 214.7 [5]**					**95% [5] [6]**

NOTES:

[1]Influent vapor-phase samples collected from SVE sample port on the pressure side of the blower.

[2]Effluent vapor-phase samples collected from sample port on the effluent stack.

[3]Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

[4]Analyzed by U.S. Environmental Protection Agency Method 8021B.

[5]DRE shall be at least 95% unless effluent GRPH vapor leaving the catox does not exceed 50 ppmv (214.7 mg/m^3 assuming a molecular weight of 105).

[6]DRE = $(1-(GRPH_{influent}/GRPH_{effluent}))$ x 100; non-detected influent concentrations assumed to be 50% of the laboratory's reporting limit. DRE % based on this assumption are shown in *italics* .

< = not detected at concentration above the laboratory's lower reporting limit

% = percent

DRE = destruction and removal efficiency

GRPH = gasoline-range petroleum hydrocarbons

mg/m^3 = milligrams per cubic meter

min. = minimum

NOC = Notice of Construction

ppmv = part per million volume

PSCAA = Puget Sound Clean Air Agency

SVE = soil vapor extraction

Table 5A
Liquid Stream Analytical Results
TOC Holdings Co. Facility No. 01-176
24205 56th Ave West
Mountlake Terrace, Washington

	Groundwater Influent - Pre GAC Treatment (µg/L)					Groundwater Influent - Mid GAC Treatment (µg/L)					Groundwater Effluent - Post GAC Treatment (µg/L)							
	GAC-1 Influent Sample[1]					GAC-2 Influent Sample[2]					Effluent Discharge Sample[3]							
Sample Date	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	BTEX	Total Lead[6]	pH[7]
10/10/12	18,000	25	370	280	4,500	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.59
11/07/12	6,100	8.4	99	24	1,200	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.61
12/05/12	14,000	12	250	200	2,700	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	19.4	7.19
01/08/13	19,000	60	400	520	3,600	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.71
02/05/13	8,200	11	83	61	1,200	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.86
03/04/13	19,000	20	200	460	3,900	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.88
04/03/13	11,000	27	83	<40	2500	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.68
05/08/13	20,000	11	450	<10	3400	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.06
06/05/13	3,200	4.0	35	<1	350	<100	<1	<1	<1	<3	<100	<1	<1	<1	3.1	<6	3.33	6.8
07/02/13	17,000	9.9	290	190	3200	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.74
08/06/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.89
09/04/13	2,400	1.1	18	<1	230	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.41
State Waste Discharge Permit Number ST0007384 Effluent Limits											**1,000**	**5**				**100**	**1,090**	**6 to 10**

NOTES:

[1]Inffluent samples collected prior to first GAC canister.

[2]Inffluent samples collected prior to second GAC canister.

[3]Effluent samples collected prior to sewer discharge.

[4]Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

[5]Analyzed by EPA Method 8021B.

[6]Analyzed by EPA Method 200.8.

[7]Field measured.

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

-- = not analyzed/not tested

µg/L = micrograms per liter

BTEX = Total sum of benzene, toluene, ethylbenzene, and total xylenes

EPA = U.S. Environmental Protection Agency

GAC = granular-activated carbon

GRPH = gasoline-range petroleum hydrocarbons

SoundEarth Strategies

Table 5B
Liquid Stream Analytical Results
TOC Holdings Co. Facility No. 01-176
24225 56th Ave West
Mountlake Terrace, Washington

	Groundwater Influent - Pre GAC Treatment (µg/L)					Groundwater Influent - Mid GAC Treatment (µg/L)					Groundwater Effluent - Post GAC Treatment (µg/L)							
	GAC-1 Influent Sample[1]					GAC-2 Influent Sample[2]					Effluent Discharge Sample[3]							
Sample Date	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	GRPH[4]	Benzene[5]	Toluene[5]	thylbenzene[5]	Total Xylenes[5]	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	BTEX	Total Lead[6]	pH[7]
10/10/12	<100	<1	<1	<1	3.1	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.59
11/07/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.71
12/05/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	76.5	8.05
01/08/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.29
02/05/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.31
03/13/13	1,100	2.9	<1	14	27	--	--	--	--	--	<100	<1	<1	<1	<3	<6	--	7.59
04/03/13	740	<1	<1	<1	7.9	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.08
05/08/13	<100	<1	<1	<1	5.1	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.51
06/05/13	590	2.0	1.8	14	120	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	4.51	6.68
07/02/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.97
08/06/13	<100	<1	<1	<1	5.2	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.10
09/04/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.96
State Waste Discharge Permit Number ST0007384 Effluent Limits											**1,000**	**5**				**100**	**1,090**	**6 to 10**

NOTES:

[1]Inffluent samples collected prior to first GAC canister.

[2]Inffluent samples collected prior to second GAC canister.

[3]Effluent samples collected prior to sewer discharge.

[4]Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

[5]Analyzed by EPA Method 8021B.

[6]Analyzed by EPA Method 200.8.

[7]Field measured.

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

-- = not analyzed/not tested

µg/L = micrograms per liter

BTEX = Total sum of benzene, toluene, ethylbenzene, and total xylenes

EPA = U.S. Environmental Protection Agency

GAC = granular-activated carbon

GRPH = gasoline-range petroleum hydrocarbons

SoundEarth Strategies

Table 5C
Liquid Stream Analytical Results
TOC Holdings Co. Facility No. 01-176
24309 56th Ave West
Mountlake Terrace, Washington

	Groundwater Influent - Pre GAC Treatment (µg/L)					Groundwater Influent - Mid GAC Treatment (µg/L)					Groundwater Effluent - Post GAC Treatment (µg/L)							
	GAC-1 Influent Sample[1]					GAC-2 Influent Sample[2]					Effluent Discharge Sample[3]							
Sample Date	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	GRPH[4]	Benzene[5]	Toluene[5]	Ethylbenzene[5]	Total Xylenes[5]	BTEX	Total Lead[6]	pH[7]
10/10/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.87
11/07/12	<100	1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.83
12/05/12	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	4.05	7.84
01/08/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.06
02/05/13	160	<1	<1	1.8	5.8	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.02
03/04/13	1,700	<1	1.4	24	160	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.64
04/03/13	<100	<1	<1	<1	3.7	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.89
05/08/13	1,500	<1	<1	16	120	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.41
06/05/13	<100	<1	<1	<1	4.0	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	2.99	7.05
07/02/13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	<100	<1	<1	<1	<3	<6	--	6.35
08/06/13	2,500	1.0	2.3	40	260	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	8.07
09/04/13	<100	<1	<1	<1	3.6	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.03
State Waste Discharge Permit Number ST0007384 Effluent Limits											**1,000**	**5**				**100**	**1,090**	**6 to 10**

NOTES:

[1]Inffluent samples collected prior to first GAC canister.

[2]Inffluent samples collected prior to second GAC canister.

[3]Effluent samples collected prior to sewer discharge.

[4]Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

[5]Analyzed by EPA Method 8021B.

[6]Analyzed by EPA Method 200.8.

[7]Field measured.

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

-- = not analyzed/not tested

µg/L = micrograms per liter

BTEX = Total sum of benzene, toluene, ethylbenzene, and total xylenes

EPA = U.S. Environmental Protection Agency

GAC = granular-activated carbon

GRPH = gasoline-range petroleum hydrocarbons

NM = not collected, not measured, not sampled

List of Figures

LEGEND

- B27 — SOIL BORING (NO WELL INSTALLED)
- MW68 — GROUNDWATER MONITORING WELL (SHALLOW SCREEN)
- MW89 — GROUNDWATER MONITORING WELL (UPPER INTERMEDIATE SCREEN)
- MW77 — GROUNDWATER MONITORING WELL (INTERMEDIATE SCREEN)
- MW78 — GROUNDWATER MONITORING WELL (DEEP SCREEN)
- MW17 — DECOMMISSIONED GROUNDWATER MONITORING WELL
- CURRENT OR FORMER UST
- CATCH BASIN
- SURVEY BENCHMARK
- PROPERTY BOUNDARY
- FO — FIBER OPTIC
- GAS — NATURAL GAS
- SI — STORM SEWER INFILTRATION PIPE
- SD — STORM SEWER DRAIN
- SS — SANITARY SEWER
- W — WATER
- OP — OVERHEAD POWER
- E1 — PRIMARY ELECTRICAL
- E2 — SECONDARY ELECTRICAL
- SANITARY SEWER MANHOLE
- OX — CATALYTIC OXIDIZER
- ELECTRICAL JUNCTION BOX
- ELECTRICAL VAULT
- PAD-MOUNTED TRANSFORMER
- C.O. — SANITARY SEWER CLEAN OUT
- UST — UNDERGROUND STORAGE TANK

DATUM/BASIS OF BEARINGS
HELD A BEARING OF N00°03'34"E ALONG THE MONUMENTED CENTERLINE OF 56TH AVE W BETWEEN 244TH ST SW AND 240TH ST SW PER PLAT OF LAKE FOREST CREST V.10 / P.107

BASIS OF POSITION: CITY OF MONTLAKE TERRACE CONTROL POINT DESIGNATION MTLK127.

ORIGINATING BENCHMARK:
TOP OF MAG NAIL IN CURB AT NORTHWEST CORNER OF SITE PER SITE PLAN BY CPS ENGINEERING PROVIDED TO AXIS BY CLIENT

COORDINATE SYSTEM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 (US FEET)

VERTICAL DATUM: NAVD '88

ELEVATION: 363.62'

TEMPORARY BENCHMARKS:

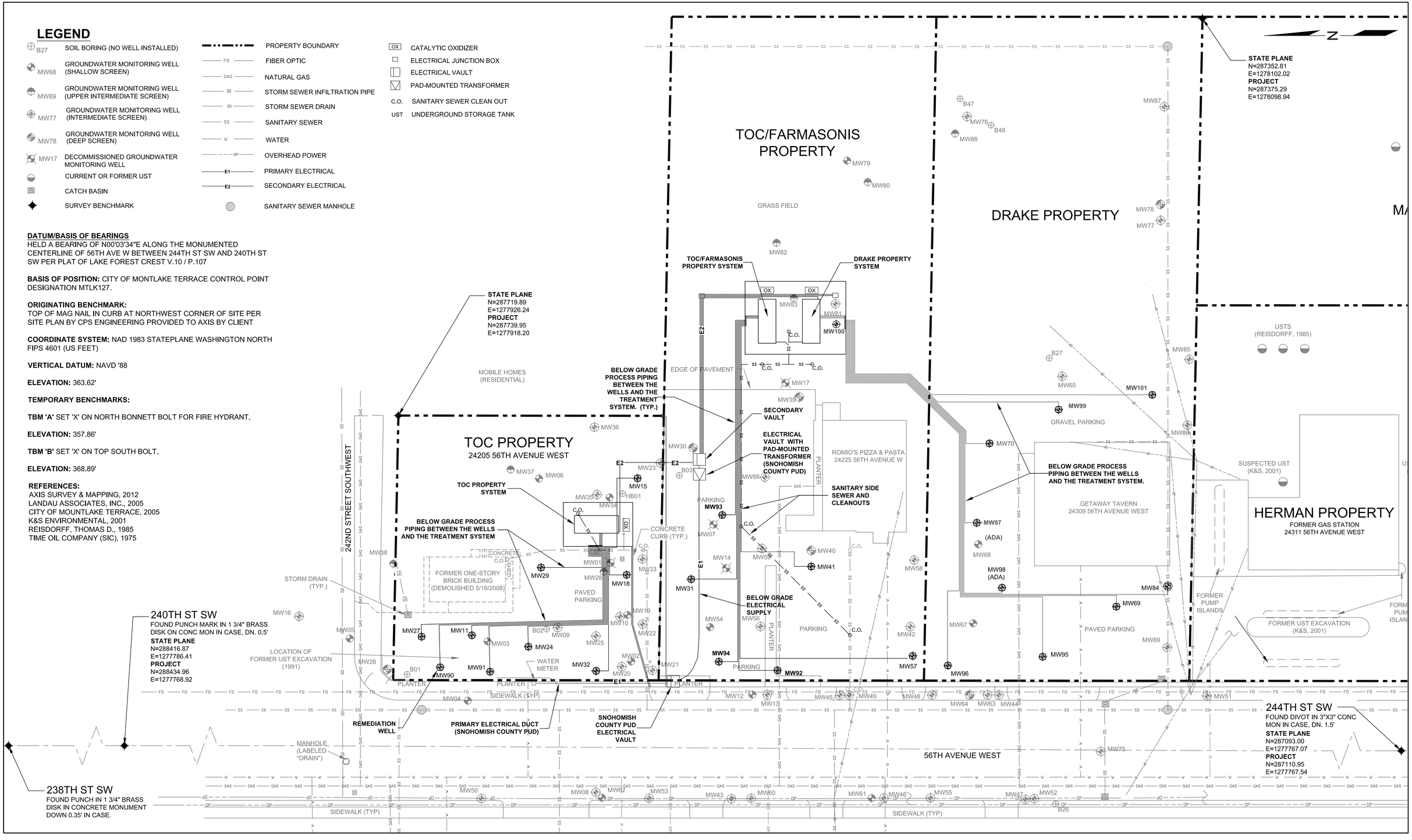
TBM 'A' SET 'X' ON NORTH BONNETT BOLT FOR FIRE HYDRANT.

ELEVATION: 357.86'

TBM 'B' SET 'X' ON TOP SOUTH BOLT.

ELEVATION: 368.89'

REFERENCES:
AXIS SURVEY & MAPPING, 2012
LANDAU ASSOCIATES, INC., 2005
CITY OF MOUNTLAKE TERRACE, 2005
K&S ENVIRONMENTAL, 2001
REISDORFF, THOMAS D., 1985
TIME OIL COMPANY (SIC), 1975



DATE:	09/30/2013
DRAWN BY:	BLR
CHECKED BY:	DHG/TSM
CAD FILE:	01-176_2013Q3_O&MI_FIG01

PROJECT NAME:	TOC HOLDINGS CO. FACILITY 01-176
PROJECT NUMBER:	0440-030
STREET ADDRESS:	24205 56TH AVENUE WEST
CITY, STATE:	MOUNTLAKE TERRACE, WASHINGTON

#	DATE	REVISION
		SHEET NO.

0 20 40 80
APPROXIMATE SCALE IN FEET

FIGURE 1
PROJECT MAP

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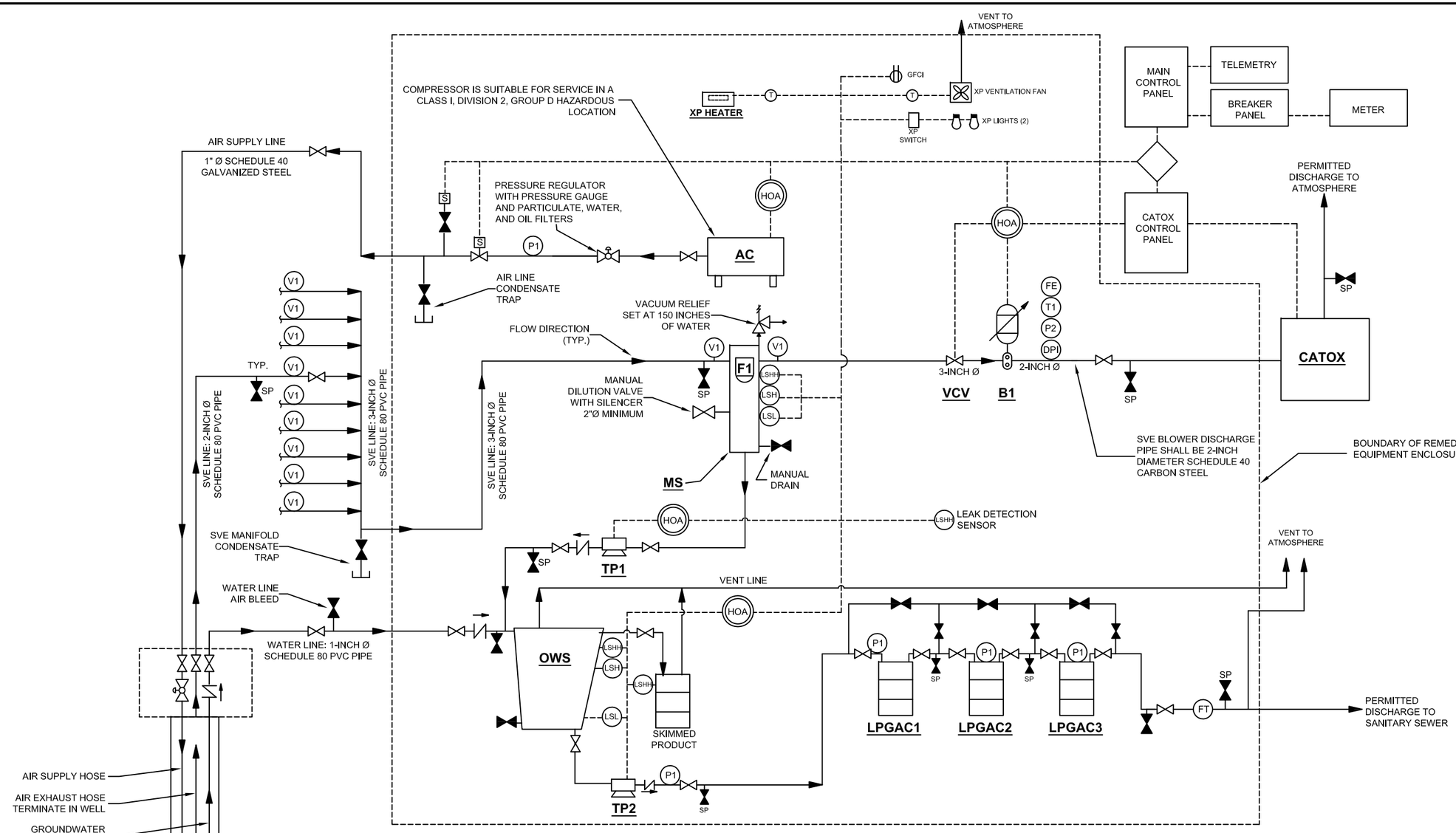
WWW.SOUNDEARTHINC.COM



MAJOR EQUIPMENT

AC	AIR COMPRESSOR
B-1	SOIL VAPOR EXTRACTION BLOWER
CATOX	CATALYTIC OXIDIZER
LPGAC-1,2,3	LIQUID PHASE GRANULAR ACTIVATED CARBON UNITS
MS	MOISTURE SEPARATOR
OWS	OIL WATER SEPARATOR
F-1	PARTICULATE FILTER
TP-1, 2	TRANSFER PUMPS
VCV	VAPOR CONTROL VALVE
WP	WELL PUMP
XP HEATER	XP HEATER

LEGEND

V1	VACUUM INDICATOR	FT	FLOW TOTALIZER	LSH	LEVEL SWITCH HIGH
T1	TEMPERATURE INDICATOR	FE	FLOW ELEMENT	LSHH	LEVEL SWITCH HIGH HIGH
P1	PRESSURE INDICATOR	DPI	DIFFERENTIAL PRESSURE INDICATOR	HOA	HAND/OFF/AUTO SWITCH - CONTROL PANEL MOUNTED
SP	SAMPLE PORT	LSL	LEVEL SWITCH LOW	GFCI	GROUND FAULT CIRCUIT INTERRUPTER
TYP	TYPICAL	T	THERMOSTAT	NEC	NATIONAL ELECTRICAL CODE
	VALVE - NORMALLY OPEN		FILTER REGULATOR		PRESSURE/VACUUM RELIEF VALVE
	VALVE NORMALLY CLOSED	S	SOLENOID VALVE		CHECK VALVE

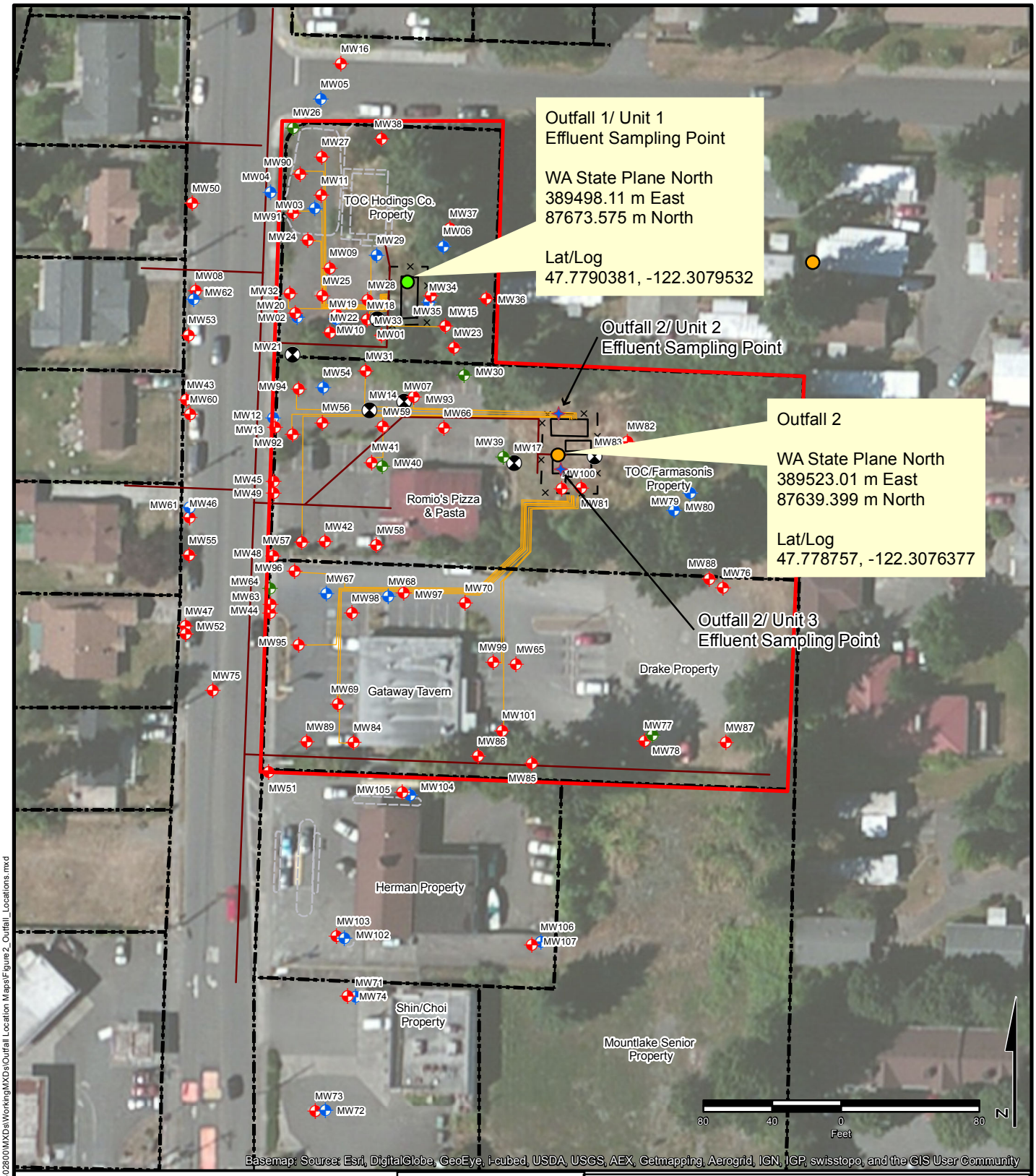
SoundEarth Strategies
SOUNDEARTHINC.COM

DATE: 12/03/2012
DRAWN BY: EAM/BLR
CHECKED BY: MES/TSM
CAD FILE: 01-176_2013Q3__PID

PROJECT NAME: TOC HOLDINGS CO. FACILITY 01-176
PROJECT NUMBER: 0440-030
STREET ADDRESS: 24205 56TH AVENUE WEST
CITY, STATE: MOUNTLAKE TERRACE, WASHINGTON

NOT TO SCALE

FIGURE 2
PIPING AND INSTRUMENTATION DIAGRAM



Legend

- Project Boundary
- Discharge Permit Outfall Locations
- Corrected Outfall Location
- Effluent Sampling Point
- Abandoned Well
- Deep Well
- Intermediate Well
- Sewer Line
- Shallow Well

TOC Holdings Co. Facility 01-176
24205 56th Avenue West
Mountlake Terrace, Washington

FIGURE 3: STATE WASTE DISCHARGE PERMIT ST0007384-
OUTFALL SAMPLING LOCATIONS

Stantec

DRAWN BY	D.H.	DATE DRAWN	7/31/2014
SCALE	1 in = 80 feet		
PROJECT	B.A14028.00		

X:\WA\Clients\Time_Oil\TOC-Mountlake Terrace_BA1402800\MXDs\WorkingMXDs\Outfall Location Maps\Figure2_Outfall_Locations.mxd

Appendix A
Laboratory Analytical Reports – Vapor

Unit 1: 24205 – TOC Property

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 9, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on July 2, 2013 from the TOC_01-176T_20130702 WORFDB7, F&BI 307034 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0709R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 2, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20130702 WORFDB7, F&BI 307034 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307034 -01	Vi_24205_20130702
307034 -02	Ve_24205_20130702

All quality control requirements were acceptable.

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176T_20130702 WORFDB7, F&BI 307034
Date Extracted: 07/03/13
Date Analyzed: 07/03/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Vi_24205_20130702 307034-01	<0.1	0.24	<0.1	0.48	26	81
Ve_24205_20130702 307034-02	<0.1	<0.1	<0.1	<0.3	<10	85
Method Blank 03-1272 MB	<0.1	<0.1	<0.1	<0.3	<10	83

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176T_20130702 WORFDB7, F&BI 307034

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

Laboratory Code: 307034-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	81	70-130
Toluene	mg/m^3	5.0	80	70-130
Ethylbenzene	mg/m^3	5.0	85	70-130
Xylenes	mg/m^3	15	86	70-130
Gasoline	mg/m^3	100	111	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

307034

SAMPLE CHAIN OF CUSTODY

ME 07-02-13

Page # 1 of 1

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176T, 24205 Property

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24205_20130702			01 A,B	7-2-13	1040	Air	2		X	X						
Ve_24205_20130702			02 T	7-2-13	1050	Air	2		X	X						

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	7-2-13	1625
Received by:		Eric Nam	FB	7/2/13	1628
Relinquished by:			Samples received at 29 °C		
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
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(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

August 14, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on August 7, 2013 from the TOC_01-176T_20130807 WORFDB7, F&BI 308100 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0814R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 7, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20130807 WORFDB7, F&BI 308100 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
308100 -01	Vi_24205_20130806
308100 -02	Ve_24205_20130806

All quality control requirements were acceptable.

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176T_20130807 WORFDB7, F&BI 308100
Date Extracted: 08/08/13
Date Analyzed: 08/08/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Vi_24205_20130806 308100-01	<0.1	0.21	0.14	0.79	31	95
Ve_24205_20130806 308100-02	<0.1	<0.1	<0.1	<0.3	<10	93
Method Blank 03-1518 MB	<0.1	<0.1	<0.1	<0.3	<10	88

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176T_20130807 WORFDB7, F&BI 308100

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

Laboratory Code: 308097-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	81	70-130
Toluene	mg/m^3	5.0	84	70-130
Ethylbenzene	mg/m^3	5.0	86	70-130
Xylenes	mg/m^3	15	88	70-130
Gasoline	mg/m^3	100	114	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

308100

SAMPLE CHAIN OF CUSTODY ME 08/07/13

Page # 1 of 1

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176T, 24205 Property

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24205_20130806			QAB	8/06/13	1150	Air	2		X	X						
Ve_24205_20130806			02 V	8/06/13	1300	Air	2		X	X						

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ashley Elliott	SES	8-6-13	15:35
Received by:		Ethan Marks	SES	8-6-13	15:35
Relinquished by:		Ethan Marks	SES	8-7-13	0830
Received by:		Nhan Phan	FEBT	8/7/13	0830

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

Samples received at 25 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 12, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on September 5, 2013 from the TOC_01-176_20130905 WORFDB7, F&BI 309038 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0912R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130905 WORFDB7, F&BI 309038 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
309038 -01	Ve_24205_20130904
309038 -02	Vi_24205_20130904

All quality control requirements were acceptable.

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309038
Date Extracted: 09/06/13
Date Analyzed: 09/06/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Ve_24205_20130904 309038-01	<0.1	<0.1	<0.1	<0.3	<10	95
Vi_24205_20130904 309038-02	<0.1	5.0	<0.1	22	580	114
Method Blank 03-1740 MB	<0.1	<0.1	<0.1	<0.3	<10	95

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309038

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

Laboratory Code: 309037-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	85	70-130
Toluene	mg/m^3	5.0	88	70-130
Ethylbenzene	mg/m^3	5.0	91	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	126	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

309038

CHAIN OF CUSTODY

ME 09-05-13

Send Report To Dee Gardner
Company Sound Earth
Address 2811 Fairview Ave #2000
City, State, ZIP Seattle, WA
Phone # _____ Fax # _____

SAMPLERS *(signature)*
PROJECT NAME/NO. 01-176
PO #
REMARKS

Page # _____ of _____

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
Ve_24205_20130904	01 A-B	9-4-13	1255	AIR	2		X	X									
Vi_24205_20130904	02 A-B	9-4-13	1300	AIR	2		X	X									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Marks	SES	9-5-13	0845
Received by:	Jordan Burkenb	FBI	9-5-13	0810
Relinquished by:				
Received by:				

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

FORMS\COC\COC.DOC

Samples received at 23 °C

Unit 2: 24225 – TOC/Farmasonis Property

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 9, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on July 2, 2013 from the TOC_01-176F_20130702 WORFDB7, F&BI 307035 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0709R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 2, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20130702 WORFDB7, F&BI 307035 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307035 -01	Vi_24225_20130702
307035 -02	Ve_24225_20130702

All quality control requirements were acceptable.

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176F_20130702 WORFDB7, F&BI 307035
Date Extracted: 07/03/13
Date Analyzed: 07/03/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Vi_24225_20130702 307035-01	<0.1	<0.1	<0.1	<0.3	<10	86
Ve_24225_20130702 307035-02	<0.1	<0.1	<0.1	<0.3	<10	83
Method Blank 03-1272 MB	<0.1	<0.1	<0.1	<0.3	<10	83

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176F_20130702 WORFDB7, F&BI 307035

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

Laboratory Code: 307034-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	81	70-130
Toluene	mg/m^3	5.0	80	70-130
Ethylbenzene	mg/m^3	5.0	85	70-130
Xylenes	mg/m^3	15	86	70-130
Gasoline	mg/m^3	100	111	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

307035

SAMPLE CHAIN OF CUSTODY

ME 07-02-13

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS *(signature)*

PROJECT NAME/NO.: TOC Holdings 01-176F, 24225 Property

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24225_20130702			01 A-B	7-2-13	1030	Air	2		X	X						
Ve_24225_20130702			02 T	7-2-13	1045	Air	2		X	X						

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	7-2-13	1623
Received by:		Eric Young	FAB	7/2/13	1623
Relinquished by:					
Received by:			Samples received at 29 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 14, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on August 7, 2013 from the TOC_01-176F_20130807 WORFDB7, F&BI 308097 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0814R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 7, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20130807 WORFDB7, F&BI 308097 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
308097 -01	Vi_24225_20130806
308097 -02	Ve_24225_20130806

All quality control requirements were acceptable.

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176F_20130807 WORFDB7, F&BI 308097
Date Extracted: 08/08/13
Date Analyzed: 08/08/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Vi_24225_20130806 308097-01	<0.1	<0.1	<0.1	<0.3	<10	90
Ve_24225_20130806 308097-02	<0.1	<0.1	<0.1	<0.3	<10	92
Method Blank 03-1518 MB	<0.1	<0.1	<0.1	<0.3	<10	88

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176F_20130807 WORFDB7, F&BI 308097

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

Laboratory Code: 308097-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	81	70-130
Toluene	mg/m^3	5.0	84	70-130
Ethylbenzene	mg/m^3	5.0	86	70-130
Xylenes	mg/m^3	15	88	70-130
Gasoline	mg/m^3	100	114	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

308097

SAMPLE CHAIN OF CUSTODY ME 08/07/13

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176F, 24225 Property

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24225_20130806			01 A-B	8/06/13	1200	Air	2		X	X						
Ve_24225_20130806			02 A-B	8/06/13	1210	Air	2		X	X						

Samples received at 25 °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:	Ashley Elliott	SES	8-6-13	1535
Received by:	Ethan Marks	SES	8-6-13	1535
Relinquished by:	Ethan Marks	SES	8-7-13	0830
Received by:	Nhan Phan	FEBT	8/7/13	0830

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 12, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on September 5, 2013 from the TOC_01-176_20130905 WORFDB7, F&BI 309037 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0912R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130905 WORFDB7, F&BI 309037 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
309037 -01	Ve_24225_20130904
309037 -02	Vi_24225_20130904

All quality control requirements were acceptable.

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309037
Date Extracted: 09/06/13
Date Analyzed: 09/06/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Ve_24225_20130904 309037-01	<0.1	<0.1	<0.1	<0.3	<10	97
Vi_24225_20130904 309037-02	<0.1	<0.1	<0.1	<0.3	<10	90
Method Blank 03-1740 MB	<0.1	<0.1	<0.1	<0.3	<10	95

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309037

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

Laboratory Code: 309037-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	85	70-130
Toluene	mg/m^3	5.0	88	70-130
Ethylbenzene	mg/m^3	5.0	91	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	126	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

309037

CHAIN OF CUSTODY ME 09-05-13

Send Report To Dee Gardner
Company Sound Earth
Address 2811 Fairview Ave #2000
City, State, ZIP Seattle, WA
Phone # _____ Fax # _____

SAMPLERS (signature)
PROJECT NAME/NO. 01-176
PO #
REMARKS

Page # _____ of _____

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
Ve-24225_20130904	01	9-4-13	1240	AIR	2		X	X									
Vi_24225_20130904	02	9-4-13	1250	AIR	2		X	X									

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

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	9-5-13	0845
Received by:		Jordan Battenb	FBI	9-5-13	0856
Relinquished by:					
Received by:					

Samples received at 23 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 9, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on July 2, 2013 from the TOC_01-176D_20130702 WORFDB7, F&BI 307036 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0709R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 2, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20130702 WORFDB7, F&BI 307036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307036 -01	Vi_24309_20130702
307036 -02	Ve_24309_20130702

All quality control requirements were acceptable.

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176D_20130702 WORFDB7, F&BI 307036
Date Extracted: 07/03/13
Date Analyzed: 07/03/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Vi_24309_20130702 307036-01	<0.1	<0.1	<0.1	<0.3	<10	79
Ve_24309_20130702 307036-02	<0.1	<0.1	<0.1	<0.3	<10	82
Method Blank 03-1272 MB	<0.1	<0.1	<0.1	<0.3	<10	83

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176D_20130702 WORFDB7, F&BI 307036

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

Laboratory Code: 307034-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	81	70-130
Toluene	mg/m^3	5.0	80	70-130
Ethylbenzene	mg/m^3	5.0	85	70-130
Xylenes	mg/m^3	15	86	70-130
Gasoline	mg/m^3	100	111	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

307036

SAMPLE CHAIN OF CUSTODY

ME 7/2/13

Page # 1 of 1

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176D 24309 Property

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24309_20130702			01 A-B	7-2-13	1115	Air			X	X						
Ve_24309_20130702			02 A-B	7-2-13	1125	Air			X	X						

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	7-2-13	1620
Received by:		Eric Young	EB	7/2	1620
Relinquished by:					
Received by:					

Samples received at 2.9 °C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 14, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on August 7, 2013 from the TOC_01-176D_20130807 WORFDB7, F&BI 308099 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0814R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 7, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20130807 WORFDB7, F&BI 308099 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
308099 -01	Vi_24309_20130806
308099 -02	Ve_24309_20130806

All quality control requirements were acceptable.

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176D_20130807 WORFDB7, F&BI 308099
Date Extracted: 08/08/13
Date Analyzed: 08/08/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Vi_24309_20130806 308099-01	<0.1	<0.1	<0.1	<0.3	<10	93
Ve_24309_20130806 308099-02	<0.1	<0.1	<0.1	<0.3	<10	93
Method Blank 03-1518 MB	<0.1	<0.1	<0.1	<0.3	<10	88

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176D_20130807 WORFDB7, F&BI 308099

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

Laboratory Code: 308097-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	81	70-130
Toluene	mg/m^3	5.0	84	70-130
Ethylbenzene	mg/m^3	5.0	86	70-130
Xylenes	mg/m^3	15	88	70-130
Gasoline	mg/m^3	100	114	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

308099

SAMPLE CHAIN OF CUSTODY ME 08/07/13

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176D 24309 Property

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24309_20130806			01A-B	8/06/13	1155	Air	2		x	x						
Ve_24309_20130806			02A-B	8/06/13	1145	Air	2		x	x						

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ashley Elliot	SES	8-6-13	1535
Received by:		Ethan Marks	SES	8-6-13	1535
Relinquished by:		Ethan Marks	SES	8-7-13	0830
Received by:		Nhan Phan	FEBT	8-7-13	V

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 25 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 12, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on September 5, 2013 from the TOC_01-176_20130905 WORFDB7, F&BI 309039 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0912R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130905 WORFDB7, F&BI 309039 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
309039 -01	Ve_24309_20130904
309039 -02	Vi_24309_20130904

All quality control requirements were acceptable.

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309039
Date Extracted: 09/06/13
Date Analyzed: 09/06/13

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
Ve_24309_20130904 309039-01	<0.1	<0.1	<0.1	<0.3	<10	89
Vi_24309_20130904 309039-02	<0.1	<0.1	<0.1	<0.3	<10	95
Method Blank 03-1740 MB	<0.1	<0.1	<0.1	<0.3	<10	95

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309039

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

Laboratory Code: 309037-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.1	<0.1	nm
Ethylbenzene	mg/m^3	<0.1	<0.1	nm
Xylenes	mg/m^3	<0.3	<0.3	nm
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	85	70-130
Toluene	mg/m^3	5.0	88	70-130
Ethylbenzene	mg/m^3	5.0	91	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	126	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

CHAIN OF CUSTODY

309039

HE 09-05-13

Send Report To Dee Gardner
Company SoundEarth
Address 2811 Fairview Ave #2000
City, State, ZIP Seattle, WA
Phone # _____ Fax # _____

SAMPLERS (signature) _____
PROJECT NAME/NO. 01-176
PO # 1
REMARKS

Page # _____ of _____

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS							Notes
VE_24309_20130904	01 A B	9-4-13	1220	AIR	2		X	X										
VE_24309_20130904	02 A B	9-4-13	1230	AIR	2		X	X										

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

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	9-5-13	0845
Received by:		Jordan Buttrell	FBL	9-5-13	0850
Relinquished by:					
Received by:					

Samples received at 23 °C

Appendix B
Laboratory Analytical Reports – Water

Unit 1: 24205 – TOC Property

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 10, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on July 2, 2013 from the TOC_01-176T_20130702 WORFDB7, F&BI 307040 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0710R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 2, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20130702 WORFDB7, F&BI 307040 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307040-01	We_24205_20130702
307040-02	GAC1i_24205_20130702
307040-03	GAC2i_24205_20130702

All quality control requirements were acceptable.

Date of Report: 07/10/13
Date Received: 07/02/13
Project: TOC_01-176T_20130702 WORFDB7, F&BI 307040
Date Extracted: 07/05/13
Date Analyzed: 07/05/13 and 07/08/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
We_24205_ 20130702 307040-01	<1	<1	<1	<3	<100	92
GAC1i_24205_ 20130702 307040-02 1/5	9.9	290	190	3,200	17,000	94
GAC2i_24205_ 20130702 307040-03	<1	<1	<1	<3	<100	92
Method Blank 03-1342 MB	<1	<1	<1	<3	<100	91

Date of Report: 07/10/13
Date Received: 07/02/13
Project: TOC_01-176T_20130702 WORFDB7, F&BI 307040

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

Laboratory Code: 307038-01 (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	92	72-119
Toluene	ug/L (ppb)	50	91	71-113
Ethylbenzene	ug/L (ppb)	50	96	72-114
Xylenes	ug/L (ppb)	150	87	72-113
Gasoline	ug/L (ppb)	1,000	98	70-119

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

307040

SAMPLE CHAIN OF CUSTODY

ME 07-02-13 VI

Page # 1 of 1

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176T, 24205 Property

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8					Notes
We_24205_20130702			01A-C	7-2-13	1045	Water	3		x	x						
GAC1i_24205_20130702			02 T	7-2-13	1053	Water	3		x	x						
GAC2i_24205_20130702			03 T	7-2-13	1050	Water	3		x	x						

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Marks	SES	7-2-13	1625
Received by:	Eric Law	FOB	7/2/13	1625
Relinquished by:				
Received by:		Samples received at 6 °C		

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 14, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on August 7, 2013 from the TOC_01-176T_20130807 WORFDB7, F&BI 308101 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0814R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 7, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20130807 WORFDB7, F&BI 308101 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
308101 -01	We_24205_20130806
308101 -02	GAC1i_24205_20130806
308101 -03	GAC2i_24205_20130806

All quality control requirements were acceptable.

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176T_20130807 WORFDB7, F&BI 308101
Date Extracted: 08/07/13
Date Analyzed: 08/07/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
We_24205_20130806 308101-01	<1	<1	<1	<3	<100	90
GAC1i_24205_20130806 308101-02	<1	<1	<1	<3	<100	84
GAC2i_24205_20130806 308101-03	<1	<1	<1	<3	<100	82
Method Blank 03-1516 MB	<1	<1	<1	<3	<100	94

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176T_20130807 WORFDB7, F&BI 308101

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: 308083-01 (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	98	72-119
Toluene	ug/L (ppb)	50	98	71-113
Ethylbenzene	ug/L (ppb)	50	99	72-114
Xylenes	ug/L (ppb)	150	90	72-113
Gasoline	ug/L (ppb)	1,000	99	70-119

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

308101

SAMPLE CHAIN OF CUSTODY

ME 08/07/13

V3

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO. TOC Holdings 01-176T 24205 Property

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8					Notes
We_24205_20130806			01A-C	8/06/13	1145	Water	3		X	X						
GAC1i_24205_20130806			02 T	8/06/13	1110	Water	3		X	X						
GAC2i_24205_20130806			03 T	8/06/13	1115	Water	3		X	X						

Samples received at 6 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Markt	SES	8-7-13	0935
Received by:	Nhan Phan	FedEx	8-7-13	0835
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 12, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on September 5, 2013 from the TOC_01-176_20130905 WORFDB7, F&BI 309042 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0912R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130905 WORFDB7, F&BI 309042 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
309042 -01	We_24205_20130904
309042 -02	GAC2i_24205_20130904
309042 -03	GAC1i_24205_20130904

All quality control requirements were acceptable.

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309042
Date Extracted: 09/05/13
Date Analyzed: 09/05/13 and 09/09/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
We_24205_20130904 309042-01	<1	<1	<1	<3	<100	91
GAC2i_24205_20130904 309042-02	<1	<1	<1	<3	<100	95
GAC1i_24205_20130904 309042-03	1.1	18	<1	230	2,400	103
Method Blank 03-1741 MB	<1	<1	<1	<3	<100	91

Date of Report: 09/12/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309042

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

Laboratory Code: 309040-01 (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	94	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	95	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

309042

CHAIN OF CUSTODY

ME 09-05-13 V2

Page # _____ of _____

Send Report To Dee Eardman
Company Sound Earth
Address 2811 Fairview Ave. #2000
City, State, ZIP Seattle, WA
Phone # _____ Fax # _____

SAMPLERS *(signature)*

PROJECT NAME/NO. 01-176

PO # 1

REMARKS

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
WC_24205_20130904	01A-C	9-4-13	1230	H_2O	3		X	X									
GAC2:_24205_20130904	02A-C	9-4-13	1235	H_2O	3		X	X									
GAC1:_24205_20130904	03A-C	9-4-13	1237	H_2O	3		X	X									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Marks	SES	9-5-13	0845
Received by:	Jordan Burtenb	FBI	9-5-13	0850
Relinquished by:				
Received by:				

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

FORMS\COC\COC.DOC

Samples received at 13 **°C**

Unit 2: 24225 – TOC/Farmasonis Property

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 9, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on July 2, 2013 from the TOC_01-176F_20130702 WORFDB7, F&BI 307038 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0709R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 2, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20130702 WORFDB7, F&BI 307038 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307038-01	We_24225_20130702
307038-02	GAC1i_24225_20130702
307038-03	GAC2i_24225_20130702

All quality control requirements were acceptable.

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176F_20130702 WORFDB7, F&BI 307038
Date Extracted: 07/05/13
Date Analyzed: 07/05/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
We_24225_20130702 307038-01	<1	<1	<1	<3	<100	93
GAC1i_24225_ 20130702 307038-02	<1	<1	<1	<3	<100	91
GAC2i_24225_ 20130702 307038-03	<1	<1	<1	<3	<100	92
Method Blank 03-1342 MB	<1	<1	<1	<3	<100	91

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176F_20130702 WORFDB7, F&BI 307038

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: 307038-01 (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	92	72-119
Toluene	ug/L (ppb)	50	91	71-113
Ethylbenzene	ug/L (ppb)	50	96	72-114
Xylenes	ug/L (ppb)	150	87	72-113
Gasoline	ug/L (ppb)	1,000	98	70-119

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

307038

SAMPLE CHAIN OF CUSTODY

02 DV
ME 07-02-13 VI

Page # 1 of 1

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)	
PROJECT NAME/NO. TOC Holdings 01-176F 24225 Property	PO #
REMARKS	GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8					Notes
We_24225_20130702			01 A-C	7-2-13	1105	Water			x	x						
GAC1i_24225_20130702			02 T	7-2-13	1110	Water			x	x						
GAC2i_24225_20130702			03 T	7-2-13	1108	Water			x	x						

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	7-2-13	1625
Received by:			FAB	7/2/13	1625
Relinquished by:					
Received by:			Samples received at 6 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 14, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on August 7, 2013 from the TOC_01-176F_20130807 WORFDB7, F&BI 308098 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0814R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 7, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20130807 WORFDB7, F&BI 308098 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
308098 -01	We_24225_20130806
308098 -02	GAC1i_24225_20130806
308098 -03	GAC2i_24225_20130806

All quality control requirements were acceptable.

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176F_20130807 WORFDB7, F&BI 308098
Date Extracted: 08/07/13
Date Analyzed: 08/07/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
We_24225_20130806 308098-01	<1	<1	<1	<3	<100	90
GAC1i_24225_20130806 308098-02	<1	<1	<1	5.2	<100	87
GAC2i_24225_20130806 308098-03	<1	<1	<1	<3	<100	88
Method Blank 03-1516 MB	<1	<1	<1	<3	<100	94

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176F_20130807 WORFDB7, F&BI 308098

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: 308083-01 (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	98	72-119
Toluene	ug/L (ppb)	50	98	71-113
Ethylbenzene	ug/L (ppb)	50	99	72-114
Xylenes	ug/L (ppb)	150	90	72-113
Gasoline	ug/L (ppb)	1,000	99	70-119

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

308098

SAMPLE CHAIN OF CUSTODY

ME 08/07/13

V3

Page # 1 of 1

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176F, 24225 Property

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8				Notes
We_24225_20130806			01A-C	8/06/13	1125	Water	3		X	X					
GAC1i_24225_20130806			02 T	8/06/13	1135	Water	3		X	X					
GAC2i_24225_20130806			03 T	8/06/13	1130	Water	3		X	X					

Samples received at 6 °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:	Ashley Elliott	SES	8-6-13	1535
Received by:	Ethan Mark	SES	8-6-13	1535
Relinquished by:	Ethan Marks	SES	8-7-13	0830
Received by:	Nhan Phan	FEBT	8-7-13	V

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 10, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on September 5, 2013 from the TOC_01-176_20130905 WORFDB7, F&BI 309040 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0910R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130905 WORFDB7, F&BI 309040 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
309040 -01	We_24225_20130904
309040 -02	GAC2i_24225_20130904
309040 -03	GAC1i_24225_20130904

All quality control requirements were acceptable.

Date of Report: 09/10/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309040
Date Extracted: 09/05/13
Date Analyzed: 09/05/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
We_24225_20130904 309040-01	<1	<1	<1	<3	<100	98
GAC2i_24225_20130904 309040-02	<1	<1	<1	<3	<100	96
GAC1i_24225_20130904 309040-03	<1	<1	<1	<3	<100	89
Method Blank 03-1741 MB	<1	<1	<1	<3	<100	91

Date of Report: 09/10/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309040

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: 309040-01 (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	94	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	95	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

309040

CHAIN OF CUSTODY ME 09-05-13

Page # 1 of 1 V2

Send Report To Dee Gardner
Company Sound Earth
Address 2811 Fairview Ave. #2000
City, State, ZIP Seattle, WA
Phone # _____ Fax # _____

SAMPLERS (signature)
PROJECT NAME/NO. 01-176
PO #
REMARKS

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
WC_24225_20130904	01 A-C	9-4-13	1310	H_2O	3		X	X										
GAC2:_24225_20130904	02 A-C	9-4-13	1315	H_2O	3		X	X										
GAC1:_24225_20130904	03 A-C	9-4-13	1318	H_2O	3		X	X										

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

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SEG	9-5-13	0845
Received by:		Jordin Butterb	FBI	9-5-13	0910
Relinquished by:					
Received by:					

Samples received at 13 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 9, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on July 2, 2013 from the TOC_01-176D_20130702 WORFDB7, F&BI 307039 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0709R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 2, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20130702 WORFDB7, F&BI 307039 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307039-01	We_24309_20130702

All quality control requirements were acceptable.

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176D_20130702 WORFDB7, F&BI 307039
Date Extracted: 07/03/13
Date Analyzed: 07/03/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
We_24309_20130702 307039-01	<1	<1	<1	<3	<100	82
Method Blank 03-1273 MB	<1	<1	<1	<3	<100	84

Date of Report: 07/09/13
Date Received: 07/02/13
Project: TOC_01-176D_20130702 WORFDB7, F&BI 307039

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: 307011-01 (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	98	72-119
Toluene	ug/L (ppb)	50	97	71-113
Ethylbenzene	ug/L (ppb)	50	103	72-114
Xylenes	ug/L (ppb)	150	92	72-113
Gasoline	ug/L (ppb)	1,000	99	70-119

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

307039

SAMPLE CHAIN OF CUSTODY

ME 07-02-13 VI

Page # 1 of 1

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)	
PROJECT NAME/NO. TOC Holdings 01-176D 24309 Property	PO #
REMARKS	GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8					Notes
			01A-C													
We_24309_20130702			01A-C	7/2/13	1128	Water			X	X						
~~GAC1i_24309_~~			02			Water			X	X						
~~GAC2i 24309_20130702~~			03	7-2-13	1128	Water	3		X	X						

pH EM 7/3/13 MG

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by:	Ethan Marks	SES	7-2-13	1625
Seattle, WA 98119-2029	Received by:	Eric Olson	FEB	7/3/13	1620
Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:		Samples received at 6 °C		

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 14, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on August 7, 2013 from the TOC_01-176D_20130807 WORFDB7, F&BI 308102 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0814R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 7, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20130807 WORFDB7, F&BI 308102 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
308102 -01	We_24309_20130806
308102 -02	GAC1i_24309_20130806
308102 -03	GAC2i_24309_20130806

All quality control requirements were acceptable.

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176D_20130807 WORFDB7, F&BI 308102
Date Extracted: 08/07/13
Date Analyzed: 08/07/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
We_24309_20130806 308102-01	<1	<1	<1	<3	<100	81
GAC1i_24309_20130806 308102-02	1.0	2.3	40	260	2,500	103
GAC2i_24309_20130806 308102-03	<1	<1	<1	<3	<100	92
Method Blank 03-1516 MB	<1	<1	<1	<3	<100	94

Date of Report: 08/14/13
Date Received: 08/07/13
Project: TOC_01-176D_20130807 WORFDB7, F&BI 308102

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: 308083-01 (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	98	72-119
Toluene	ug/L (ppb)	50	98	71-113
Ethylbenzene	ug/L (ppb)	50	99	72-114
Xylenes	ug/L (ppb)	150	90	72-113
Gasoline	ug/L (ppb)	1,000	99	70-119

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

308102

SAMPLE CHAIN OF CUSTODY ME 08/07/13

V3

Send Report To Dee Gardner

Company SoundEarth Strategies Inc.

Address 2811 Fairview Ave East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature)

PROJECT NAME/NO.: TOC Holdings 01-176D, 24309 Property

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8				Notes
We_24309_20130806			01A-C	8/06/13	1100	Water	3		x	x					
GAC1i_24309_20130806			02 T	8/06/13	1110	Water	3		x	x					
GAC2i_24309_20130806			03 T	8/06/13	1105	Water	3		x	x					

Samples received at 6 °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:		Ashley Elliott	SES	8-6-13	1535
Received by:		Ethan Marks	SES	8-6-13	1535
Relinquished by:		Ethan Marks	SES	8-7-13	0935
Received by:		Nhan Phan	FedEx	8-7-13	0835

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

September 10, 2013

Dee Gardner, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Ms. Gardner:

Included are the results from the testing of material submitted on September 5, 2013 from the TOC_01-176_20130905 WORFDB7, F&BI 309041 project. There are 4 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: Audrey Hackett, Beau Johnson
SOU0910R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 5, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20130905 WORFDB7, F&BI 309041 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
309041 -01	We_24309_20130904
309041 -02	GAC2i_24309_20130904
309041 -03	GAC1i_24309_20130904

All quality control requirements were acceptable.

Date of Report: 09/10/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309041
Date Extracted: 09/05/13
Date Analyzed: 09/05/13

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
We_24309_20130904 309041-01	<1	<1	<1	<3	<100	93
GAC2i_24309_20130904 309041-02	<1	<1	<1	<3	<100	92
GAC1i_24309_20130904 309041-03	<1	<1	<1	3.6	<100	92
Method Blank 03-1741 MB	<1	<1	<1	<3	<100	91

Date of Report: 09/10/13
Date Received: 09/05/13
Project: TOC_01-176_20130905 WORFDB7, F&BI 309041

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: 309040-01 (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	94	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	95	73-126
Xylenes	ug/L (ppb)	150	94	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

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

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

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

CHAIN OF CUSTODY

309041

ME 09-05-13 V2

Send Report To Dee Gardner
Company SoundEarth
Address 2811 Fairview Ave #2000
City, State, ZIP Seattle, WA
Phone # _____ Fax # _____

SAMPLERS (signature)
PROJECT NAME/NO. 01-176
PO #
REMARKS

Page # 1 of 1

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
We_24309_20130904	01A	9-4-13	1320	H_2O	3		X	X									
GACI:_24309_20130904	02A	9-4-13	1324	H_2O	3		X	X									
GACI:_24309_20130904	03A	9-4-13	1331	H_2O	3		X	X									

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

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[redacted]	Ethan Marks	SES	9-5-13	0845
Received by:	[redacted]	Jordin Butterb	FBI	9-5-13	0850
Relinquished by:					
Received by:					

Samples received at 13 °C