Operations & Maintenance Report
First Quarter 2014

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

now

Prepared for:
TOC Holdings Co.
2737 West Commodore Way
Seattle WA 98199

Prepared by:
JBR Environmental Consultants, Inc.
now
Stantec Consulting Services Inc.
19101 36th Avenue West, Ste. 203
Lynnwood WA 98036
Phone: 425.977.4994

September 5, 2014

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, First Quarter 2014,*** 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. Services conducted by JBR (now Stantec) for this project were conducted in accordance with the Environmental Services Contract between **HydroCon Environmental, LLC (HydroCon)** and JBR, which has been now transferred over to Stantec. 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 HydroCon. 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.

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

Prepared by: **Jeremy Fleege, PE**
Environmental Engineer

Reviewed by: **Rebekah Brooks, LG, LHg**
Manager, Hydrogeology

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Abbreviations & Acronyms

µg/L	micrograms per liter
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
HydroCon	HydroCon Environmental, LLC
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 Protection 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 **First Quarter 2014** operation and maintenance (O&M) activities from January through March 2014 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.

The activities during January and February (2014) described in this report were completed by SoundEarth Strategies (SES). Since that time, including activities during March 2014, JBR Environmental Consultants, Inc. (now Stantec Consulting Services Inc. [Stantec]) has been hired by HydroCon to take over environmental consulting responsibilities on the project. This report has been prepared by Stantec to meet reporting requirements of the AO. Work was conducted by SES and Stantec 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). The Unit 1 remediation system is located on the TOC Property, and is associated with operation of remediation wells on the TOC Property. Units 2 and 3 remediation systems are located on the TOC/Farmasonis Property and are associated with operation of remediation wells on 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:

- Operation and maintenance consisted of routine, scheduled maintenance activities (as described in the O&M Manual), as well as the following:
  - Installation of bag filters at the remediation systems on the TOC (Unit 1) and TOC/Farmasonis Properties (Unit 2);
  - Routine bag filter replacements; and
  - Replacement of seven (of nine) granular-activated carbon (GAC) canisters (three at the TOC Property, one at the TOC/Farmasonis Property, and three at the Drake Property).
- A combined total of 306.6 pounds of vapor-phase hydrocarbons was removed during this reporting period, and a cumulative total of 2,789.1 pounds since startup in October 2012. In addition, a volume of 262,957 gallons of groundwater was extracted, treated and discharged during this period. The total volume of water processed since system startup is approximately 1,262,700 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 oil-water separators (OWS) and addressing issues associated with the GAC canisters. These activities are described in more detail in the following sections.

1.0 INTRODUCTION

This report documents the **First Quarter 2014** O&M activities from January through March 2014 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 properties identified below, as defined in the AO No. DE 8661 between Ecology and TOC. The following properties constitute the TOC Site, as defined by the AO:

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.

Some of the activities described in this report were completed by SES, since that time, Stantec has been hired by TOC to take over environmental consulting responsibilities on the project. This report has been prepared by Stantec to meet the reporting requirements, but the work was conducted by SES during the beginning of this Quarter, and by Stantec during the conclusion of this Quarter. As such, figures 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 during this Quarter.

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 (DPE) 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. Site investigations between 1992 and 2013 led to the installation of 107 monitoring and remediation wells into three groundwater zones on the TOC Site and two properties immediately downgradient (Herman Property and Shin/Choi Property). Of this total, 24 are installed in the shallow water-bearing zone, 71 are installed in the intermediate water-bearing zone (including six intermediate zone wells that intersect shallow zone conditions), 7 wells are installed in the deep water-bearing zone, and six wells have been decommissioned. 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 23 remediation wells serve the three MPE systems: 9 wells at the TOC Property, 6 wells at the TOC/Farmasonis Property, and 8 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 and surrounding soil. Process piping is utilized to convey recovered fluids (groundwater and 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 (gpm). 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 installation of bag filters at the remediation systems on the TOC Property (Unit 1) and TOC/Farmasonis Property (Unit 2). The bag filters are being used to collect sand, silt, and biological byproducts, in order to minimize the amount of these items that enter the GAC canisters.

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 a 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 [SUP]).

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 monthly 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.
- Total petroleum hydrocarbons, gasoline range (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.

3.2 PSCAA ORDER OF APPROVAL

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 TPH-G flowing into and out of the catalytic oxidizer shall be 95 percent unless the concentration of TPH-G 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 TPH-G 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 TPH-G exceed 0.5 or 50 ppm_v, respectively.

3.3 SPECIAL USE PERMIT

The SUP executed between TOC and the City of Mountlake Terrace (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 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 **First Quarter 2014** system O&M at the TOC Property:

- The MPE operation time this Quarter was approximately 53 percent (**Table 1-1**). System down time was attributed to a leak at one of the GAC canisters, as well as, GAC canister maintenance.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 179.9 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was approximately 1.299 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal to date is approximately 1,982 pounds (**Tables 1-1, 1-2 and 1-3**).
- The volume of groundwater extracted during this reporting period was 31,157.9 gallons **(Tables 1-1 and 1-3)**. The average flow rate of groundwater recovery was 328.9 gallons/day **(Tables 1-1 and 1-3)**.
- No LNAPL was recovered from the OWS. Also, the OWS was inspected, and a slight sheen was visible on the liquid contents. No LNAPL was visible.
- The SVE daily mass removal rate ranged from 0.90 to 5.80 pounds per day (lb/day) during this Quarter (**Table 1-2**).
- 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/m^3; 2.329 ppm_v; **Table 1-4**).
- All system operations were in compliance with Ecology's Water Quality Program and PSCAA permits (**Tables 1-4 and 1-5**).

4.2 TOC / FARMASONIS PROPERTY

The following is a summary of the **First Quarter 2014** system O&M at the TOC/Farmasonis Property:

- The MPE operation time this Quarter was approximately 88 percent (**Table 2-1**). System down time was attributed to GAC canister maintenance, as well as, GAC canister fouling and OWS high level alarms.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 72.9 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was 0.024 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal was approximately 670.2 pounds (**Tables 2-1, 2-2 and 2-3**).

- The volume of groundwater extracted during this reporting period was approximately 58,665 gallons (**Tables 2-1 and 2-3**). The average flow rate of groundwater recovery was 536.44 gallons/day (**Tables 2-1 and 2-3**).
- 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 0.97 to 1.33 lb/day during this Quarter (**Table 2-2**).
- The effluent concentration of GRPH exiting the catalytic oxidizer was not detected at concentrations above the laboratory's lower reporting limit of 10 mg/m3 (2.329 ppm_v; **Table 2-4**).
- All system operations were in compliance with Ecology's Water Quality Program and PSCAA permits (**Tables 2-4 and 2-5**).

4.3 DRAKE PROPERTY

The following is a summary of the **First Quarter 2014** system O&M at the Drake Property:

- The MPE operation time this Quarter was approximately 95 percent (**Table 3-1**). System down time was attributed to GAC canister maintenance, as well as, GAC canister fouling and OWS high level alarms.
- The vapor-phase hydrocarbon mass removal associated with the SVE system was approximately 53.9 pounds, and aqueous-phase hydrocarbon removal associated with the GAC treatment process was approximately 0.07 pounds for this reporting period. The cumulative vapor-phase and aqueous-phase hydrocarbon removal to date is approximately 136.6 pounds (**Tables 3-1, 3-2 and 3-3**).
- The volume of groundwater extracted during this reporting period was approximately 173,134 gallons (**Tables 3-1 and 3-3**). The average flow rate of groundwater recovery was 1,530 gallons/day (**Tables 3-1 and 3-3**).
- No LNAPL was recovered from the OWS. Also, the OWS was inspected, minor LNAPL or sheen was visible on the liquid contents, mainly at the TOC Property system.
- The average daily vapor mass removal rate ranged from 0.1 to 0.9 lb/day during this Quarter (**Table 3-2**).
- 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 3-4**).
- All system operations were in compliance with PSCAA and Ecology's Water Quality Program permits (**Tables 3-4 and 3-5**).

5.0 SYSTEM OPTIMIZATION & FUTURE RECOMMENDATIONS

The following is a summary of the **First Quarter 2014** 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."

Operational activities during this Quarter continued to focus on dewatering the formation to optimize recovery of hydrocarbon vapors. 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:

- Field crews continued to optimize the system flows to balance the flow rate of the OWS. Modifications were conducted to minimize high level conditions, which triggered the systems to shut down. Generally, the program modification stopped the flow of water to the OWS for a brief period of time while the OWS transfer pumps discharged water to the GAC canisters.
- Sand, silt, and biological byproducts continued to accumulate within the lead GAC canisters. This buildup of materials restricts the discharge of wastewater from the OWS and eventually causes the systems to shut down. The majority of this loading has been observed at the TOC Property (Unit 1) system. This loading was also observed at the Drake Property system (Unit 2) during previous quarters but has been reduced following installation of a bag filter in 2013. An additional bag filter may need to be installed in Unit 1 in the future.
- Leaks were noted at many of the GAC canisters; therefore, seven GAC canisters (three for Unit 1, one for Unit 2, and three for Unit 3) were replaced during this Quarter.

6.0 LIMITATIONS

This document, ***Operations & Maintenance Report, First Quarter 2014,*** was prepared by Stantec Consulting Services Inc. on behalf of TOC Holdings Co. The material presented reflects Stantec's best judgment in light of the information available to it 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.

Tables

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Unit 1: TOC Property (24205)

Table 1-1
Unit 1 - TOC Property (24205)
Summary of System Performance
First Quarter 2014
TOC Holdings Facility No. 01-176

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%	35,204.90	550.08	2.522	917.763
12/05/12	03/04/13	89	36	40%	7,655.90	86.02	0.918	42.110
03/04/13	06/05/13	93	29	31%	4,915.80	52.86	0.609	5.997
06/05/13	09/04/13	91	69	76%	83,540.30	918.03	3.121	138.038
09/04/13	12/03/13	90	90	100%	75,825.20	842.50	0.836	698.480
12/03/13	01/31/14	59	26	44%	1,166.18	19.77	0.064	151.654
01/31/14	03/19/14	47	29	63%	29,991.72	638.12	1.235	28.224
Average System Run Time				**57%**				
Averages for Quarter		**53**	**28**	**53%**	**15,578.95**	**328.94**	**0.650**	**89.939**
Totals for Quarter		**106**	**55**	n/a	**31,157.90**	**657.89**	**1.300**	**179.878**

NOTES:

shaded cells = data for reporting quarter

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

n/a = not applicable

Table 1-2
Unit 1 - TOC Property (24205)
Vapor Stream - System Performance Monitoring Data
First Quarter 2014
TOC Holdings Facility No. 01-176

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	146.8	330	380	1,600	21.1	0.00
10/10/12	70.2	2.93	69	149.2	330	419	2,600	27.9	75.91
10/17/12	237.7	9.90	69	149.2	330	410	3,400	40.2	356.74
10/24/12	406.9	16.95	68	144.4	330	385	2,400	38.3	626.56
11/07/12	638.2	26.59	73	140.7	330	384	1,700	26.3	879.75
12/05/12	714.2	29.76	67	148.0	330	344	150	12.0	917.76
01/08/13	1,482.9	61.79	65	153.8	330	342	35	1.3	957.95
01/17/13	1,533.7	63.90	76	153.0	330	350	--	--	--
02/05/13	1,537.6	64.07	64	148.6	330	342	53	0.60	959.32
03/04/13	1,569.4	65.39	27	173.0	330	342	<10	0.42	959.87
04/03/13	1,587.2	66.13	60	157.4	330	342	14	0.14	959.98
05/08/13	1,595.4	66.48	17	175.2	330	341	22	0.27	960.07
06/05/13	2,267.7	94.49	36	166.0	330	340	<10	0.21	965.87
07/02/13	2,789.8	116.24	39	168.0	330	340	26	0.23	970.93
08/06/13	3,227.4	134.48	47	162.1	330	341	31	0.42	978.64
08/09/13	3,302.8	137.62	64	157.1	330	345	--	--	--
09/04/13	3,924.4	163.52	66	152.0	330	351	580	4.31	1,103.91
10/07/13	4,715.2	196.47	66	153.1	330	356	710	8.85	1,395.37
10/14/13	4,888.3	203.68	72	155.4	330	354	--	--	--
10/15/13	4,913.7	204.74	70	154.7	330	355	--	--	--
10/16/13	4,936.9	205.70	66	154.4	330	364	--	--	--
11/06/13	5,434.8	226.45	45	173.7	330	349	240	6.98	1,604.58
11/07/13	5,460.5	227.52	45	168.1	330	346	--	--	--
12/03/13	6,084.2	253.51	74	158.2	330	355	740	7.31	1,802.39
01/13/14	6,710.4	279.60	0	0.0	--	--	--	--	--
01/31/14	6,711.6	279.65	47	174.0	330	342	37	5.80	1,954.04
02/06/14	6,854.2	285.59	47	173.4	330	343	--	--	--
02/07/14	6,877.1	286.55	47	174.9	330	342	110	1.15	1,961.99
03/22/14[6]	7,416.7	309.03	48	174.0	330	340	<10	0.90	1,982.27
PSCAA NOC-10384 Restrictions and Conditions				**max. 350**	**min. 240**	**max. 620**			

NOTES:
shaded cells = data for reporting quarter
[1]Air flow rates through 02/07/14 calculated using an averaging flow sensor (Dwyer Model DS). Air flow rates after 02/07/14 calculated from data. Air flow rate from 03/22/2014 is assumed value for subsequent calculations.
[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).
[6]Samples collected on 3/19/14, while hour readings were from 3/22/14

-- = 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

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Table 1-3
Unit 1 - TOC Property (24205)
Liquid Stream - System Performance Monitoring Data
First Quarter 2014
TOC Holdings Facility No. 01-176

Site Visit	Extracted Groundwater			Hydrocarbon Recovery - Aqueous-Phase		
Date	Flow Totalizer	Treated Between Visits	Average Flow Rate	Influent GRPH Concentration	GRPH Removed[1] [2] [3]	Cumulative GRPH Removed[3] [4]
	(gallons)	(gallons)	(gallons/day)	(µg/L)	(lb)	(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
10/07/13	174,445.2	43,128.3	1,307	1,100	0.396	7.565
10/14/13	184,151.7	9,706.5	1,387	--	--	--
10/15/13	184,982.4	830.7	831	--	--	--
10/16/13	185,955.0	972.6	973	--	--	--
11/06/13	187,065.4	1,110.4	53	3,800	0.400	7.965
11/07/13	188,072.0	1,006.6	1,007	--	--	--
12/03/13	207,142.1	19,070.1	733	240	0.040	8.006
01/13/14	208,153.8	1,011.7	25	--	--	--
01/31/14	208,308.3	154.5	9	6,600	0.064	8.070
02/06/14	214,154.3	5,846.0	974	--	--	--
02/07/14	214,840.5	686.2	686	760	0.041	8.111
03/19/14	238,300	23,459.5	586	6,100	1.194	9.305
State Waste Discharge Permit Number ST0007384 Maximum Daily Limits			**7,000**			

NOTES:

shaded cells = data for reporting quarter

[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

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Table 1-4
Unit 1 - TOC Property (24205)
Vapor Stream Analytical Results
First Quarter 2014
TOC Holdings Facility No. 01-176

Sample Date	Analytical Results (mg/m^3)										
	Influent Vapor Samples[1]					Effluent Vapor Samples[2]					GRPH DRE [5]
	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	
	(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	--
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	--
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*
10/07/13	710	<0.1	5.7	<0.1	22	<10	<0.1	<0.1	<0.1	<0.3	*99.3*
11/06/13	240	<0.1	1.6	<0.1	6.4	<10	<0.1	<0.1	<0.1	<0.3	*97.9*
12/03/13	740	<0.1	6.3	<0.1	19	<10	<0.1	<0.1	<0.1	<0.3	*99.3*
01/31/14	37	<0.1	0.40	<0.1	0.75	<10	<0.1	<0.1	<0.1	<0.3	*86.5*
02/07/14	110	<0.1	0.77	<0.1	2.2	<10	<0.1	<0.1	<0.1	<0.3	*95.5*
03/19/14	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
PSCAA NOC-10384 Restrictions and Conditions						**min. 214.7 [5]**					**95% [5] [6]**

NOTES:

shaded cells = data for reporting quarter

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

-- = not analyzed, measured, or calculated

< = 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

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Table 1-5
Unit 1- TOC Property (24205)
Liquid Stream Analytical Results
First Quarter 2014
TOC Holdings Facility No. 01-176

Sample Date	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]							
	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	2,500	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.68
05/08/13	20,000	11	450	<10	3,400	<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	3,200	<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
10/07/13	1,100	1.1	12	<1	86	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.89
11/06/13	3,800	27	150	26	810	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.94
12/03/13	240	<1	3.7	<1	19	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	7.05	6.98
01/31/14	6,600	19	370	<1	1,000	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	--
02/07/14	760	1.0	6.6	<1	54	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.71
03/19/14	6,100	2.9	160	<1	1,100	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	8.49
State Waste Discharge Permit Number ST0007384 Effluent Limits											**1,000**	**5**				**100**	**1,090**	**6 to 10**

NOTES:

shaded cells = data for reporting quarter

[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.

< = 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

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Unit 2: TOC/Farmasonis Property (24225)

Table 2-1
Unit 2 - TOC/Farmasonis Property (24225)
Summary of System Performance
First Quarter 2014
TOC Holdings Facility No. 01-176

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	52	82%	12,858.38	204.10	0.005	477.403
12/05/12	03/04/13	89	52	59%	5,899.63	66.29	0.002	9.066
03/04/13	06/05/13	93	67	72%	106,669.79	1,146.99	0.235	4.934
06/05/13	09/04/13	91	82	90%	123,303.10	1,354.98	0.051	6.214
09/04/13	12/03/13	90	90	100%	89,204.30	991.16	0.046	99.638
12/03/13	01/13/14	41	41	100%	29,086.77	709.43	0.012	54.622
01/13/14	02/07/14	25	19	75%	9,853.77	394.15	0.004	18.324
02/07/14	03/18/14	39	-	-	19,724.26	505.75	0.008	-
Average System Run Time				**83%**				
Averages for Quarter		**35**	**30**	**88%**	**19,554.93**	**536.44**	**0.008**	**36.473**
Totals for Quarter		**105**	**59**	n/a	**58,664.80**	**1,609.33**	**0.024**	**72.945**

NOTES:

shaded cells = data for reporting quarter

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

n/a = not applicable

Table 2-2
Unit 2 - TOC/Farmasonis Property (24225)
Vapor Stream - System Performance Monitoring Data
First Quarter 2014
TOC Holdings Facility No. 01-176

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	335	--	--	--
07/02/13	4,746.1	197.8	32	164.2	330	335	<10	*0.07*	493.28
08/06/13	5,403.6	225.2	10	175.5	330	335	<10	*0.08*	495.37
08/09/13	5,475.4	228.1	20	168.6	330	335	--	--	--
09/04/13	6,098.7	254.1	20	170.1	330	335	<10	*0.08*	497.62
10/07/13	6,890.0	287.1	34	163.9	330	336	41	*0.35*	509.00
10/14/13	7,062.9	294.3	35	165.2	330	336	--	--	--
10/15/13	7,088.0	295.3	74	146.5	330	342	--	--	--
10/16/13	7,111.3	296.3	67	147.6	330	340	--	--	--
11/06/13	7,610.8	317.1	73	150.7	330	338	140	*1.28*	547.44
11/07/13	7,635.3	318.1	65	148.2	330	338	--	--	--
12/03/13	8,257.0	344.0	65	154.2	330	337	130	*1.85*	597.26
12/04/13	8,287.9	345.3	66	154.2	330	337	--	--	--
01/13/14	9,242.4	385.1	71	147.8	330	336	66	*1.33*	651.88
01/23/14	9,485.7	395.2	69	--	--	--	--	--	--
01/31/14	9,675.8	403.2	68	147.3	330	335	--	--	--
02/07/14	9,694.4	403.9	74	144.7	330	335	82	*0.97*	670.20
03/18/14	--	--	74	--	330	334	26	--	--
PSCAA NOC-10384 Restrictions and Conditions				**max. 350**	**min. 240**	**max. 620**			

NOTES:
shaded cells = data for reporting quarter
[1]Air flow rates through 02/07/14 calculated using an averaging flow sensor (Dwyer Model DS). Air flow rates after 02/07/14 calculated from data.
[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

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Table 2-3
Unit 2 - TOC/Farmasonis Property (24225)
Liquid Stream - System Performance Monitoring Data
First Quarter 2014
TOC Holdings Facility No. 01-176

Site Visit	Extracted Groundwater			Hydrocarbon Recovery - Aqueous-Phase		
Date	Flow Totalizer	Treated Between Visits	Average Flow Rate	Influent GRPH Concentration	GRPH Removed[1] [2] [3]	Cumulative GRPH Removed[3] [4]
	(gallons)	(gallons)	(gallons/day)	(µg/L)	(lb)	(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
03/12/13	18,758.0	4.1	0	1,100	*0.000*	0.008
03/13/14	18,758.0	0.0	0	--	--	--
04/03/13	24,667.4	5,909.4	-17	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
10/07/13	269,136.3	20,405.4	618	<100	*0.018*	0.312
10/14/13	273,636.3	4,500.0	643	--	--	--
10/15/13	275,837.1	2,200.8	2,201	--	--	--
10/16/13	277,480.5	1,643.4	1,643	--	--	--
11/06/13	308,993.4	31,512.9	1,501	<100	*0.017*	0.328
11/07/13	310,249.2	1,255.8	1,256	--	--	--
12/03/13	337,935.2	27,686.0	1,065	<100	*0.012*	0.340
12/04/13	339,243.0	1,307.8	1,308	--	--	--
01/13/14	367,022.0	27,779.0	694	<100	*0.012*	0.353
01/23/14	--	--	--	--	--	--
01/31/14	376,637.4	9,615.4	534	--	--	--
02/07/14	376,875.7	238.4	34	<100	*0.004*	0.357
03/18/14	396,600.0	19,724.3	506	<100	*0.008*	0.365
State Waste Discharge Permit Number ST0007384 Maximum Daily Limits			**7,000**			

NOTES:
shaded cells = data for reporting quarter

[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)

Table 2-4
Unit 2 - TOC/Farmasonis Property (24225)
Vapor Stream Analytical Results
First Quarter 2014
TOC Holdings Facility No. 01-176

Sample Date	Analytical Results (mg/m^3)										
	Influent Vapor Samples[1]					Effluent Vapor Samples[2]					GRPH DRE[5]
	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	
	(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*
09/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	*0.0*
10/07/13	41	<0.1	0.19	<0.1	0.4	<10	<0.1	<0.1	<0.1	<0.3	*87.8*
11/06/13	140	<0.1	0.52	<0.1	1.4	<10	<0.1	<0.1	<0.1	<0.3	*96.4*
12/03/13	130	<0.1	0.44	0.73	1.3	<10	<0.1	<0.1	<0.1	<0.3	*96.2*
01/13/14	66	<0.1	0.31	0.38	0.51	<10	<0.1	<0.1	<0.1	<0.3	*92.4*
02/07/14	82	<0.1	<0.1	0.73	0.65	<10	<0.1	<0.1	<0.1	<0.3	*93.9*
03/18/14	26	<0.1	<0.1	0.20	<0.3	<10	<0.1	<0.1	0.15	<0.3	*80.8*
PSCAA NOC-10384 Restrictions and Conditions						**min. 214.7** [5]					**95%** [5] [6]

NOTES:

shaded cells = data for reporting quarter

[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

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Table 2-5
Unit 2 - TOC/Farmasonis Property (24225)
Liquid Stream Analytical Results
First Quarter 2014
TOC Holdings Facility No. 01-176

	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[	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
10/07/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.17
11/06/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.92
12/03/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	1.59	7.04
01/13/14	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.13
02/07/14	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.45
03/18/14	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.86
State Waste Discharge Permit Number ST0007384 Effluent Limits											**1,000**	**5**				**100**	**1,090**	**6 to 10**

NOTES:

shaded cells = data for reporting quarter

[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

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Unit 3: Drake Property (24309)

Table 3-1
Unit 3 - Drake Property (24309)
Summary of System Performance
First Quarter 2014
TOC Holdings Facility No. 01-176

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	59	92%	71,160.20	1,111.88	0.029	31.485
12/05/12	03/04/13	89	73	82%	30,268.80	340.10	0.258	37.649
03/04/13	06/05/13	93	40	43%	74,015.89	795.87	0.491	2.716
06/05/13	09/04/13	91	58	64%	68,178.71	749.22	0.158	4.641
09/04/13	12/03/13	90	76	84%	211,042.80	2,344.92	0.088	6.271
12/03/13	01/13/14	41	41	100%	40,409.70	985.60	0.017	3.437
01/13/14	03/18/14	64	58	91%	132,723.90	2,073.81	0.055	50.435
Average System Run Time				**79%**				
Averages for Quarter		**53**	**49**	**95%**	**86,566.80**	**1,529.71**	**0.036**	**26.936**
Totals for Quarter		**105**	**98**	n/a	**173,133.60**	**3,059.41**	**0.072**	**53.873**

NOTES:

shaded cells = data for reporting quarter

% = percent

gallons/day = gallons per day

GRPH = gasoline-range petroleum hydrocarbons

lb = pound(s)

n/a = not applicable

Table 3-2
Unit 3 - Drake Property (24309)
Vapor Stream - System Performance Monitoring Data
First Quarter 2014
TOC Holdings Facility No. 01-176

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	*0.2*	0.00
10/10/12	75.7	3.15	73.0	140.4	330	338	12	*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*	2.51
12/05/12	1,417.6	59.1	76	141.9	330	340	160	*1.0*	31.48
01/08/13	2,231.8	93.0	83	137.3	330	337	<10	*1.0*	66.61
02/05/13	2,731.0	113.8	70	144.2	330	337	<10	*0.1*	67.93
03/04/13	3,177.5	132.4	71	144.6	330	338	<10	*0.1*	69.13
04/03/13	3,894.4	162.3	64	152.4	330	338	<10	*0.1*	71.13
05/15/13	4,059.7	169.2	27	173.5	330.0	301.0	<10	*0.1*	71.63
06/05/13	4,126.8	172.0	27	172.9	330.0	338.0	<10	*0.1*	71.85
07/02/13	4,400.3	183.3	17	171.7	330	338	<10	*0.1*	72.73
08/06/13	5,055.3	210.6	10	182.6	330	338	<10	*0.1*	74.91
09/04/13	5,520.0	230.0	13	181.6	330	338	<10	*0.1*	76.49
10/07/13	6,311.3	263.0	13	183.7	330	337	<10	*0.1*	79.20
10/14/13	6,484.1	270.2	14	185.6	330	337	--	--	--
10/15/13	6,509.2	271.2	15	184.9	330	337	--	--	--
11/06/13	7,031.9	293.0	18	185.6	330	338	<10	*0.1*	81.69
11/07/13	7,056.6	294.0	18	172.7	330	337	--	--	--
12/03/13	7,339.5	305.8	20	186.4	330	338	<10	*0.1*	82.76
12/04/13	7,368.7	307.0	25	185.1	330	338	--	--	--
01/13/14	8,323.6	346.8	24	186.6	330	337	<10	*0.1*	86.20
01/31/14	8,620.1	359.2	26	186.1	330	338	--	--	--
02/06/14	8,786.4	366.1	20	186.0	330	340	--	--	--
02/07/14	8,766.0	365.3	20	188.9	330	340	98	*0.9*	102.22
03/18/14	9,715.1	404.8	24	187.0	330	338	<10	*0.9*	136.63
PSCAA NOC-10384 Restrictions and Conditions				**max. 350**	**min. 240**	**max. 620**			

NOTES:
shaded cells = data for reporting quarter
[1]Air flow rates through 02/07/14 calculated using an averaging flow sensor (Dwyer Model DS). Air flow rates after 02/07/14 calculated from data. Air flow rate from 03/18/2014 is assumed value for subsequent calculations.
[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 3-3
Unit 3 - Drake Property (24309)
Liquid Stream - System Performance Monitoring Data
First Quarter 2014
TOC Holdings Facility No. 01-176

Site Visit	Extracted Groundwater			Hydrocarbon Recovery - Aqueous-Phase		
	Flow Totalizer	Treated Between Visits	Average Flow Rate	Influent GRPH Concentration	GRPH Removed[1] [2] [3]	Cumulative GRPH Removed[3] [4]
Date	(gallons)	(gallons)	(gallons/day)	(µg/L)	(lb)	(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*
10/07/13	333,942.9	90,319.3	2,737	<100	*0.038*	*0.975*
10/14/13	355,115.5	21,172.6	3,025	--	--	--
10/15/13	358,033.9	2,918.4	2,918	--	--	--
11/06/13	420,282.1	62,248.2	2,829	<100	*0.036*	*1.011*
11/07/13	423,365.1	3,083.0	3,083	--	--	--
12/03/13	454,666.4	31,301.3	1,204	<100	*0.014*	*1.025*
12/04/13	458,180.0	3,513.6	3,514	--	--	--
01/13/14	495,076.1	36,896.1	922	<100	*0.017*	*1.042*
01/31/14	506,528.6	11,452.5	636	--	--	--
02/07/14	523,790.1	17,261.5	2,466	<100	*0.012*	*1.054*
03/18/14	627,800	104,010.0	2,667	<100	*0.043*	*1.097*
State Waste Discharge Permit Number ST0007384 Maximum Daily Limits			**7,000**			

NOTES:
shaded cells = data for reporting quarter
[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

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Table 3-4
Unit 3 - Drake Property (24309)
Vapor Stream Analytical Results
First Quarter 2014
TOC Holdings Facility No. 01-176

Sample Date	Analytical Results (mg/m^3)										
	Influent Vapor Samples[1]					Effluent Vapor Samples[2]					GRPH DRE [5]
	GRPH[3] (mg/m^3)	Benzene[4] (mg/m^3)	Toluene[4] (mg/m^3)	Ethylbenzene[4] (mg/m^3)	Total Xylenes[4] (mg/m^3)	GRPH[3] (mg/m^3)	Benzene[4] (mg/m^3)	Toluene[4] (mg/m^3)	Ethylbenzene[4] (mg/m^3)	Total Xylenes[4] (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	--
10/24/12	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
11/07/12	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
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	--
02/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
03/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
04/03/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
05/15/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
06/05/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
07/02/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
08/06/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
09/04/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
10/07/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
11/06/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
12/03/13	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
01/13/14	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
02/07/14	98	<0.1	<0.1	0.34	0.65	<10	<0.1	<0.1	<0.1	<0.3	*94.9*
03/18/14	<10	<0.1	<0.1	<0.1	<0.3	<10	<0.1	<0.1	<0.1	<0.3	--
PSCAA NOC-10384 Restrictions and Conditions						**min. 214.7 [5]**					**95% [5] [6]**

NOTES:

shaded cells = data for reporting quarter

[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 = $(1-(GRPH_{influent}/GRPH_{effluent})) \times 100$; 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

Stantec

Table 3-5
Unit 3 - Drake Property (24309)
Liquid Stream Analytical Results
First Quarter 2014
TOC Holdings Facility No. 01-176

	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	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
10/07/13	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.09
11/06/13	<100	<1	<1	<1	5.7	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	6.94
12/03/13	<100	<1	<1	<1	5.7	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	1.9	7.35
01/13/14	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	--
02/07/14	<100	<1	<1	<1	3.3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	7.36
03/18/14	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<100	<1	<1	<1	<3	<6	--	8.38
State Waste Discharge Permit Number ST0007384 Effluent Limits											**1,000**	**5**				**100**	**1,090**	**6 to 10**

NOTES:
shaded cells = data for reporting quarter
[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

Figures

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:

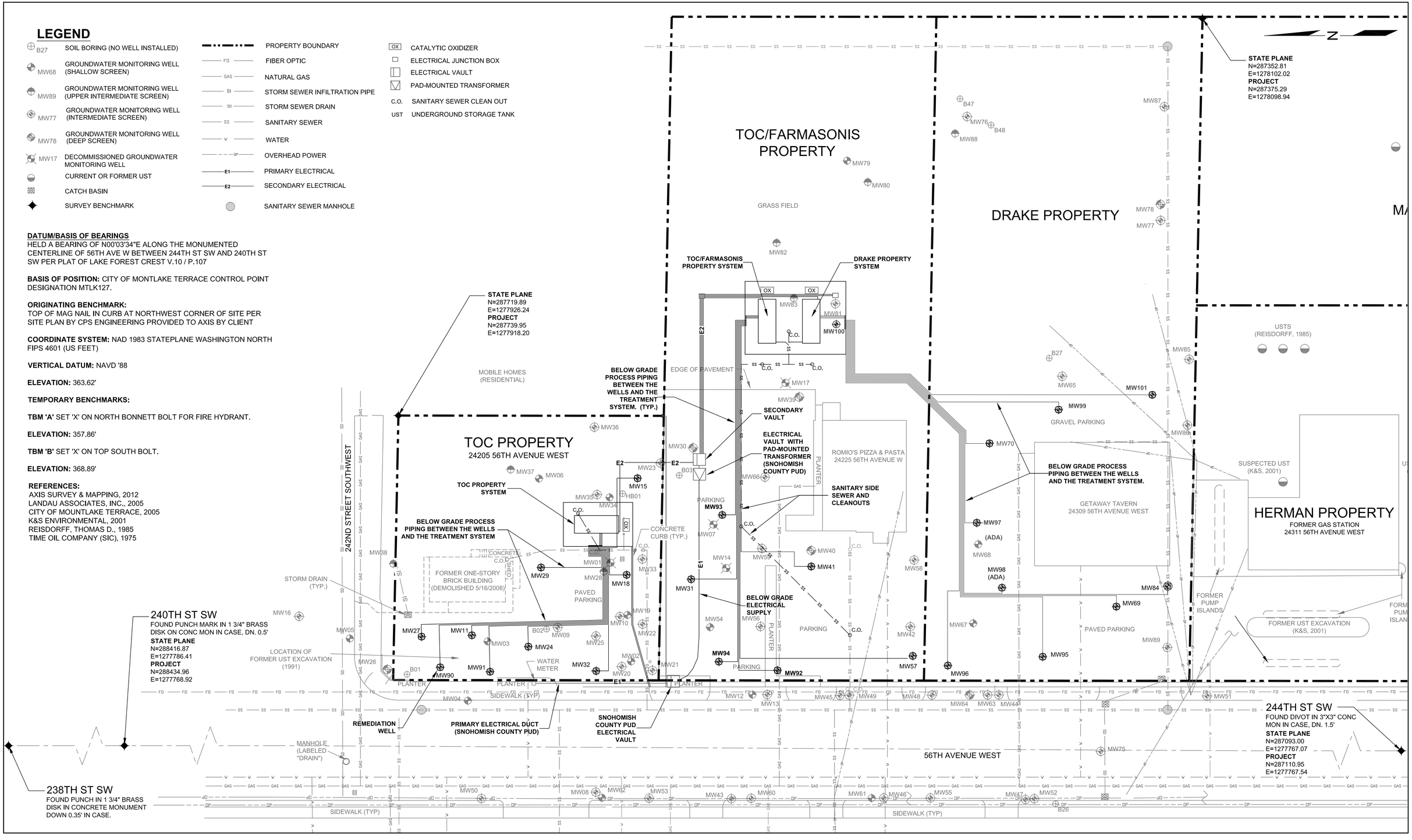
TBM 'A' SET 'X' ON NORTH BONNETT BOLT FOR FIRE HYDRANT.

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

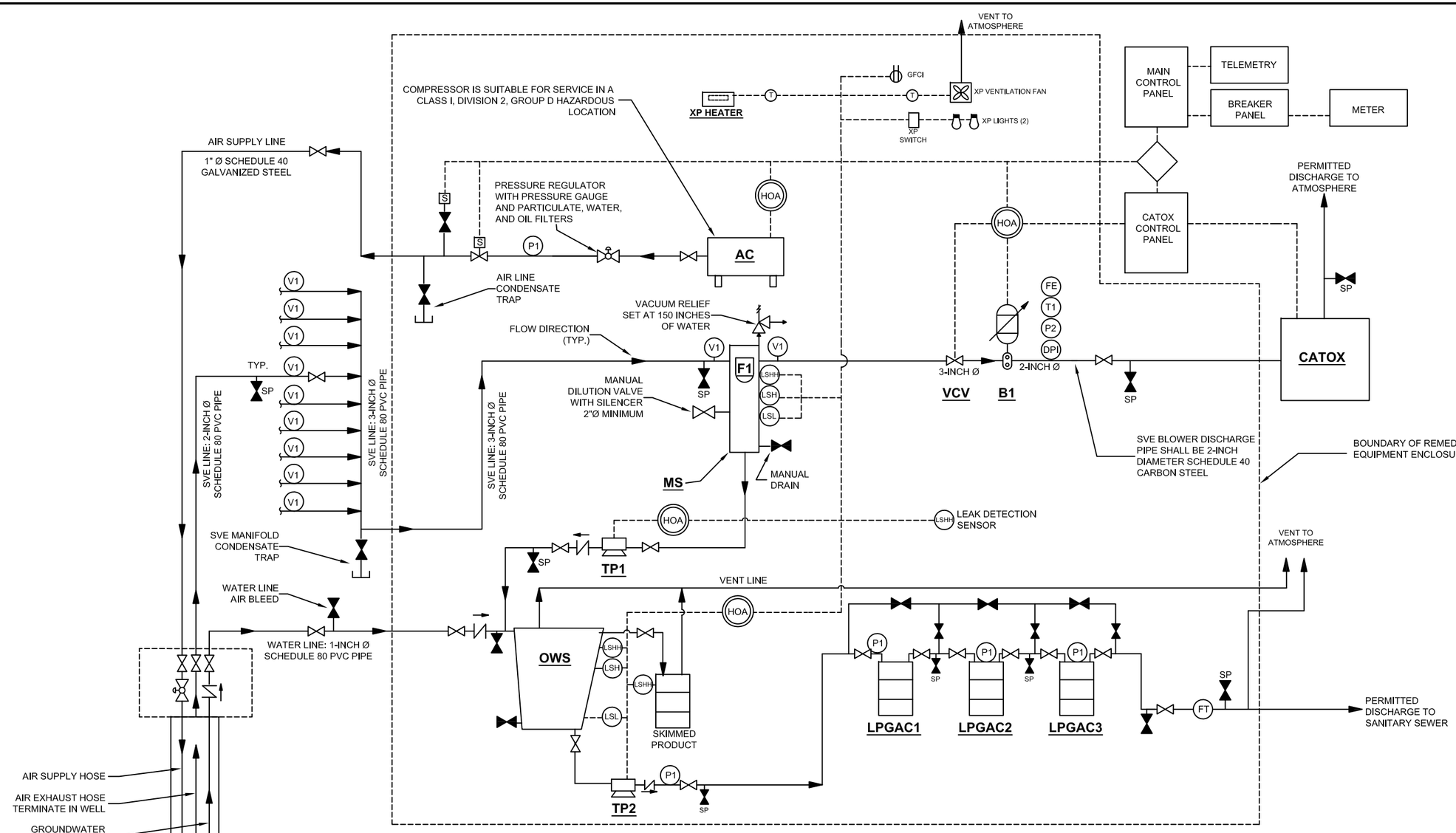
PROJECT NAME:	TOC HOLDINGS CO. FACILITY 01-176
PROJECT NUMBER:	0440-030
STREET ADDRESS:	24205 56TH AVENUE WEST
CITY, STATE:	MOUNTLAKE TERRACE, WASHINGTON

#	DATE	REVISION
		SHEET NO.

0 20 40 80
APPROXIMATE SCALE IN FEET

FIGURE 1
PROJECT MAP

SoundEarth Strategies
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

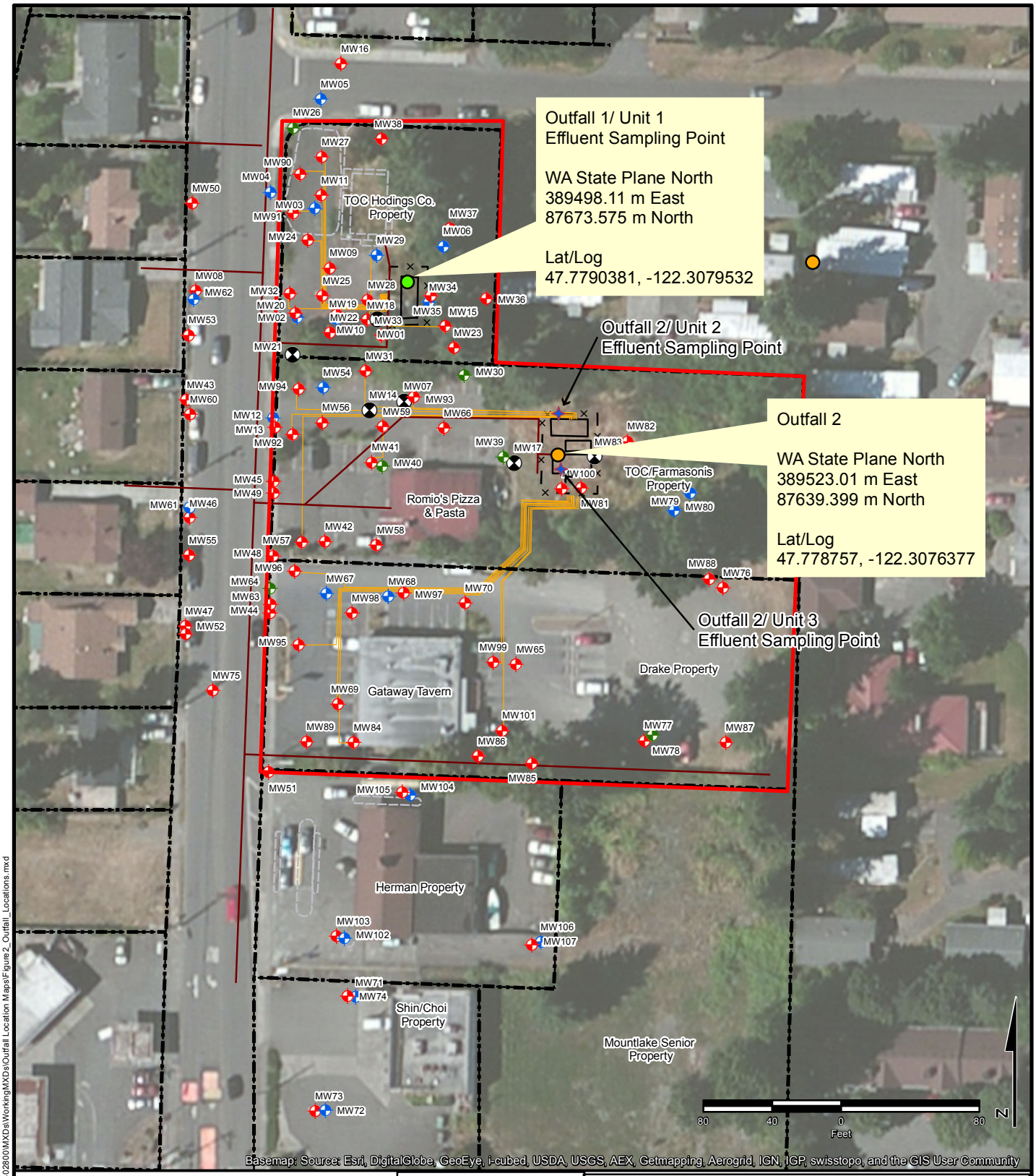
SoundEarth Strategies
SOUNDEARTHINC.COM

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: TOC Property (24205)

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

February 5, 2014

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 January 31, 2014 from the TOC_01-176_20140131 WORFDB8, F&BI 401393 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
SOU0205R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 31, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20140131 WORFDB8, F&BI 401393 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
401393 -01	Ve_24205_20140131
401393 -02	Vi_24205_20140131

All quality control requirements were acceptable.

Date of Report: 02/05/14
Date Received: 01/31/14
Project: TOC_01-176_20140131 WORFDB8, F&BI 401393
Date Extracted: 02/03/14
Date Analyzed: 02/03/14

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_20140131 401393-01	<0.1	<0.1	<0.1	<0.3	<10	85
Vi_24205_20140131 401393-02	<0.1	0.40	<0.1	0.75	37	88
Method Blank 04-0205 MB	<0.1	<0.1	<0.1	<0.3	<10	87

Date of Report: 02/05/14
Date Received: 01/31/14
Project: TOC_01-176_20140131 WORFDB8, F&BI 401393

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: 401393-01 (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	87	70-130
Toluene	mg/m^3	5.0	89	70-130
Ethylbenzene	mg/m^3	5.0	95	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	105	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.

401393

MS 1/31/14

SAMPLE CHAIN OF CUSTODY

Send Report To Dee Gardner

Company SES

Address 2811 Fairview Ave N #2000

City, State, ZIP Seattle, WA

Phone # _____ Fax # _____

SAMPLERS (signature)

PROJECT NAME/NO. 01-176 TOC

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	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
VE_24205_20140131	01A-B	1-31-14	1400	AIR	2		X	X									
VE_24205_20140151	02A-B	↓	1405	↓	2		X	X									

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Mark	SES	1-31-14	1650
Received by:		FST	1/31/14	1650
Relinquished by:				
Received by:				

Samples received at 11 °C

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

FORMS\COC\COC.DOC

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

February 18, 2014

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 February 7, 2014 from the TOC_01-176T_20140207 WORFDB8, F&BI 402085 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
SOU0218R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 7, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20140207 WORFDB8, F&BI 402085 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
402085 -01	Vi_24205_20140207
402085 -02	Ve_24205_20140207

All quality control requirements were acceptable.

Date of Report: 02/18/14
Date Received: 02/07/14
Project: TOC_01-176T_20140207 WORFDB8, F&BI 402085
Date Extracted: 02/10/14
Date Analyzed: 02/10/14

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_20140207 402085-01	<0.1	0.77	<0.1	2.2	110	90
Ve_24205_20140207 402085-02	<0.1	<0.1	<0.1	<0.3	<10	86
Method Blank 04-0253 MB	<0.1	<0.1	<0.1	<0.3	<10	90

Date of Report: 02/18/14
Date Received: 02/07/14
Project: TOC_01-176T_20140207 WORFDB8, F&BI 402085

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: 402083-02 (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	85	70-130
Toluene	mg/m^3	5.0	88	70-130
Ethylbenzene	mg/m^3	5.0	94	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	102	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.

407085

ME 02/07/14

SAMPLE CHAIN OF CUSTODY

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	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
								ANALYSES REQUESTED								
Vi_24205_20140207	inflow		01AB	2-7-14	1235	Air	2		x	x						
Ve_24205_20140207	Stack		02AB	2-7-14	1230	Air	2		x	x						

Samples received at ___ °C

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		C. Lamitatis	SES	2-7-14	1530
Received by:		TYLER CESTER	SES	2/7/14	1530
Relinquished by:		TYLER CESTER	SES	2/7/14	1640
Received by:		Jun Shimazu	EBF	"	"

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

March 25, 2014

Rebekah Brooks, Project Manager
JBR Environmental Consultants
19101 36th Ave W, Suite 203
Lynnwood, WA 98036

Dear Ms. Brooks:

Included are the results from the testing of material submitted on March 19, 2014 from the TOC_01-176 MLT PO B A14085.00, WORFDB8 F&BI 403249 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: Kim Vik
JBR0325R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 19, 2014 by Friedman & Bruya, Inc. from the JBR Environmental Con TOC_01-176 MLT PO B A14085.00, WORFDB8 F&BI 403249 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	JBR Environmental Con
403249 -01	1VINF
403249 -02	1VEFF

All quality control requirements were acceptable.

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT PO B A14085.00, WORFDB8 F&BI 403249
Date Extracted: 03/20/14
Date Analyzed: 03/20/14

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)
1VINF 403249-01	<0.1	<0.1	<0.1	<0.3	<10	90
1VEFF 403249-02	<0.1	<0.1	<0.1	<0.3	<10	87
Method Blank 04-0523 MB	<0.1	<0.1	<0.1	<0.3	<10	87

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT PO B A14085.00, WORFDB8 F&BI 403249

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: 403247-02 (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	84	70-130
Toluene	mg/m^3	5.0	84	70-130
Ethylbenzene	mg/m^3	5.0	90	70-130
Xylenes	mg/m^3	15	90	70-130
Gasoline	mg/m^3	100	115	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.

403249

SAMPLE CHAIN OF CUSTODY

ME 03-19-14

Page # 1 of 1

Send Report To Rebekah Brooks
Company JBR Environmental Con.
Address 19101 36th Ave West, Ste 203
City, State, ZIP Lynnwood, Wa, 98036
Phone # 425-977-4994 Fax # 425-449-4097

SAMPLERS (signature) Dana Hutchins
PROJECT NAME/NO. TOC-MLT
PO# B.A140B5.00
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 by8260	SVOCs by 8270	HFS							Notes
IVINF	01A-B	3-19-14	1000	Air	2		X	X										
IVEFF	02T	3-19-14	1010	Air	2		X	X										
																		Samples received at 1.8 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Dana Hutchins	Dana Hutchins	JBR	3-19-14	1330
Received by:	Matt Lagsher	FOIL	3/19/14	1370
Relinquished by:				
Received by:				

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

Unit 2: TOC/Farmasonis Property (24225)

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

January 22, 2014

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 January 14, 2014 from the TOC_01-176F_20140114 WORFDB7, F&BI 401144 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
SOU0122R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 14, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20140114 WORFDB7, F&BI 401144 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
401144 -01	Vi_24225_20140113
401144 -02	Ve_24225_20140113

All quality control requirements were acceptable.

Date of Report: 01/22/14
Date Received: 01/14/14
Project: TOC_01-176F_20140114 WORFDB7, F&BI 401144
Date Extracted: 01/16/14
Date Analyzed: 01/16/14

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_20140113 401144-01	<0.1	0.31	0.38	0.51	66	90
Ve_24225_20140113 401144-02	<0.1	<0.1	<0.1	<0.3	<10	90
Method Blank 04-0112 MB	<0.1	<0.1	<0.1	<0.3	<10	90

Date of Report: 01/22/14
Date Received: 01/14/14
Project: TOC_01-176F_20140114 WORFDB7, F&BI 401144

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: 401144-02 (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	85	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	87	70-130
Gasoline	mg/m^3	100	102	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.

401144

SAMPLE CHAIN OF CUSTODY

ME 01-14-13

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

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

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

								ANALYSES REQUESTED								
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24225_20140113			01A-B	01/13/14	1110	Air	2		X	X						
Ve_24225_20140113			02A B	01/13/14	1120	Air	2		X	X						

AD

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	01/14/14	0740
Received by:		Nhan Phan	FEBI	01-14-14	@11:50
Relinquished by:					
Received by:					

Samples received at 15 °

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

February 18, 2014

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 February 7, 2014 from the TOC_01-176F_20140207 WORFDB8, F&BI 402083 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
SOU0218R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 7, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20140207 WORFDB8, F&BI 402083 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
402083 -01	Vi_24225_20140207
402083 -02	Ve_24225_20140207

All quality control requirements were acceptable.

Date of Report: 02/18/14
Date Received: 02/07/14
Project: TOC_01-176F_20140207 WORFDB8, F&BI 402083
Date Extracted: 02/10/14
Date Analyzed: 02/10/14

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_20140207 402083-01	<0.1	<0.1	0.73	0.65	82	91
Ve_24225_20140207 402083-02	<0.1	<0.1	<0.1	<0.3	<10	89
Method Blank 04-0253 MB	<0.1	<0.1	<0.1	<0.3	<10	90

Date of Report: 02/18/14
Date Received: 02/07/14
Project: TOC_01-176F_20140207 WORFDB8, F&BI 402083

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: 402083-02 (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	85	70-130
Toluene	mg/m^3	5.0	88	70-130
Ethylbenzene	mg/m^3	5.0	94	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	102	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.

402083

SAMPLE CHAIN OF CUSTODY

MG 02/07/14

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	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
Vi_24225_20140207	Precutter	—	01AA	2-7-14	1500	Air	2		X	X						
Ve_24225_20140207	Shack	—	02V	2-7-14	1450	Air	2		X	X						

Samples received at 12 °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:		Ethan Morris	SES	2-7-14	1930
Received by:		TYLER OESTER	SES	2/7/14	1530
Relinquished by:		TYLER OESTER	SES	2/7/14	1640
Received by:		FBT	FBT	"	"

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

March 25, 2014

Rebekah Brooks, Project Manager
JBR Environmental Consultants
19101 36th Ave W, Suite 203
Lynnwood, WA 98036

Dear Ms. Brooks:

Included are the results from the testing of material submitted on March 19, 2014 from the TOC_01-176 MLT PO B A1408500, WORFDB8 F&BI 403248 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: Kim Vik
JBR0325R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 19, 2014 by Friedman & Bruya, Inc. from the JBR Environmental Con TOC_01-176 MLT PO B A1408500, WORFDB8 F&BI 403248 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	JBR Environmental Con
403248 -01	2VINF
403248 -02	2VEFF

All quality control requirements were acceptable.

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT PO B A1408500, WORFDB8 F&BI 403248
Date Extracted: 03/20/14
Date Analyzed: 03/20/14

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)
2VINF 403248-01	<0.1	<0.1	0.20	<0.3	26	91
2VEFF 403248-02	<0.1	<0.1	0.15	<0.3	<10	83
Method Blank 04-0523 MB	<0.1	<0.1	<0.1	<0.3	<10	87

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT PO B A1408500, WORFDB8 F&BI 403248

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: 403247-02 (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	84	70-130
Toluene	mg/m^3	5.0	84	70-130
Ethylbenzene	mg/m^3	5.0	90	70-130
Xylenes	mg/m^3	15	90	70-130
Gasoline	mg/m^3	100	115	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.

403248

SAMPLE CHAIN OF CUSTODY

ME 03-19-14

Send Report To Rebekah Brooks
Company JBR Environmental Con.
Address 19101 36th Ave West, Ste 203
City, State, ZIP Lynnwood, Wa, 98036
Phone # 425-977-4994 Fax # 425-449-4091

SAMPLERS (signature) Dana Hutchins

PROJECT NAME/NO. TCC - MLT

PO# B.A140850

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 by8260	SVOCs by 8270	HFS							Notes
2VINF	01A-B	3-18-14	1545	Air	2		X	X										
2VEFF	02T	3-18-14	1550	Air	2		X	X										
																		Samples received at 18 °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: Dana Hutchins	Dana Hutchins	JBR	3-19-14	1330
Received by:	Matt Upton	FB	3/19/14	1330
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

Unit 3: Drake Property (24309)

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

January 22, 2014

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 January 14, 2014 from the TOC_01-176D_20140114 WORFDB7, F&BI 401143 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
SOU0122R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 14, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20140114 WORFDB7, F&BI 401143 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
401143 -01	Vi_24309_20140113
401143 -02	Ve_24309_20140113

All quality control requirements were acceptable.

Date of Report: 01/22/14
Date Received: 01/14/14
Project: TOC_01-176D_20140114 WORFDB7, F&BI 401143
Date Extracted: 01/16/14
Date Analyzed: 01/16/14

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_20140113 401143-01	<0.1	<0.1	<0.1	<0.3	<10	91
Ve_24309_20140113 401143-02	<0.1	<0.1	<0.1	<0.3	<10	87
Method Blank 04-0112 MB	<0.1	<0.1	<0.1	<0.3	<10	90

Date of Report: 01/22/14
Date Received: 01/14/14
Project: TOC_01-176D_20140114 WORFDB7, F&BI 401143

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: 401144-02 (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	85	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	87	70-130
Gasoline	mg/m^3	100	102	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.

401143

SAMPLE CHAIN OF CUSTODY

ME 01-14-13

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_20140113			01 AB	01/13/14	1300	Air	2		X	X						
Ve_24309_20140113			02 AB	01/13/14	1240	Air	2		X	X						

ME

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	01/14/14	0740
Received by:		Nhan Phan	FBI	01/14/14	1150
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 15 °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

February 18, 2014

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 February 7, 2014 from the TOC_01-176D_20140207 WORFDB8, F&BI 402084 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
SOU0218R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 7, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20140207 WORFDB8, F&BI 402084 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
402084 -01	Vi_24309_20140207
402084 -02	Ve_24309_20140207

All quality control requirements were acceptable.

Date of Report: 02/18/14
Date Received: 02/07/14
Project: TOC_01-176D_20140207 WORFDB8, F&BI 402084
Date Extracted: 02/10/14
Date Analyzed: 02/10/14

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_20140207 402084-01	<0.1	<0.1	0.34	0.65	98	87
Ve_24309_20140207 402084-02	<0.1	<0.1	<0.1	<0.3	<10	89
Method Blank 04-0253 MB	<0.1	<0.1	<0.1	<0.3	<10	90

Date of Report: 02/18/14
Date Received: 02/07/14
Project: TOC_01-176D_20140207 WORFDB8, F&BI 402084

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: 402083-02 (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	85	70-130
Toluene	mg/m^3	5.0	88	70-130
Ethylbenzene	mg/m^3	5.0	94	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	102	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.

402059

SAMPLE CHAIN OF CUSTODY

ME 02/07/14

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_20140207	Duplicator	—	01 AB	2-7-14	1250	Air	2		X	X						
Ve_24309_20140207	Stack	—	02 V	2-7-14	1245	Air	2		X	X						

Samples received at 67 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Marks	SES	2-7-14	1530
Received by:	TYLER CESTOR	SES	2/7/14	1530
Relinquished by:	TYLER CESTOR	SES	2/7/14	1640
Received by:	Jon Stohlgren	FBI	2	1

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

March 25, 2014

Rebekah Brooks, Project Manager
JBR Environmental Consultants
19101 36th Ave W, Suite 203
Lynnwood, WA 98036

Dear Ms. Brooks:

Included are the results from the testing of material submitted on March 19, 2014 from the TOC_01-176 MLT PO BA14085.00, WORFDB8 F&BI 403247 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: Kim Vik
JBR0325R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 19, 2014 by Friedman & Bruya, Inc. from the JBR Environmental Con TOC_01-176 MLT PO BA14085.00, WORFDB8 F&BI 403247 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	JBR Environmental Con
403247 -01	3VINF
403247 -02	3VEFF

All quality control requirements were acceptable.

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT PO BA14085.00, WORFDB8 F&BI 403247
Date Extracted: 03/20/14
Date Analyzed: 03/20/14

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)
3VINF 403247-01	<0.1	<0.1	<0.1	<0.3	<10	90
3VEFF 403247-02	<0.1	<0.1	<0.1	<0.3	<10	90
Method Blank 04-0523 MB	<0.1	<0.1	<0.1	<0.3	<10	87

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT PO BA14085.00, WORFDB8 F&BI 403247

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: 403247-02 (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	84	70-130
Toluene	mg/m^3	5.0	84	70-130
Ethylbenzene	mg/m^3	5.0	90	70-130
Xylenes	mg/m^3	15	90	70-130
Gasoline	mg/m^3	100	115	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.

403247

SAMPLE CHAIN OF CUSTODY

ME 03-19-14

Send Report To Rebekah Brooks
Company JBR Environmental Corp.
Address 19101 36th Ave West, Ste 203
City, State, ZIP Lynnwood, Wa, 98036
Phone # 425-977-4994 Fax # 425-449-4097

SAMPLERS (signature) Dana Hutchins
PROJECT NAME/NO. TOC-MLT
PO# BA14085.00
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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
3VINF	01A-B	3-18-14	1230	Air	2		X	X										
3VEFF	02T	3-18-14	1240	Air	2		X	X										
																		Samples received at 18 °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: Dana Hutchins	Dana Hutchins	JBR	3-19-14	1330
Received by:	Matt Layton	FB	3/19/14	1330
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

Appendix B
Laboratory Analytical Reports – Water

Unit 1: TOC Property (24205)

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

February 10, 2014

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 January 31, 2014 from the TOC_01-176_20140131 WORFDB8, F&BI 401390 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
SOU0210R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 31, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176_20140131 WORFDB8, F&BI 401390 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
401390 -01	We_24205_20140131
401390 -02	GAC2i_24205_20140131
401390 -03	GAC1i_24205_20140131

All quality control requirements were acceptable.

Date of Report: 02/10/14
Date Received: 01/31/14
Project: TOC_01-176_20140131 WORFDB8, F&BI 401390
Date Extracted: 02/04/14
Date Analyzed: 02/04/14

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_20140131 401390-01	<1	<1	<1	<3	<100	94
GAC2i_24205_20140131 401390-02	<1	<1	<1	<3	<100	93
GAC1i_24205_20140131 401390-03	19	370	<1	1,000	6,600	113
Method Blank 04-0207 MB	<1	<1	<1	<3	<100	93

Date of Report: 02/10/14
Date Received: 01/31/14
Project: TOC_01-176_20140131 WORFDB8, F&BI 401390

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: 401390-01 (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	96	65-118
Toluene	ug/L (ppb)	50	99	72-122
Ethylbenzene	ug/L (ppb)	50	99	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	91	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.

401390

SAMPLE CHAIN OF CUSTODY

ME 1/31/14 V2

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

SAMPLERS (signature)
PROJECT NAME/NO. 01-176 TOC
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	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
WE-24205_20140131	01 A-C	1-31-14	1302	water	3		X	X									
GAC2-24205_20140131	02		1300		3		X	X									
GAC1-24205_20140131	03		1254		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	SES	1-31-14	1650
Received by:		Matt Langdon	FBInc	1/31/14	1650
Relinquished by:					
Received by:					

Samples received at 3 °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

February 12, 2014

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 February 7, 2014 from the TOC_01-176T_20140207 WORFDB8, F&BI 402082 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
SOU0212R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 7, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176T_20140207 WORFDB8, F&BI 402082 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
402082 -01	We_24205_20140207
402082 -02	GAC1i_24205_20140207
402082 -03	GAC2i_24205_20140207

All quality control requirements were acceptable.

Date of Report: 02/12/14
Date Received: 02/07/14
Project: TOC_01-176T_20140207 WORFDB8, F&BI 402082
Date Extracted: 02/10/14
Date Analyzed: 02/10/14

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_20140207 402082-01	<1	<1	<1	<3	<100	95
GAC1i_24205_20140207 402082-02	1.0	6.6	<1	54	760	97
GAC2i_24205_20140207 402082-03	<1	<1	<1	<3	<100	96
Method Blank 04-0254 MB	<1	<1	<1	<3	<100	93

Date of Report: 02/12/14
Date Received: 02/07/14
Project: TOC_01-176T_20140207 WORFDB8, F&BI 402082

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: 402080-01 (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	97	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	96	73-126
Xylenes	ug/L (ppb)	150	95	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.

407083

SAMPLE CHAIN OF CUSTODY

ME 02/07/14 V2

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_20140207	effluent		01 AC	2-7-14	1207	Water	3		X	X						
GAC1i_24205_20140207	effluent		02	2-7-14	1203	Water	3		X	X						
GAC2i_24205_20140207	mid		03	2-7-14	1205	Water	3		X	X						

Samples received at 4 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Marks	SES	2-7-14	1530
Received by:	TYLER OESTER	SES	2/7/14	1530
Relinquished by:	TYLER OESTER	SES	2/7/14	1640
Received by:	Jon Shimazu	FBT	"	"

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

March 26, 2014

Rebekah Brooks, Project Manager
JBR Environmental Consultants
19101 36th Ave W, Suite 203
Lynnwood, WA 98036

Dear Ms. Brooks:

Included are the results from the testing of material submitted on March 19, 2014 from the TOC 01-176 MLT, PO B.A14085.00, WORFDB8 F&BI 403252 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: Kim Vik
JBR0326R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 19, 2014 by Friedman & Bruya, Inc. from the JBR Environmental Con TOC 01-176 MLT, PO B.A14085.00, WORFDB8 F&BI 403252 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	JBR Environmental Con
403252 -01	1WINF
403252 -02	1WEFF
403252 -03	1GAC2

The pH of sample 1WEFF was analyzed in the field and determined to be 8.49.

All quality control requirements were acceptable.

Date of Report: 03/26/14
Date Received: 03/19/14
Project: TOC 01-176 MLT, PO B.A14085.00, WORFDB8 F&BI 403252
Date Extracted: 03/20/14
Date Analyzed: 03/20/14 and 03/21/14

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)
1WINF 403252-01	2.9	160	<1	1,100	6,100	85
1WEFF 403252-02	<1	<1	<1	<3	<100	88
1GAC2 403252-03	<1	<1	<1	<3	<100	85
Method Blank 04-0524 MB	<1	<1	<1	<3	<100	84

Date of Report: 03/26/14
Date Received: 03/19/14
Project: TOC 01-176 MLT, PO B.A14085.00, WORFDB8 F&BI 403252

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: 403250-01 (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	95	72-119
Toluene	ug/L (ppb)	50	97	71-113
Ethylbenzene	ug/L (ppb)	50	101	72-114
Xylenes	ug/L (ppb)	150	88	72-113
Gasoline	ug/L (ppb)	1,000	104	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.

403252

SAMPLE CHAIN OF CUSTODY

ME 03-19-14 V2

Send Report To Rebekah Brooks
Company JBR Environmental Con.
Address 19101 36th Ave West Ste 203
City, State, ZIP Lynnwood, Wa, 98036
Phone #425-977-4994 Fax #425-449-4097

SAMPLERS (signature) Dana Hutchins
PROJECT NAME/NO. TOC-MLT
PO# B.A1408500
REMARKS *Ph Taken in Field Add on Report

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 by8260	SVOCs by 8270	HFS	*Field pH	Notes
IWINF	01A-C	3-19-14	1015	W	3		X	X					
IWEFF	02	3-19-14	1020	W	3		X	X				X	
IGAC2	03	3-19-14	1025	W	3		X	X					
													Samples received at 4 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Dana Hutchins	Dana Hutchins	JBR	3-19-14	1330
Received by:	Matt Layton	FBI	3/19/14	1330
Relinquished by:				
Received by:				

Unit 2: TOC/Farmasonis Property (24225)

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

January 16, 2014

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 January 14, 2014 from the TOC_01-176F_20140114 WORFDB7, F&BI 401146 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
SOU0116R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 14, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20140114 WORFDB7, F&BI 401146 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
401146 -01	We_24225_20140113
401146 -02	GAC1i_24225_20140113
401146 -03	GAC2i_24225_20140113

All quality control requirements were acceptable.

Date of Report: 01/16/14
Date Received: 01/14/14
Project: TOC_01-176F_20140114 WORFDB7, F&BI 401146
Date Extracted: 01/14/14
Date Analyzed: 01/14/14

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_ 20140113 401146-01	<1	<1	<1	<3	<100	95
GAC1i_24225_ 20140113 401146-02	<1	<1	<1	<3	<100	99
GAC2i_24225_ 20140113 401146-03	<1	<1	<1	<3	<100	100
Method Blank 04-0024 MB	<1	<1	<1	<3	<100	92

Date of Report: 01/16/14
Date Received: 01/14/14
Project: TOC_01-176F_20140114 WORFDB7, F&BI 401146

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: 401136-02 (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	99	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	99	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	99	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.

401146

SAMPLE CHAIN OF CUSTODY

ME 01-14-14 VI

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_20140113			01 A-C	01/13/14	1045	Water	3		X	X						
GAC1i_24225_20140113			02	01/13/14	1105	Water	3		X	X						
GAC2i_24225_20140113			03	01/13/14	1055	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:		Ashley Elliott	SES	01/14/14	0740
Received by:		Nhan Phan	FCBI	01/14/14	1180
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 3 °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

February 12, 2014

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 February 7, 2014 from the TOC_01-176F_20140207 WORFDB8, F&BI 402080 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
SOU0212R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 7, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176F_20140207 WORFDB8, F&BI 402080 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
402080 -01	We_24225_20140207
402080 -02	GAC1i_24225_20140207
402080 -03	GAC2i_24225_20140207

All quality control requirements were acceptable.

Date of Report: 02/12/14
Date Received: 02/07/14
Project: TOC_01-176F_20140207 WORFDB8, F&BI 402080
Date Extracted: 02/10/14
Date Analyzed: 02/10/14

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_20140207 402080-01	<1	<1	<1	<3	<100	93
GAC1i_24225_20140207 402080-02	<1	<1	<1	<3	<100	94
GAC2i_24225_20140207 402080-03	<1	<1	<1	<3	<100	96
Method Blank 04-0254 MB	<1	<1	<1	<3	<100	93

Date of Report: 02/12/14
Date Received: 02/07/14
Project: TOC_01-176F_20140207 WORFDB8, F&BI 402080

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: 402080-01 (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	97	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	96	73-126
Xylenes	ug/L (ppb)	150	95	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.

4020 80

SAMPLE CHAIN OF CUSTODY

ME 02/07/14 V2

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	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	Total Lead by 6020/200.8					Notes
								ANALYSES REQUESTED								
We_24225_20140207	effluent		01	2-7-14	1340	Water	3		X	X						
GAC1i_24225_20140207	influent		02	2-7-14	1340	Water	3		X	X						
GAC2i_24225_20140207	mid		03	2-7-14	1342	Water	3		X	X						

Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Martin	SES	2-7-14	1530
Received by:	TYLER CESTER	SES	2/7/14	1532
Relinquished by:	TYLER CESTER	SES	2/7/14	1640
Received by:	Jon Shimazu	EBI	"	"

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

March 25, 2014

Rebekah Brooks, Project Manager
JBR Environmental Consultants
19101 36th Ave W, Suite 203
Lynnwood, WA 98036

Dear Ms. Brooks:

Included are the results from the testing of material submitted on March 19, 2014 from the TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403250 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: Kim Vik
JBR0325R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 19, 2014 by Friedman & Bruya, Inc. from the JBR Environmental Consultants TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403250 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	JBR Environmental Consultants
403250 -01	2WEFF
403250 -02	2WINF
403250 -03	2GAC1
403250 -04	2GAC2

The pH of sample 2WEFF was analyzed in the field and determined to be 7.86.

All quality control requirements were acceptable.

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403250
Date Extracted: 03/20/14
Date Analyzed: 03/20/14

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)
2WEFF 403250-01	<1	<1	<1	<3	<100	85
2WINF 403250-02	<1	<1	<1	<3	<100	85
2GAC1 403250-03	<1	<1	<1	<3	<100	86
2GAC2 403250-04	<1	<1	<1	<3	<100	87
Method Blank 04-0524 MB	<1	<1	<1	<3	<100	84

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403250

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: 403250-01 (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	95	72-119
Toluene	ug/L (ppb)	50	97	71-113
Ethylbenzene	ug/L (ppb)	50	101	72-114
Xylenes	ug/L (ppb)	150	88	72-113
Gasoline	ug/L (ppb)	1,000	104	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.

403250

SAMPLE CHAIN OF CUSTODY

ME 03-19-14 V2

Send Report To Rebekah Brooks
Company JBR Environmental Con
Address 19101 36th Ave West, Ste 203
City, State, ZIP Lynnwood, Wa, 98036
Phone #425-977-4994 Fax # 425-449-4047

SAMPLERS (signature) Dana Hutchins
PROJECT NAME/NO. TOC-MLT
PO# B-A14085.00
REMARKS *pH Taken in Field Add to Report

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	*Field pH 7.86						Notes
2WEFF	01A-C	3-18-14	1615	W	3		X	X				X						
2WINF	02	3-18-14	1610	W	3		X	X										
2GAC1	03	3-18-14	1620	W	3		X	X										
2GAC2	04	3-18-14	1625	W	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: Dana Hutchins	Dana Hutchins	JBR	3-19-14	1330
Received by:	Matt Langston	FBI	3/19/14	1330
Relinquished by:				
Received by:		Samples received at 4 °C		

FORMS\COC\COC.DOC

Unit 3: Drake Property (24309)

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

January 16, 2014

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 January 14, 2014 from the TOC_01-176D_20140114 WORFDB7, F&BI 401145 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
SOU0116R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 14, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20140114 WORFDB7, F&BI 401145 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
401145 -01	We_24309_20140113
401145 -02	GAC1i_24309_20140113
401145 -03	GAC2i_24309_20140113

All quality control requirements were acceptable.

Date of Report: 01/16/14
Date Received: 01/14/14
Project: TOC_01-176D_20140114 WORFDB7, F&BI 401145
Date Extracted: 01/14/14
Date Analyzed: 01/14/14

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_20140113 401145-01	<1	<1	<1	<3	<100	94
GAC1i_24309_ 20140113 401145-02	<1	<1	<1	<3	<100	93
GAC2i_24309_ 20140113 401145-03	<1	<1	<1	<3	<100	98
Method Blank 04-0024 MB	<1	<1	<1	<3	<100	92

Date of Report: 01/16/14
Date Received: 01/14/14
Project: TOC_01-176D_20140114 WORFDB7, F&BI 401145

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: 401136-02 (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	99	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	99	73-126
Xylenes	ug/L (ppb)	150	98	74-118
Gasoline	ug/L (ppb)	1,000	99	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.

401145

SAMPLE CHAIN OF CUSTODY

ME 01-14-14 V1

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
We_24309_20140113			01 AC	01/13/14	1140	Water	3		X	X						
GAC1i_24309_20140113			02	01/13/14	1150	Water	3		X	X						
GAC2i_24309_20140113			03	01/13/14	1145	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:		Ashley Elliott	SES	01/14/14	0740
Received by:		Nhan Phan	FEBI	01/14/14	1152
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 3 °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

February 12, 2014

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 February 7, 2014 from the TOC_01-176D_20140207 WORFDB8, F&BI 402081 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
SOU0212R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 7, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-176D_20140207 WORFDB8, F&BI 402081 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
402081 -01	We_24309_20140207
402081 -02	GAC1i_24309_20140207
402081 -03	GAC2i_24309_20140207

All quality control requirements were acceptable.

Date of Report: 02/12/14
Date Received: 02/07/14
Project: TOC_01-176D_20140207 WORFDB8, F&BI 402081
Date Extracted: 02/10/14
Date Analyzed: 02/10/14

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_20140207 402081-01	<1	<1	<1	<3	<100	91
GAC1i_24309_20140207 402081-02	<1	<1	<1	3.3	<100	92
GAC2i_24309_20140207 402081-03	<1	<1	<1	<3	<100	91
Method Blank 04-0254 MB	<1	<1	<1	<3	<100	93

Date of Report: 02/12/14
Date Received: 02/07/14
Project: TOC_01-176D_20140207 WORFDB8, F&BI 402081

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: 402080-01 (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	97	65-118
Toluene	ug/L (ppb)	50	97	72-122
Ethylbenzene	ug/L (ppb)	50	96	73-126
Xylenes	ug/L (ppb)	150	95	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.

402051

SAMPLE CHAIN OF CUSTODY

ME 02/07/14 VL

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
We_24309_2014020[illegible]	PES+	—	01A	2-7-14	1335	Water	3		X	X						
GAC1i_24309_2014020[illegible]	PRE	—	02	2-7-14	1325	Water	3		X	X						
GAC2i_24309_2014020[illegible]	MID	—	03	2-7-14	1330	Water	3		X	X						

Samples received at 4 °C

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Edina Marks	SES	2-7-14	1530
Received by:		TYLER CESTER	SES	2/7/14	1530
Relinquished by:		TYLER CESTER	SES	2/7/14	1640
Received by:		Jon Shimazu	FBI	†	†

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

March 25, 2014

Rebekah Brooks, Project Manager
JBR Environmental Consultants
19101 36th Ave W, Suite 203
Lynnwood, WA 98036

Dear Ms. Brooks:

Included are the results from the testing of material submitted on March 19, 2014 from the TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403251 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: Kim Vik
JBR0325R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 19, 2014 by Friedman & Bruya, Inc. from the JBR Environmental Consultants TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403251 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	JBR Environmental Consultants
403251 -01	3WINF
403251 -02	3WEFF
403251 -03	3GAC1
403251 -04	3GAC2

The pH of sample 3WEFF was analyzed in the field and determined to be 8.38.

All quality control requirements were acceptable.

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403251
Date Extracted: 03/20/14
Date Analyzed: 03/20/14

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)
3WINF 403251-01	<1	<1	<1	<3	<100	84
3WEFF 403251-02	<1	<1	<1	<3	<100	87
3GAC1 403251-03	<1	<1	<1	<3	<100	87
3GAC2 403251-04	<1	<1	<1	<3	<100	88
Method Blank 04-0524 MB	<1	<1	<1	<3	<100	84

Date of Report: 03/25/14
Date Received: 03/19/14
Project: TOC_01-176 MLT, PO B-A 14085.00, WORFDB8 F&BI 403251

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: 403250-01 (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	95	72-119
Toluene	ug/L (ppb)	50	97	71-113
Ethylbenzene	ug/L (ppb)	50	101	72-114
Xylenes	ug/L (ppb)	150	88	72-113
Gasoline	ug/L (ppb)	1,000	104	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.

403251

SAMPLE CHAIN OF CUSTODY

ME 03-19-14

V2

Page # 1 of 1

Send Report To Rebekah Brooks
Company JBR Environmental Con.
Address 19101 36th Ave West, Ste 203
City, State, ZIP Lynnwood, Wa, 98036
Phone # 425-977-4994 Fax # 425-449-4097

SAMPLERS (signature) Dana Hutchins

PROJECT NAME/NO. TOC - MLT

PO# B.A14085.00

REMARKS *Ph Taken in Field Add to Report

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 by8260	SVOCs by 8270	HFS	Field pH * 8.38	Notes
3WINF	01A-C	3-18-14	1325	W	3		X	X					
3WEFF	02	3-18-14	1330	W	3		X	X				X	
[redacted]													
3GAC1	03	3-18-14	1335	W	3		X	X					
3GAC2	04	3-18-14	1340	W	3		X	X					

Samples received at 4 °C

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Dana Hutchins	Dana Hutchins	JBR	3-19-14	1330
Received by:		Matt Layton	FBI	3/19/14	1330
Relinquished by:					
Received by:					