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

November 15, 2022

Mr. Scott Koppelman
AMLI Residential Partners
425 Pontius Avenue North, Suite 400
Seattle, Washington 98109

SUBJECT: ECOLOGY RESPONSE AND WORK PLAN FOR GROUNDWATER MONITORING AND VAPOR INTRUSION EVALUATION
Avtech Corp
3400 Wallingford Avenue North, Seattle, Washington
Facility/Site No.: 71755531
Cleanup Site ID No.: 12131
VCP Project No.: NW2739
Project No.: 0789-004

Dear Mr. Koppelman:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this work plan in response to the letter issued by the Washington State Department of Ecology (Ecology) dated October 4, 2022 (Ecology 2022; Ecology October 2022 opinion letter), which detailed Ecology's opinion on SoundEarth's letter regarding the Remedial Injection and Groundwater Monitoring Work Plan from June 2022 (SoundEarth 2022; June 2022 Work Plan). This work plan provides additional information requested by Ecology and presents the proposed scope of work for additional groundwater monitoring and vapor intrusion evaluation at the Avetech Corp property located at 3400 Wallingford Avenue North in Seattle, Washington (the Property).

The scope of work presented in this work plan is intended to supplement the scope of work detailed in SoundEarth's June 2022 work plan, which included additional remedial injections and pre- and post-injection groundwater monitoring events to evaluate the effectiveness of the remedial injections. The Property is currently enrolled in Ecology's Voluntary Cleanup Program (VCP Project No. NW2739, Facility/Site No. 71755531). This work is being performed in support of pursuing a No Further Action determination.

BACKGROUND

The Property consists of six tax parcels on the northern and southern sides of North 34th Street (King County Parcel Nos. 4083306660, 4083306670, 4083306695, 4083307105, 4083307155, and 4083307160) that encompass a total of approximately 87,894 square feet (2.02 acres) of land. The three parcels north of North 34th Street (King County Parcel Nos. 4083306660, 4083306670, and 4083306695) are collectively known as the North Block. The three parcels south of North 34th Street (King County Parcel Nos. 4083307105, 4083307155, and 4083307160) are collectively known as the South Block.

Multiple phases of remedial investigation activities have been conducted at the Property by SoundEarth since 2012. Based on the data gathered during these investigations, the Site, which is defined by the nature and extent of contamination associated with one or more releases of hazardous substances prior to the implementation of remediation activities, includes soil contaminated with trichloroethene (TCE), tetrachloroethene (PCE), lead, and polycyclic aromatic hydrocarbons and groundwater contaminated with TCE. The identified TCE and PCE impacts likely resulted from a release associated with the Avtech Corporation manufacturing facility formerly located on the North Block of the Property. The field activities and findings of these investigations are included in SoundEarth's *Draft Remedial Investigation and Feasibility Study Report* dated January 10, 2014 (SoundEarth 2014a; 2014 Draft RIFS Report), and SoundEarth's letter regarding SoundEarth's RI/FS/CAP Addendum to Mr. Koppelman dated August 6, 2014 (SoundEarth 2014b). Soil boring and well locations from all investigations conducted to date are shown on Figure 1.

In 2014, SoundEarth initiated interim cleanup actions at the Site, which included source removal by excavation in conjunction with the construction of the existing buildings on the Property, the installation and operation of a soil vapor extraction (SVE) system beneath the newly constructed building on the North Block to mitigate potential vapor intrusion, and in situ chemical oxidation to address residual groundwater contamination beneath the Property and adjacent rights-of-way (ROWs). Interim cleanup actions conducted between 2014 and 2016, which included remedial excavation activities; installation of injection wells; potassium permanganate injection events conducted in March 2015, July 2016, and December 2016; and installation of the SVE system in March 2015, are documented in SoundEarth's letter regarding SoundEarth's Cleanup Action Report to Mr. Koppelman dated June 19, 2017 (SoundEarth 2017a; 2017 Cleanup Action Report).

Groundwater monitoring has been conducted at the Site during most quarters since the second quarter of 2012. Groundwater monitoring activities and results through the third quarter of 2017 have been documented in SoundEarth groundwater monitoring reports, the most recent of which is SoundEarth's letter regarding Third Quarter 2017 Groundwater Monitoring Report to Mr. Koppelman dated October 18, 2017 (SoundEarth 2017b; Third Quarter 2017 Groundwater Monitoring Report).

Additional groundwater monitoring and remedial injection activities conducted at the Site since the completion of SoundEarth's 2017 Cleanup Action Report and Third Quarter 2017 Groundwater Monitoring Report are summarized in SoundEarth's June 2022 Work Plan.

RESPONSES TO ECOLOGY COMMENTS AND PROPOSED SUPPLEMENTAL SCOPE OF WORK

The Ecology October 2022 opinion letter included comments regarding three primary components of the Site characterization and remediation work conducted to date (Ecology 2022). SoundEarth's responses to these comments and proposed scope of work to address Ecology's comments are detailed in the following sections.

Soil Contamination at the Site

Ecology's October 2022 opinion letter indicated that soil contamination at the Site has been sufficiently characterized based on the results of previous investigations and sampling conducted during remedial excavation activities. At the completion of remedial excavation activities, soil containing TCE at concentrations exceeding the Washington State Model Toxics Control Act (MTCA) Method A cleanup level

remained in place in seven locations on the North Block of the Property and in the North 34th Street ROW, including the following:

- Excavation bottom confirmation soil sample A2-65N85E-68-BTM, collected from the south-central portion of the North Block at an approximate elevation of 68 feet above mean sea level (AMSL)
- Soil samples collected from soil borings SB201 and SB204, located on the south-central portion of the North Block, at an approximate elevation of 65 feet AMSL
- Soil samples collected from soil boring IW03, located on the southeastern portion of the North Block outside of the redevelopment excavation area, at approximate elevations of 60 and 70 feet AMSL
- Soil samples collected from soil boring MW16, located on the south-central portion of the North Block outside of the redevelopment excavation area, at approximate elevations of 55, 60, and 70 feet AMSL
- Soil samples collected from soil borings B06/MW04 and B18/MW13, located in the North 34th Street ROW, at an approximate elevation of 44 feet AMSL

In May 2019, to evaluate soil conditions following the operation of the SVE system since January 2017, SoundEarth advanced three additional soil borings beneath the floor slab on the south-central portion of the North Block. Soil borings P1 through P3 were advanced at the locations of soil borings SB201 and SB204 and bottom confirmation soil sample A2-65N85E-68-BTM, respectively (Figure 1). Soil samples were collected from each boring at the depth where TCE was previously detected at concentrations exceeding the MTCA Method A cleanup level. TCE was not detected at concentrations above the laboratory reporting limit in the soil samples collected from soil borings P1 or P2 at an approximate elevation of 65 feet AMSL or from soil boring P3 at an approximate elevation of 68 feet AMSL, indicating that the SVE system has effectively remediated remaining soil contamination on this portion of the Property. To date, additional soil sampling has not been conducted to evaluate post-SVE soil conditions in the locations of soil borings IW03, MW16, B06/MW04, or B18/MW13. Soil sample analytical results for soil borings P1 through P3 and boring locations where TCE remains in place at concentrations exceeding the MTCA Method A cleanup level (soil borings IW03, MW16, B06/MW04, and B18/MW13) are provided in Table 1. Soil analytical results for all soil samples collected during previous investigations and during remedial excavation activities can be found as attachments to SoundEarth's 2014 Draft RIFS Report and 2017 Cleanup Action Report.

Ecology's comments related to soil contamination at the Site (in bold font) and SoundEarth's responses (in normal font) are provided below.

Ecology Comment: Please note that submission of a TEE form is required for consideration of a no further action (NFA) determination.

The Site qualifies for a Terrestrial Ecological Evaluation (TEE) exclusion per Section 7491(1)(c) of Chapter 173-340 of the Washington Administrative Code because there is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site. No further consideration of ecological impacts is required under MTCA. The TEE form for the Site is provided as Attachment A.

Ecology Comment: Clearly display the locations and analytical results of soil samples collected from monitoring wells, borings, and excavation limits in plan and cross section view, including areas with soil remaining above the Method A cleanup level.

The locations and analytical results of soil samples collected during previous investigations and remedial excavation activities are shown in plan view on Figures 2 and 3 and in cross-section view on Figures 4 through 6. Areas with TCE remaining at concentrations above the MTCA Method A cleanup level in soil are limited to the vicinities of soil borings IW03 and MW16; near the southern boundary of the North Block; and at soil borings B06/MW04 and B18/MW13, located in the North 34th Street ROW (Figures 2, 4, and 5). The data from the soil samples collected by SoundEarth in May 2019 demonstrate that the TCE detected in soil borings SB201 and SB204 and bottom confirmation soil sample A2-65N85E-68-BTM has been reduced to concentrations below the MTCA Method A cleanup level through the operation of the SVE system.

Groundwater Contamination at the Site

Ecology's October 2022 opinion letter indicated that additional groundwater sampling is necessary to delineate the current extent of the TCE plume in groundwater at the Site. Based on the results of recent groundwater sampling at the Site, TCE was detected at concentrations exceeding the MTCA Method A cleanup level in groundwater in the vicinities of monitoring wells MW05 and MW12. Historically, TCE has also been detected at concentrations exceeding the MTCA Method A cleanup level in groundwater collected from monitoring wells MW03, MW04, MW07 (decommissioned), MW09 (decommissioned), MW11, and MW13 and from injection wells IW03 and IW04 (decommissioned). The TCE concentrations detected during the most recent four quarters of sampling are shown on Figure 7. Ecology's comments related to groundwater contamination at the Site and SoundEarth's responses are provided below.

Ecology Comment: The current extent of the groundwater plume is not delineated upgradient to the northwest, cross-gradient to the east and west, and downgradient to the south. Prior to the proposed injection, Ecology recommends sampling groundwater from all existing monitoring wells and analyzing for TCE, to delineate the extent of groundwater with concentrations of TCE currently exceeding the MTCA Method A cleanup level.

In the June 2022 Work Plan, SoundEarth proposed to conduct a pre-injection groundwater monitoring event to include the sampling of monitoring wells MW05, MW12, MW17, and MW18. Based on Ecology's comment, SoundEarth has identified the existing network of wells that are able to be sampled prior to the supplemental injections to evaluate current groundwater conditions throughout the Site and to delineate the extents of groundwater containing TCE at concentrations exceeding the MTCA Method A cleanup level. The proposed network of wells to be sampled prior to the injection event is summarized in the following table:

Well ID	Sampling Objective
MW05	Evaluate current groundwater conditions (last sampled in December 2021).
MW11D	Evaluate current deep groundwater conditions (last sampled in May 2016).

MW12	Evaluate current groundwater conditions and delineate the extent of TCE impacts cross-gradient to the west (last sampled in December 2021). This monitoring well is also representative of groundwater conditions at monitoring well MW03 based on location and well screen interval.
MW14	Delineate the extent of TCE impacts upgradient to the northwest (last sampled in April 2012). This monitoring well is also representative of groundwater conditions at injection well IW05 based on location and well screen interval.
MW15	Evaluate current groundwater conditions (last sampled in May 2016).
MW16A	Evaluate current groundwater conditions (last sampled in September 2020). This monitoring well is also representative of groundwater conditions at monitoring wells MW04 and MW13 based on location and well screen interval.
MW17	Delineate the extent of TCE impacts downgradient to the south (last sampled in May 2016).
MW18	Delineate the extent of TCE impacts cross-gradient to the east (last sampled in March 2018).
IW08	Evaluate current groundwater conditions (last sampled in September 2020). This monitoring well is also representative of groundwater conditions at monitoring well MW03 based on location and well screen interval.

Ecology Comment: Include a rose diagram displaying estimated groundwater flow directions for all monitoring events in addition to the groundwater contour map provided in the June 2022 Work Plan.

A rose diagram displaying groundwater flow directions for all monitoring events conducted to date is depicted on Figure 8. This figure also depicts the groundwater contour map from the December 2021 groundwater monitoring event, which was included in the June 2022 Work Plan.

Ecology Comment: Display concentrations of TCE in wells on a time-series plot to show the effectiveness of ISCO treatments in reducing contamination at the Site.

Time-series plots were generated for select monitoring wells and are provided in Attachment B. The time-series plots indicate that the chemical oxidant injections, in conjunction with contaminated soil mass removal and SVE system operation, have been successful at reducing TCE to concentrations below the MTCA Method A cleanup level in groundwater throughout majority of the Site. However, TCE concentrations remain above the cleanup level in groundwater samples collected from monitoring wells MW05 and MW12. As stated in the June 2022 Work Plan, SoundEarth will use a sodium permanganate injectate in the supplemental injection event to chemically oxidize the residual TCE. It is anticipated that delivery of a high-concentration permanganate-based injection solution will overcome the natural organic demand associated with the fine-grained material present in the vicinity of monitoring wells MW05 and MW12.

Ecology Comment: Display the inferred extent of groundwater containing TCE above Method A cleanup levels in plan and cross section view.

The inferred extent of groundwater containing TCE at concentrations above the MTCA Method A cleanup level is depicted in cross-section view on Figures 4 through 6 and in plan view on Figure 7.

Vapor Intrusion Evaluation

The Ecology October 2022 opinion letter indicated that an evaluation of the vapor intrusion risk at the Site is needed based on the historical presence of TCE at concentrations exceeding the MTCA Method B vapor intrusion screening level for unrestricted land use in groundwater samples collected from monitoring wells MW03, MW04, MW05, MW07, MW09, MW11, and MW13. Ecology's comments related to evaluation of the vapor intrusion risk at the Site and SoundEarth's responses are provided below.

Ecology Comment: Current SVE system data should be provided which includes information on operating hours, estimated mass removal rates, and estimated total contaminant mass removal.

The SVE system was installed prior to construction of the new building on the North Block in March and April 2015. The SVE system consisted of six vertical SVE wells (SVE06A, SVE06B, SVE08A, SVE08B, SVE09A, and SVE09B) and three horizontal SVE wells (SVE02, SVE04, and SVE05) as shown in plan view on Figure 2 and in cross-section view on Figures 4 through 6. The vertical SVE wells were installed to depths between 66 and 68 feet NAVD with 12 to 13 feet of screen. The horizontal SVE wells were installed at depths between 66 and 68 feet AMSL. The SVE well conveyance pipes extend beneath the foundation slab from the wellheads to a manifold located at the SVE system compound (i.e., utility room located in basement parking garage of building on the North Block).

The SVE system was started in January 2017 and operated until December 2020. During routine monitoring events, the system vacuum, total extraction rate, and run time were measured and recorded. In addition, the relative chlorinated volatile organic carbon (CVOC) content was measured in the extracted soil gas from each SVE well using a photoionization detector (PID). System parameter and PID measurements are summarized in Tables 2 and 3, respectively.

During system operation, soil gas samples were periodically collected and submitted for chemical analysis of CVOCs (PCE, TCE, cis-1,2-dichloroethene [DCE], and vinyl chloride [VC]) using US Environmental Protection Agency (EPA) Method 8260C. The SVE system total influent soil gas sampling results are summarized in Table 4. The laboratory analytical reports for collected SVE soil gas samples are provided in Attachment C.

During the SVE operational period, approximately 40 pounds of vapor-phase CVOCs were removed from the subsurface (see Table 1).

Ecology Comment: Ecology recommends collecting vapor samples from SVE system wells on the Property to evaluate the effectiveness of remedial actions in reducing the concentration of TCE in soil vapor and the risk of vapor intrusion.

Total influent soil gas samples were submitted for analysis of CVOCs using EPA Method 8260C. The laboratory reporting limit for PCE, TCE, cis-1,2-DCE, and VC using EPA Method 8260C is 1 milligram per cubic meter, which is above the applicable MTCA Method B sub-slab soil gas screening levels. Therefore, soil gas data from existing total influent/individual SVE well SVE08 is not suitable to use for evaluating the vapor intrusion pathway.

In December 2020, the SVE operation was terminated due to declining CVOC mass removal rates (i.e., CVOCs were not detected at concentrations above the laboratory reporting limit and PID measurements were negligible). To evaluate the effectiveness of completed remedial actions (i.e., CVOC-impacted soil removal and disposal, chemical oxidant injections, and SVE operation) and the potential risk associated the vapor intrusion pathway, the following is proposed:

- The SVE system will be restarted with soil gas extracted from the six vertical and three horizontal extraction wells.
- The SVE system parameters (i.e., individual well/blower vacuum, individual and total extraction rate, individual and total PID measurements, and run time) will be measured and recorded during each monitoring event.
- The SVE system parameters will be measured weekly during the first month of operation. A sample will be collected that is representative of the total extracted soil gas when system vacuums and extraction rates stabilize and PID measurements are negligible. The total extracted soil gas sample will be submitted for analysis of PCE, TCE, cis-1,2-DCE, and VC using EPA Method TO-15.
- The collected soil gas will be evaluated in accordance with Ecology's *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Ecology 2009).

CLOSING

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

Respectfully,

SoundEarth Strategies, Inc.

Clare Tochilin, LG
Associate Geologist

Levi Fernandes, PE
Senior Engineer

Ryan K. Bixby, LG
Managing Principal

Attachments: Figure 1, Property and Exploration Location Plan
Figure 2, Remedial Excavation Extent, Soil Sample Locations and Extent of TCE Impacts in Soil – North Block
Figure 3, Soil Sample Locations and Remedial Excavation Extents – South Block
Figure 4, Geologic Cross Section A-A'

Figure 5, Geologic Cross Section B-B'
Figure 6, Geologic Cross Section C-C'
Figure 7, Groundwater Analytical Results and Extent of TCE Impacts in Groundwater
Figure 8, Fourth Quarter 2021 Groundwater Contour Map with Rose Diagram
Table 1, TCE Exceeding MTCA Method A Cleanup Level in Soil Samples Remaining in Place
Table 2, SVE System Operation and Mass Removal Summary
Table 3, SVE System Manifold PID Measurements
Table 4, SVE System Soil Gas Analytical Results
A, Terrestrial Ecological Evaluation
B, TCE Time-Series Plots
C, SVE System Soil Gas Laboratory Analytical Reports

CJT:kak/kar

REFERENCES

SoundEarth Strategies, Inc. (SoundEarth). 2014a. *Draft Remedial Investigation and Feasibility Study Report, Avtech Property, 3400 Wallingford Avenue North, Seattle, Washington*. January 10.

_____. 2014b. Letter regarding RI/FS/CAP Addendum, Avtech Corporation Property, 3400 Wallingford Avenue North, Seattle, Washington. From Rob Roberts, John Funderburk, and Terry Montoya. To Scott Koppelman, AMLI Residential Partners. August 6.

_____. 2017a. Letter regarding Cleanup Action Report, AMLI Wallingford Property, 3400 Wallingford Avenue North, Seattle, Washington 98103. From Chris Cass, Rob Roberts, John Funderburk, and Terry Montoya. To Scott Koppelman, AMLI Residential Partners. June 19.

_____. 2017b. Letter regarding Third Quarter 2017 Groundwater Monitoring Report, Former Avtech Property (AMLI Wallingford), 3400 Wallingford Avenue North, Seattle, Washington. From Clare Tochilin and Rob Roberts. To Scott Koppelman, AMLI Residential Partners. October 18.

_____. 2022. Letter regarding Remedial Injection and Groundwater Monitoring Work Plan, AMLI Wallingford Property, 3400 Wallingford Avenue North, Seattle, Washington 98103. From Clare Tochilin, Levi Fernandes, and Ryan Bixby. To Scott Koppelman, AMLI Residential Partners. June 13.

Washington State Department of Ecology (Ecology). 2009. *Guidance for Evaluating Vapor Intrusion in Washington State: Investigation and Remedial Action.* Publication No. 09-09-047. Revised March 2022. January.

_____. 2022. Letter regarding Opinion Pursuant to WAC 173-340-515(5) on Remedial Action, Avtech Corp, 3400 Wallingford Avenue N, Seattle, WA 98103. From David Unruh. To Levi Fernandes, SoundEarth Strategies, Inc. October 4.

FIGURES

10/28/2022

N

0 25 50

APPROXIMATE SCALE IN FEET

WALLINGFORD AVENUE NORTH

VARSITY INN PROPERTY

SOUTH BLOCK

OFFICE PROPERTY

NORTH BLOCK

NORTH 34TH STREET

PARKING LOT

BURKE AVENUE NORTH

A A' B B' C C'

B04/ MW02 · B13/MW08 · B11/MW06 · P10 · IW39 · IW51 · IW47 · B12/ MW07 · P09 · IW44 · B07/MW05 · IW53 · MW17 · IW50 · B20/MW15 · B08 · IW57 · IW56 · MW18

IW18 · IW17 · IW16 · MW11D · B16/ MW11 · IW15 · IW13 · IW14 · B06/ MW04 · IW02 · MW16A · IW12 · B18/ MW13 · IW11 · IW10 · IW09 · IW08 · B05/ MW03 · IW07

IW55 · IW58 · B17/ MW12 · SB208 · IW03 · SVE06A · SVE06B · IW19 · SVE08A · MW16 · SB209 · SVE08B · IW33 · SB210 · SVE09A · SVE09B · SB211 · SB212 · P08 · P106 · IW37 · P07 · P107 · B101

B19/ MW14 · IW05 · IW06 · B15/ MW10 · P01 · IW01 · P101 · P105 · IW04 · IW04A · P15 · SB207 · P14 · P104 · SB206 · P103 · P102 · SB201 · P1 · P3 · P2 · SB204 · SB203 · SB202 · IW26 · P02 · B01/ MW01 · B103 · IW30 · B14/MW09 · B104 · P04 · B102 · P05 · SB205 · P06 · B03 · P03 · B02 · P12 · P11 · B09 · P13 · B10

LEGEND

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE (APPROXIMATE)
- CATCH BASIN
- MW18 — MONITORING WELL
- ABANDONED WELL
- IW58 — INJECTION WELL
- P107 — PUSH-PROBE BORING
- SB212 — MINI-TRACK AUGER BORING (JUL 2013, APRIL - MAY 2014)
- MW18 — POST FOUNDATION CONSTRUCTION MONITORING WELL (2015)
- B12 — SOIL BORING
- SB212 — MINI-TRACK AUGER BORING (JULY 2013)
- B104 — HOLLOW STEM AUGER BORING (JAN 2013)
- B104 — HOLLOW STEM AUGER 30-DEGREE ANGLE BORING (JAN 2013)
- P3 — SUB-SLAB SOIL BORING (MAY 2019)
- SVE09B — SOIL VAPOR EXTRACTION WELL
- CROSS SECTION LOCATION

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FIGURE 1
PROPERTY AND EXPLORATION LOCATION PLAN

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10/31/2022

N

0 15 30

APPROXIMATE SCALE IN FEET

APARTMENTS

CONDOMINIUMS

WALLINGFORD AVENUE NORTH

BURKE AVENUE NORTH

NORTH 34TH STREET

NORTH BLOCK

AREA B

AREA C1

AREA EX01

AREA A3-NORTH

AREA A3-SOUTH

AREA A4

AREA A5-SOUTH

AREA A1

AREA A2

AREA A5-NORTH

COMPOSITE SOIL SAMPLE

FORMER BUILDING 1

FORMER METHAMPHETAMINE LAB

FORMER BASKETBALL COURT

FORMER RESIDENCE

FORMER RESIDENCE

FORMER BUILDING 2

FORMER MACHINE SHOP/ SOLDER ROOM

FORMER DIESEL AND GASOLINE UST LOCATION

CHEMICAL STORAGE AREA

LOADING DOCK

LUNCH ROOM

FLOOR DRAIN

FORMER CHROMATE PROCESS ROOM

SUMP

ELEVATOR

BASEMENT

1950s-ERA ADDITION

1970s-ERA ADDITION

1980s-ERA ADDITION

APPROXIMATE EXTENT OF UST01 EXCAVATION

250-GALLSON RESIDENTIAL HEATING OIL UST (UST01, REMOVED 10/10/2015)

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECTECHNICAL\CAD\2022\0789-004-2022-SLM-FIG 2.DWG

LEGEND

- SETBACK FOR NEW BUILDING
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE (APPROXIMATE)
- CATCH BASIN
- B-220N65E-92-BTM — SOIL SAMPLE LOCATION
- COMPRESSOR OIL SAMPLE
- MW18 — MONITORING WELL
- ABANDONED WELL
- IW58 — INJECTION WELL
- P107 — PUSH-PROBE BORING
- SB212 — MINI-TRACK AUGER BORING (JUL 2013, APRIL - MAY 2014)
- MW18 — POST FOUNDATION CONSTRUCTION MONITORING WELL (2015)
- B12 — SOIL BORING
- SB212 — MINI-TRACK AUGER BORING (JULY 2013)
- B104 — HOLLOW STEM AUGER BORING (JAN 2013)
- B104 — HOLLOW STEM AUGER 30-DEGREE ANGLE BORING (JAN 2013)
- IW56 — PRECONSTRUCTION INJECTION WELL (APR 2014 - JUN 2014)
- P3 — SUB-SLAB SOIL BORING (MAY 2019)
- SVE09B — SOIL VAPOR EXTRACTION WELL

bgs/BGS	BELOW GROUND SURFACE
HSA	HOLLOW-STEM AUGER
MTCA	MODEL TOXICS CONTROL ACT
NAVD88	THE NORTH AMERICAN VERTICAL DATUM OF 1988
PCS	PETROLEUM-CONTAMINATED SOIL
TCE	TRICHLOROETHENE
UST	UNDERGROUND STORAGE TANK

- A5 — KNOWN OVEREXCAVATION AREA
- A3 — HOT SPOT REMOVAL
  - 0'-10' CLEAN SOIL (85' TO 75' ELEVATION)
  - 10'-17' CONTAMINATED (75' TO 68' ELEVATION)
- A2 — AREA A - SOURCE AREA
  - 0'-10' CLEAN SOIL (85' TO 75' ELEVATION)
  - 10'-19' CONTAMINATED (75' TO 66' ELEVATION)
- A4 — SOIL SCREEN AND STOCK PILE AREA (10' -17')
- A1 — SOIL SCREEN AND STOCK PILE SOURCE (0 - 10') (85' TO 75' ELEVATION)
- AREA EX01 PCS REMOVAL
- APPROXIMATE EXTENT OF EXCAVATION AREA B
- APPROXIMATE EXTENT OF EXCAVATION AREA C1
- APPROXIMATE EXTENT OF TCE ABOVE MTCA METHOD A CLEANUP LEVEL IN SOIL REMAINING IN PLACE
- DENOTES TCE CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL
- DENOTES TCE CONCENTRATION PREVIOUSLY EXCEEDING MTCA METHOD A CLEANUP LEVEL REMEDIATED BY SOIL VAPOR EXTRACTION SYSTEM

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FIGURE 2

REMEDIAL EXCAVATION EXTENT, SOIL SAMPLE LOCATIONS AND EXTENT OF TCE IMPACTS IN SOIL - NORTH BLOCK

10/28/2022

N

0 15 30

APPROXIMATE SCALE IN FEET

NORTH 34TH STREET

132" DIAMETER METRO SEWER MAIN

IW18 IW17 IW16 MW11D B16/ MW11 IW15 IW13 IW14

IW56 MW18 IW57

B08

VARSITY INN RESTAURANT

IW44

B12/ MW07

P09

SOUTH BLOCK

IW50

B20/MW15

B13/MW08

IW39

BUILDING 4

PARCEL 4

BUILDING 3

PARCEL 5

BUILDING 5
(FORMER HYDROPLANE RACING SUPPORT FACILITY)

FORMER PAINT SPRAY BOOTH

IW47

FORMER OFFICE BUILDING

FORMER CHROMATE PROCESS ROOM

COMPOSITE SOIL SAMPLE

IW53

FORMER PAINT SPRAY BOOTH

BUILDING 6

PARCEL 6

B11/MW06 P10 AREA C2

B04/ MW02

C2-1204OE-04-BTM

C2-12N14OE-04-BTM

COMPOSITE SOIL SAMPLE

IW51

EX02-ON191E-56-ESW

B07/MW05

EX02-ON18OE-56 & EX02-ON18OE-53-BTM

AREA EX02

RESIDENCE

WALLINGFORD AVENUE NORTH

BURKE AVENUE NORTH

LEGEND

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE (APPROXIMATE)
- EX02-ON191E-56-ESW — SOIL SAMPLE LOCATION
- MW18 — MONITORING WELL
- ABANDONED WELL
- IW58 — INJECTION WELL
- P15 — PUSH-PROBE BORING
- MW18 — POST FOUNDATION CONSTRUCTION MONITORING WELL (2015)
- B10 — SOIL BORING
- APPROXIMATE EXTENT OF EXCAVATION AREA C2
- APPROXIMATE EXTENT OF EXCAVATION AREA EX02

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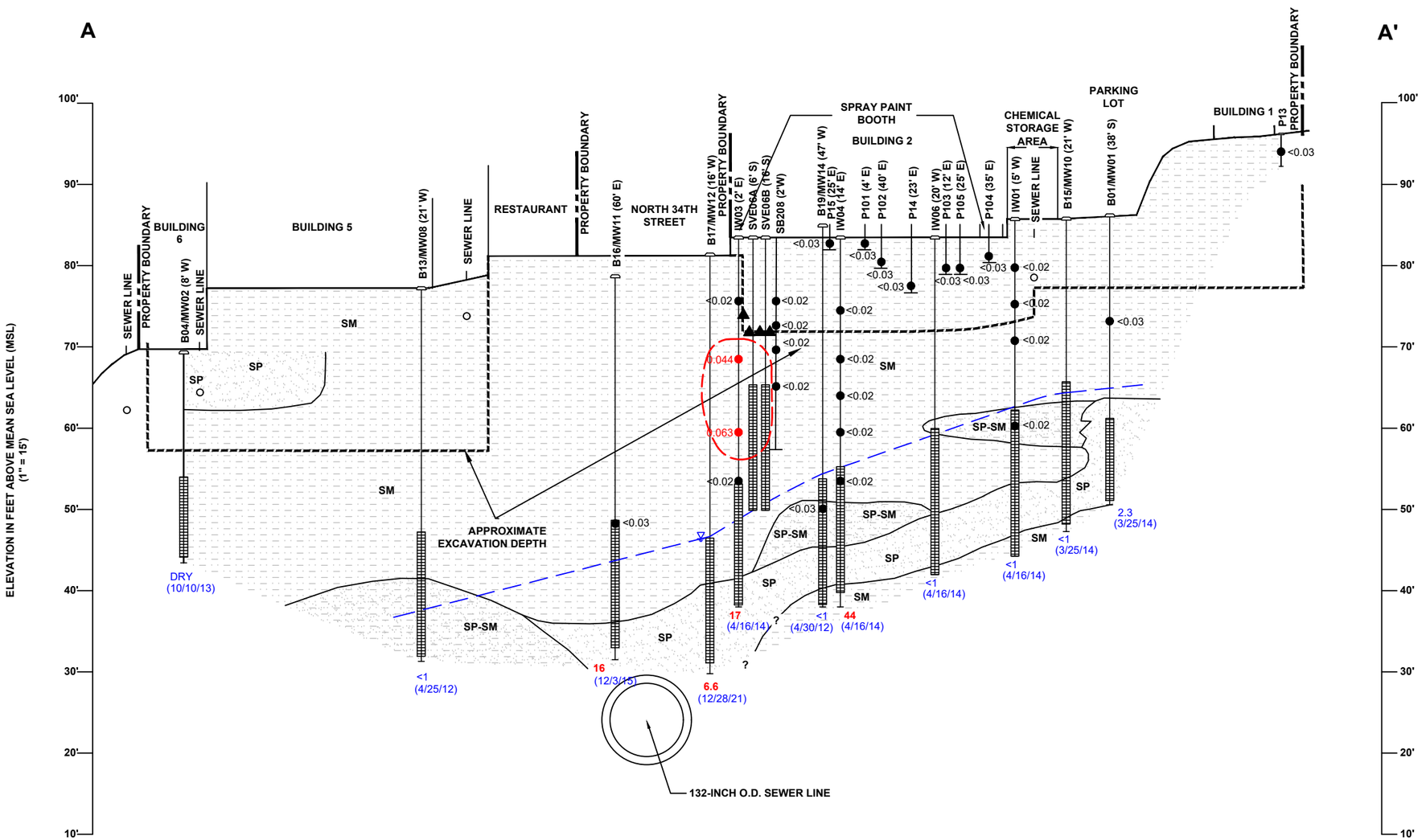
FIGURE 3
SOIL SAMPLE LOCATIONS AND REMEDIAL EXCAVATION EXTENTS - SOUTH BLOCK

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECTECHNICAL\CAD\2022\0789-004-2022-SLM-FIG 3.DWG

10/28/2022



LEGEND

(8' W) OFFSET 8' WEST MONITORING WELL

SCREEN INTERVAL

GROUNDWATER LEVEL (DECEMBER 2021)

SP - FINE SAND

SM - SILTY-FINE SAND

CONCENTRATIONS OF CHEMICALS OF CONCERN IN SOIL (mg/kg):

- SOIL BORING SAMPLE CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- SOIL BORING SAMPLE CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL
- EXCAVATION CONFIRMATION SAMPLE CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL

APPROXIMATE EXTENT OF TCE ABOVE MTCA METHOD A CLEANUP LEVEL IN SOIL REMAINING IN PLACE

SOIL RESULTS (mg/kg):

<0.02 TCE

GROUNDWATER RESULTS (µg/L):

<1 (7/10/13) TCE MOST RECENT SAMPLING DATE

mg/kg	MILLIGRAMS PER KILOGRAM
µg/L	MICROGRAMS PER LITER
RED	DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVEL
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
O.D.	OUTSIDE DIAMETER
TCE	TRICHLOROETHENE

0 25 50 100

APPROXIMATE HORIZONTAL SCALE IN FEET
NOT FOR CONSTRUCTION OR ENGINEERING PURPOSES

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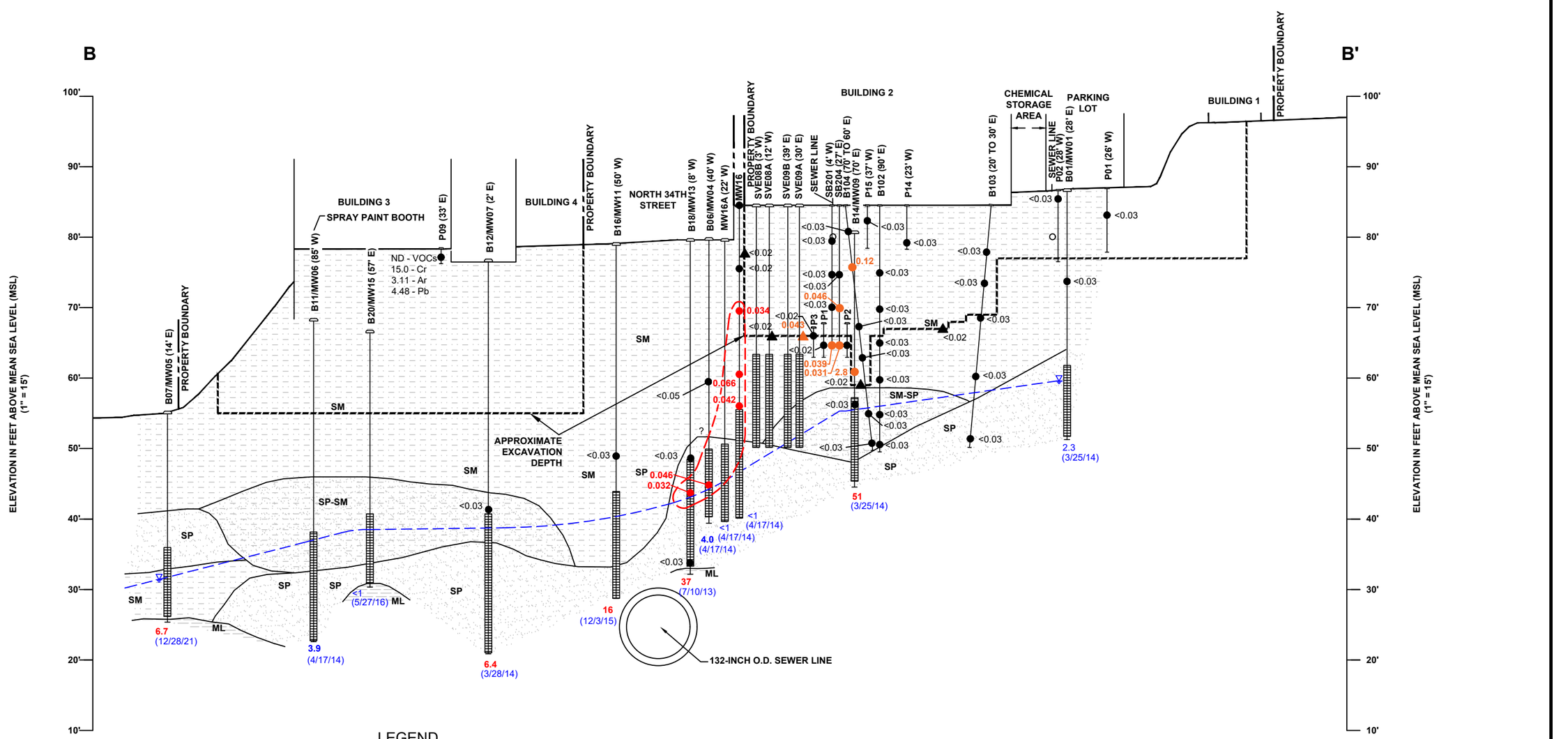
SOUNDEARTH PROJECT #0789-004

FIGURE 4
GEOLOGIC CROSS SECTION A-A'

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTEC\TECHNICAL\CAD\2022\0789-004-2022_XAA.DWG

10/31/2022



LEGEND

CONCENTRATIONS OF CHEMICALS OF CONCERN IN SOIL (mg/kg):

- SOIL BORING SAMPLE CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- SOIL BORING SAMPLE CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL
- EXCAVATION CONFIRMATION SAMPLE CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- EXCAVATION CONFIRMATION SAMPLE CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL
- APPROXIMATE EXTENT OF TCE ABOVE MTCA METHOD A CLEANUP LEVEL IN SOIL REMAINING IN PLACE
- SOIL BORING OR EXCAVATION CONFIRMATION SAMPLE CONCENTRATION PREVIOUSLY EXCEEDING MTCA METHOD A CLEANUP LEVEL FOR TCE. SOIL HAS BEEN REMOVED BY EXCAVATION OR REMEDIATED BY SOIL VAPOR EXTRACTION SYSTEM

SOIL RESULTS (mg/kg):

<0.02 TCE

GROUNDWATER RESULTS (µg/L):

<1 (7/10/13) TCE MOST RECENT SAMPLING DATE

(8' W) OFFSET 8' WEST MONITORING WELL

SCREEN INTERVAL

GROUNDWATER LEVEL (DECEMBER 2021)

ML - SILT

SP - FINE SAND

SM - SILTY-FINE SAND

mg/kg	MILLIGRAMS PER KILOGRAM
µg/L	MICROGRAMS PER LITER
RED	DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVEL
ORANGE	DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVEL PRIOR TO REMEDIATION
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
O.D.	OUTSIDE DIAMETER
TCE	TRICHLOROETHENE

0 25 50 100

APPROXIMATE HORIZONTAL SCALE IN FEET
NOT FOR CONSTRUCTION OR ENGINEERING PURPOSES

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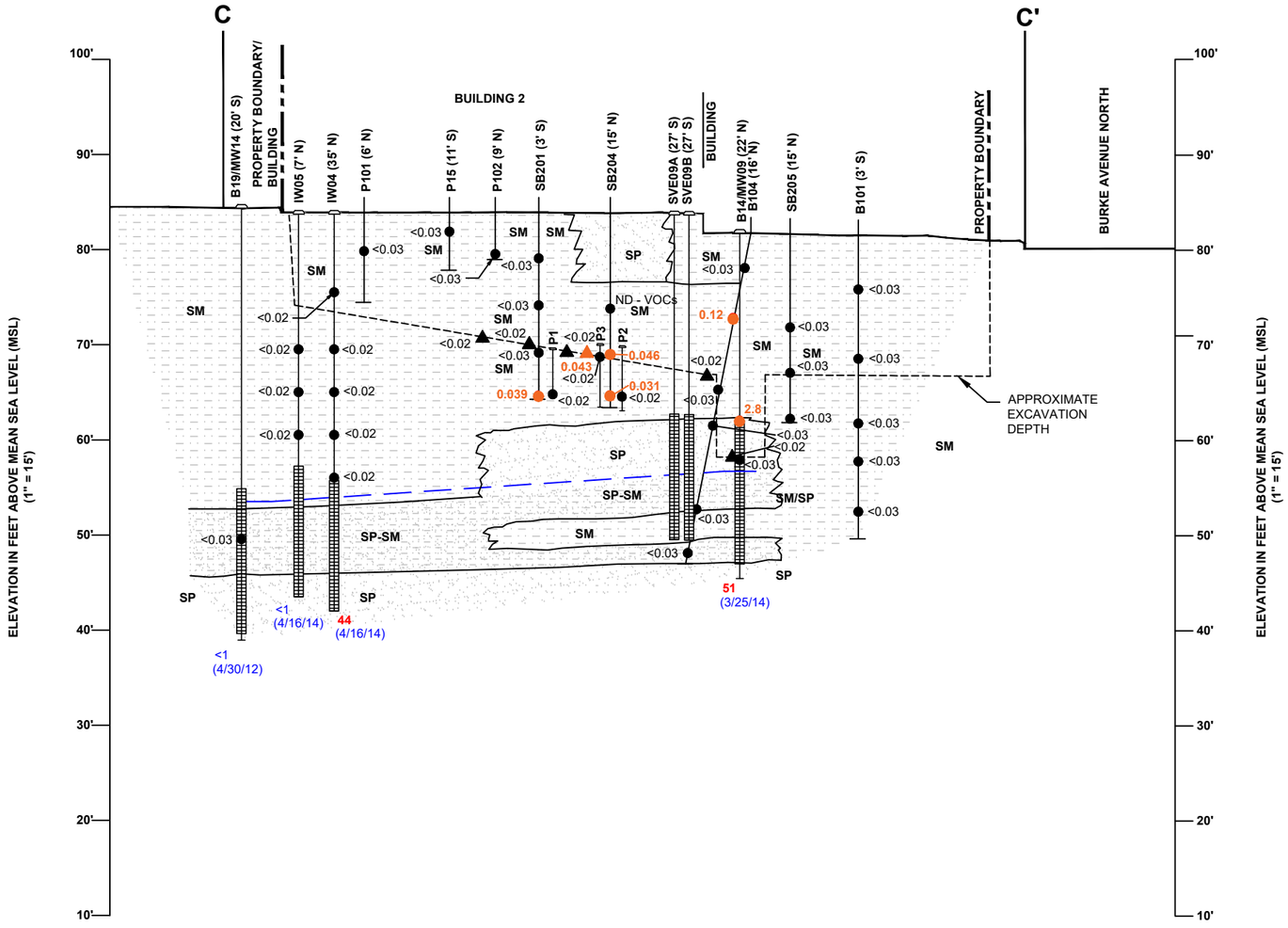
FIGURE 5
GEOLOGIC CROSS SECTION B-B'

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECH\TECHNICAL\CAD\2022\0789-004-2022_XBB.DWG

10/31/2022



LEGEND

(6' N) OFFSET 6' NORTH

MONITORING WELL

SCREEN INTERVAL

GROUNDWATER LEVEL (DECEMBER 2021)

SP - FINE SAND

SM - SILTY-FINE SAND

ML - INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS

CONCENTRATIONS OF CHEMICALS OF CONCERN IN SOIL (mg/kg):

- SOIL BORING SAMPLE CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- EXCAVATION CONFIRMATION SAMPLE CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- SOIL BORING OR EXCAVATION CONFIRMATION SAMPLE CONCENTRATION PREVIOUSLY EXCEEDING MTCA METHOD A CLEANUP LEVEL FOR TCE. SOIL HAS BEEN REMOVED BY EXCAVATION OR REMEDIATED BY SOIL VAPOR EXTRACTION SYSTEM

SOIL RESULTS (mg/kg):

<0.02 TCE

GROUNDWATER RESULTS (µg/L):

<1 (7/10/13) TCE MOST RECENT SAMPLING DATE

mg/kg	MILLIGRAMS PER KILOGRAM
µg/L	MICROGRAMS PER LITER
RED	DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVEL
ORANGE	DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVEL PRIOR TO REMEDIATION
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
TCE	TRICHLOROETHENE

0 25 50 100

APPROXIMATE HORIZONTAL SCALE IN FEET
NOT FOR CONSTRUCTION OR ENGINEERING PURPOSES

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FIGURE 6
GEOLOGIC CROSS SECTION C-C'

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECVTECHNICAL\CAD\2022\0789-004-2022_XCC.DWG

10/28/2022

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECH\TECHNICAL\CAD\2022\0789-004-2022-PP.DWG

Sample ID	Sample Date	TCE (µg/L)
IW02	04/16/14	<1

Sample ID	Sample Date	TCE (µg/L)
MW12	09/17/20	5.6
	12/16/20	5.9
	09/22/21	5.9
	12/28/21	6.6

Sample ID	Sample Date	TCE (µg/L)
IW03	04/16/14	17

Sample ID	Sample Date	TCE (µg/L)
MW04	01/11/13	85
	04/24/13	290
	07/10/13	150
	09/19/17	4.0

Sample ID	Sample Date	TCE (µg/L)
MW14	04/30/12	<1

Sample ID	Sample Date	TCE (µg/L)
IW04	04/16/14	44

Sample ID	Sample Date	TCE (µg/L)
MW16A	12/12/19	<1
	03/24/20	<1
	07/06/20	3.6
	09/17/20	<1

Sample ID	Sample Date	TCE (µg/L)
IW05	04/16/14	<1

Sample ID	Sample Date	TCE (µg/L)
IW06	04/16/14	<1

Sample ID	Sample Date	TCE (µg/L)
MW08	04/25/12	<1

Sample ID	Sample Date	TCE (µg/L)
MW10	05/01/12	<1
	03/25/14	<1

Sample ID	Sample Date	TCE (µg/L)
MW11	07/10/13	56
	10/10/13	35
	03/25/14	48
	12/03/15	16

Sample ID	Sample Date	TCE (µg/L)
IW01	04/16/14	<1

Sample ID	Sample Date	TCE (µg/L)
MW13	04/27/12	1.0
	05/07/12	2.0
	04/24/13	2.5
	07/10/13	37

Sample ID	Sample Date	TCE (µg/L)
MW01	01/17/12	<1
	05/01/12	<1
	03/25/14	2.3

Sample ID	Sample Date	TCE (µg/L)
MW07	04/25/13	6.1
	07/11/13	11
	10/10/13	6.5
	03/25/14	6.4

Sample ID	Sample Date	TCE (µg/L)
MW06	04/26/13	4.5
	07/11/13	3.2
	10/11/13	<1
	04/17/14	3.9

Sample ID	Sample Date	TCE (µg/L)
MW16	04/16/14	<1

Sample ID	Sample Date	TCE (µg/L)
MW09	04/24/13	24
	07/10/13	36
	10/10/13	43
	03/25/14	51

Sample ID	Sample Date	TCE (µg/L)
MW17	06/29/15	<1
	09/14/15	1.2
	02/22/16	<1
	05/27/16	<1

Sample ID	Sample Date	TCE (µg/L)
MW05	09/17/20	18
	12/16/20	25
	09/22/21	3.0
	12/28/21	6.7

Sample ID	Sample Date	TCE (µg/L)
MW15	10/28/13	<1
	04/16/14	<1
	12/03/15	<1
	05/27/16	<1

Sample ID	Sample Date	TCE (µg/L)
MW18	05/25/17	<1
	09/19/17	<1
	12/04/17	<1
	03/27/18	<1

Sample ID	Sample Date	TCE (µg/L)
IW08	09/19/19	1.4
	03/24/20	3.2
	07/06/20	1.2
	09/17/20	<1

Sample ID	Sample Date	TCE (µg/L)
MW03	04/27/12	83
	05/08/12	64
	01/14/13	71
	04/24/13	76

N

0 25 50

APPROXIMATE SCALE IN FEET

VARSITY INN PROPERTY

SOUTH BLOCK

OFFICE PROPERTY

NORTH 34TH STREET

WALLINGFORD AVENUE NORTH

NORTH BLOCK

BURKE AVENUE NORTH

PARKING LOT

B04/ MW02
B13/MW08
B17/ MW12
B19/ MW14
B15/ MW10
B16/ MW11
B06/ MW04
B01/ MW01
B18/ MW13
B11/MW06
B12/ MW07
B14/MW09
B07/MW05
B20/MW15
B05/ MW03
B08
B09
B10
B02
B03
B101
B102
B103
B104

IW55 IW58 IW18 IW17 IW19 IW16 IW15 IW13 IW14 IW12 IW11 IW10 IW09 IW08 IW07 IW03 IW04 IW04A IW02 IW01 IW05 IW06 IW30 IW26 IW33 IW37 IW39 IW51 IW47 IW44 IW53 IW50 IW56 IW57

SVE06A SVE06B SVE08A SVE08B SVE09A SVE09B

SB208 SB209 SB210 SB211 SB212 SB201 SB202 SB203 SB204 SB205 SB206 SB207

P01 P02 P03 P04 P05 P06 P07 P08 P09 P10 P11 P12 P13 P14 P15 P101 P102 P103 P104 P105 P106 P107 P1 P2 P3

MW16A MW11D MW16 MW17 MW18

LEGEND

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE (APPROXIMATE)
- CATCH BASIN
- MW18 MONITORING WELL
- ABANDONED WELL
- IW58 INJECTION WELL
- P107 PUSH-PROBE BORING
- SB212 MINI-TRACK AUGER BORING (JUL 2013, APRIL - MAY 2014)
- MW18 POST FOUNDATION CONSTRUCTION MONITORING WELL (2015)
- B12 SOIL BORING
- SB212 MINI-TRACK AUGER BORING (JULY 2013)
- B104 HOLLOW STEM AUGER BORING (JAN 2013)
- B104 HOLLOW STEM AUGER 30-DEGREE ANGLE BORING (JAN 2013)
- P3 SUB-SLAB SOIL BORING (MAY 2019)
- SVE09B SOIL VAPOR EXTRACTION WELL
- APPROXIMATE EXTENT OF TCE ABOVE MTCA METHOD A CLEANUP LEVEL IN GROUNDWATER
- DENOTES TCE CONCENTRATION EXCEEDED MTCA METHOD A CLEANUP LEVEL DURING MOST RECENT SAMPLING EVENT
- MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT
- RED DENOTES TCE CONCENTRATION ABOVE THE MTCA METHOD A CLEANUP LEVEL
- TCE TRICHLOROETHENE
- < NOT DETECTED AT A CONCENTRATION EXCEEDING THE LABORATORY REPORTING LIMIT
- µg/L MICROGRAMS PER LITER

	Analytical Results (µg/L)
	TCE
MTCA Method A	5

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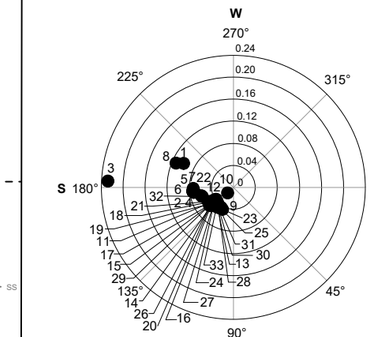
SEATTLE, WASHINGTON
SOUNDEARTH PROJECT #0789-004

FIGURE 7
GROUNDWATER ANALYTICAL RESULTS AND EXTENT OF TCE IMPACTS IN GROUNDWATER

10/28/2022



1. 01/17/12
2. 04/30/12
3. 05/07/12
4. 01/11/13
5. 04/25/13
6. 07/10/13
7. 10/10/13
8. 03/25/14
9. 06/29/15
10. 09/14/15
11. 12/02/15
12. 02/18/16
13. 05/27/16
14. 09/29/16
15. 12/27/16
16. 03/21/17
17. 05/24/17
18. 09/18/17
19. 12/04/17
20. 03/27/18
21. 06/12/18
22. 09/12/18
23. 12/27/18
24. 03/21/19
25. 06/12/19
26. 09/19/19
27. 12/12/19
28. 03/24/20
29. 07/06/20
30. 09/17/20
31. 12/16/20
32. 09/22/21
33. 12/28/21

WALLINGFORD AVENUE NORTH

B04/ MW02
B13/MW08
B19/ MW14
IW55
IW58
B17/ MW12 (47.49')
IW05
B15/ MW10
IW06
P01
IW01
SB208
IW03
SVE06A
P101
P105
VARSITY INN PROPERTY
IW18
IW04
IW04A
SVE06B
SB207
IW17
IW19
P15
P14
P104
IW16
MW11D
B06/ MW04
IW02
SB206
P102
P103
P02
B01/ MW01
P13
SB201
P1
B16/ MW11
MW16A
SVE08A
SB202
P12
P3
IW12
MW16
SB209
B103
IW26
IW15
P2
SVE08B
IW33
B09
P11
B18/ MW13
SB204
SB203
IW13
B11/MW06
IW14
SB210
SVE09A
P03
P10
IW39
SOUTH BLOCK
SVE09B
IW30
B14/MW09
IW11
NORTH 34TH STREET
SB211
B104
P04
B12/ MW07
IW10
B102
P05
SB205
NORTH BLOCK
OFFICE PROPERTY
IW51
SB212
IW09
P06
B10
IW47
P07
P08
IW08
B101
B03
B02
P09
IW44
P106
IW37
B05/ MW03
P107
IW07
IW50
B20/MW15
B07/MW05 (31.24')
IW53
B08
IW56
MW17 (31.72')
IW57
MW18 (38.78')
BURKE AVENUE NORTH
PARKING LOT

LEGEND

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE (APPROXIMATE)
- CATCH BASIN
- MW18 — MONITORING WELL
- ABANDONED WELL
- IW58 — INJECTION WELL
- P107 — PUSH-PROBE BORING
- SB212 — MINI-TRACK AUGER BORING (JUL 2013, APRIL - MAY 2014)
- MW18 — POST FOUNDATION CONSTRUCTION MONITORING WELL (2015)
- B12 — SOIL BORING
- SB212 — MINI-TRACK AUGER BORING (JULY 2013)
- B104 — HOLLOW STEM AUGER BORING (JAN 2013)
- B104 — HOLLOW STEM AUGER 30-DEGREE ANGLE BORING (JAN 2013)
- P3 — SUB-SLAB SOIL BORING (MAY 2019)
- SVE09B — SOIL VAPOR EXTRACTION WELL
- 5-FOOT INTERVAL GROUNDWATER CONTOUR
- (31.24') — GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION

N

0 25 50
APPROXIMATE SCALE IN FEET

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FIGURE 8
FOURTH QUARTER 2021
GROUNDWATER CONTOUR MAP WITH ROSE DIAGRAM

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECTECHNICALCAD\20220789-004-2022-PP.DWG

TABLES

Table 1
TCE Exceeding MTCA Method A Cleanup Level in Soil Samples Remaining in Place
AMLI Wallingford Property
3400 Wallingford Avenue North
Seattle, Washington

Sample ID	Analytical Results (mg/kg)							
	Sample Location	Sample Date	Sample Type	Sample Matrix	Sample Elevation[1] (feet)	Sample Status (In Place/Remediated)	TCE[2]	PCE[2]
Excavation Area A2								
A2-65N85E-68-BTM	North Block	02/11/15	Bottom	Soil	68	Remediated by SVE system	**0.043**	< 0.025
P3-2019-01 (same location as A2-65N85E-68-BTM)	North Block	05/17/19	Sub-slab boring (2019)	Soil	68	In place	<0.02	< 0.025
SB201-20	North Block	07/09/13	Boring	Soil	65	Remediated by SVE system	**0.039**	<0.025
P1-2019-04 (same location as SB201-20)	North Block	05/17/19	Sub-slab boring (2019)	Soil	65	In place	<0.02	< 0.025
SB204-20	North Block	07/09/13	Boring	Soil	65	Remediated by SVE system	**0.031**	< 0.025
P2-2019-05 (same location as SB204-20)	North Block	05/17/19	Sub-slab boring (2019)	Soil	65	In place	<0.02	<0.025
April 2014 SoundEarth Soil Borings Outside of the Mass Excavation								
B-IW03-15	North Block	04/03/14	Boring	Soil	70	In place	**0.044**	< 0.025
B-IW03-25	North Block	04/03/14	Boring	Soil	60	In place	**0.063**	< 0.025
B-MW16-15	North Block	04/02/14	Boring	Soil	70	In place	**0.034**	< 0.025
B-MW16-25	North Block	04/02/14	Boring	Soil	60	In place	**0.066**	< 0.025
B-MW16-30	North Block	04/02/14	Boring	Soil	55	In place	**0.042**	< 0.025
January and April 2012 Soil Borings In North 34th Street Right-of-Way								
B06-35	North Block	01/11/12	Boring	Soil	44	In place	**0.046**	<0.025
B18-35	North Block	04/26/12	Boring	Soil	44	In place	**0.032**	<0.025
MTCA Method A Cleanup Levels[3]							**0.03**	**0.05**

NOTES:

Red denotes concentration exceeds MTCA Method A cleanup level for soil.

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

[1] Elevations in NAVD88.

[2] Analyzed by EPA Method 8260C.

[3] MTCA Method A Cleanup Levels, Table 740-1 of WAC 173-340-900, revised November 2007.

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

EPA = US Environmental Protection Agency

mg/kg = milligrams per kilogram

MTCA= Washington State Model Toxics Control Act

NAVD88 = North American Vertical Datum of 1988

PCE = tetrachloroethene

SoundEarth = SoundEarth Strategies, Inc.

SVE = soil vapor extraction

TCE = trichloroethene

WAC = Washington Administrative Code

Table 2
SVE System Operation and Mass Removal Summary
AMLI AVTECH
3400 Wallingford Avenue
Seattle, Washington

	SVE Operation							PCE Mass Removal			TCE Mass Removal			cis-DCE Mass Removal			trans-DCE Mass Removal			VC Mass Removal		
Date	Days Since Last Visit	SVE/VIMS System Run Time (Days)	Run Time (SVE Timer)	Run Time Total Hours	Run Time (Delta Hours)	Moisture Separator Vacuum (in. H2O)	Flow Rate [1] (scfm)	PCE Concentration [2] (mg/m^3)	Daily Mass Removed Rate [3],[4] (lb/day)	Cumulative Mass Removed [5] (lb)	TCE Concentration [2] (mg/m^3)	Daily Mass Removed Rate [3],[4] (lb/day)	Cumulative Mass Removed [5] (lb)	cis-DCE Concentration [2] (mg/m^3)	Daily Mass Removed Rate [3],[4] (lb/day)	Cumulative Mass Removed [5] (lb)	trans-DCE Concentration [2] (mg/m^3)	Daily Mass Removed Rate [3],[5] (lb/day)	Cumulative Mass Removed [5] (lb)	VC Concentration [2] (mg/m^3)	Daily Mass Removed Rate [3],[6] (lb/day)	Cumulative Mass Removed [5] (lb)
01/17/17	0	0		0	0	29	229	<1	*0.00*	*0.0*	5.1	*0.12*	*0.0*	<1	*0.00*	*0.0*	<1	*0.00*	*0.0*	<0.2	*0.002*	*0.0*
01/18/17	1	1		24	24	37	316	<1	*0.01*	*0.0*	3.0	*0.10*	*0.1*	<1	*0.01*	*0.0*	<1	*0.01*	*0.0*	<0.2	*0.002*	*0.0*
01/24/17	6	6		168	144	37	316	<1	*0.01*	*0.1*	<1	*0.05*	*0.4*	<1	*0.01*	*0.1*	<1	*0.01*	*0.1*	<0.2	*0.003*	*0.0*
02/24/17	31	30		894	726	26	230	<1	*0.01*	*0.5*	<1	*0.01*	*0.8*	<1	*0.01*	*0.5*	<1	*0.01*	*0.5*	<0.2	*0.002*	*0.1*
03/14/17	18	18	0	1326	432	26	275	<1	*0.01*	*0.7*	<1	*0.01*	*1.0*	<1	*0.01*	*0.7*	<1	*0.01*	*0.7*	<0.2	*0.002*	*0.1*
04/17/17	34	33	792	2118	792	27	219	<1	*0.01*	*1.0*	<1	*0.01*	*1.3*	<1	*0.01*	*1.0*	<1	*0.01*	*1.0*	<0.2	*0.002*	*0.2*
05/15/17	28		NM			25	208	<1	*0.01*		<1	*0.01*		<1	*0.01*		<1	*0.01*		<0.2 jl	*0.002*	
06/06/17	22	70	1689	3015	897	26	208	<1	*0.01*	*1.4*	<1	*0.01*	*1.7*	<1	*0.01*	*1.4*	<1	*0.01*	*1.4*	<0.2	*0.002*	*0.3*
07/11/17	35	105	2531	3857	843	17	220															
08/14/17	34	139	3345	4671	813	17	223	<1	*0.01*	*1.7*	1.8	*0.02*	*2.5*	<1	*0.01*	*1.7*	<1	*0.01*	*1.7*	<0.2	*0.002*	*0.3*
09/25/17	42	171	4104	5430	760	19	261															
10/16/17	21	192	4605	5931	501	10	240	<1	*0.01*	*2.0*	<1	*0.01*	*2.7*	<1	*0.01*	*2.0*	<1	*0.01*	*2.0*	<0.2	*0.002*	*0.4*
01/18/18	94	284	6809	8135	2205	21	217															
04/05/18	77	361	8655	9981	1846	12	234	<1	*0.01*	*2.7*	<1	*0.01*	*3.5*	<1	*0.01*	*2.7*	<1	*0.01*	*2.7*	<0.2	*0.002*	*0.5*
07/09/18	95	456	10932	12258	2277	16	232															
10/10/18	93	549	13165	14491	2233	15	233	<1	*0.01*	*3.7*	<1	*0.01*	*4.4*	<1	*0.01*	*3.7*	<1	*0.01*	*3.7*	<0.2	*0.002*	*0.7*
01/28/19	110	626	15034	16360	1869	15	218	<1	*0.01*	*4.5*	<1	*0.01*	*5.2*	<1	*0.01*	*4.5*	<1	*0.01*	*4.5*	<0.2	*0.002*	*0.9*
04/05/19	67	693	16640	17966	1606	15	236	<1	*0.01*	*5.2*	<1	*0.01*	*5.9*	<1	*0.01*	*5.2*	<1	*0.01*	*5.2*	<0.2	*0.002*	*1.0*
07/08/19	94	787	18896	20222	2256	16	230	<1	*0.01*	*6.2*	<1	*0.01*	*6.9*	<1	*0.01*	*6.2*	<1	*0.01*	*6.2*	<0.2	*0.002*	*1.2*
10/21/19	105	889	21326	22652	2430	16	232	<1 jl	*0.01*	*7.2*	<1 jl	*0.01*	*8.0*	<1 jl	*0.01*	*7.2*	<1 jl	*0.01*	*7.2*	<0.2 jl	*0.002*	*1.4*
01/08/20	79	950	22800	24126	1475	16	241	<1	*0.01*	*7.9*	<1	*0.01*	*8.6*	<1	*0.01*	*7.9*	<1	*0.01*	*7.9*	<0.2	*0.002*	*1.6*
07/06/20	180	1093	26235	27561	3435	16	241	<1	*0.01*	*9.4*	<1	*0.01*	*10.2*	<1	*0.01*	*9.4*	<1	*0.01*	*9.4*	<0.2	*0.002*	*1.9*
								Total Mass Removed (PCE, TCE, cis-1,2-DCE, and VC) (lb)		**40**												

NOTES:

Concentrations that are estimated are shown in *italics.*

Gray shading indicates parameter not measured/recorded or not applicable.

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

[2] PCE, TCE, cis-1,2-DCE, and VC soil gas concentration per EPA Method 8260C or 8260D (see Table 3).

[3] 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] Non-detect concentrations are assumed to be 50 percent of the laboratory's reporting limit. Removal rates based on this assumption are shown in *italics.*

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

Laboratory Note:

[jl] The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

< = not detected at a concentration above the laboratory reporting limit
DCE = dichloroethene
EPA = US Environmental Protection Agency
lb = pound
lb/day = pounds per day
mg/m^3 = milligrams per cubic meter
PCE = tetrachloroethene
scfm = standard cubic feet per minute
SVE = soil vapor extraction
TCE = trichloroethene
VC = vinyl chloride
VIMS = vapor intrusion mitigation systems

Table 3
SVE System Manifold PID Measurements
AMLI AVTECH
3400 Wallingford Avenue
Seattle, Washington

Date	Manifold PID Measurements (ppm)[1]					
	SVE02	SVE04	SVE05	SVE06	SVE08	SVE09
01/17/17	1.2	--	2.0	5.6	37.6	11.6
01/18/17	0.1	--	0.1	3.6	11.2	6.7
02/24/27	0.0	0.0	0.0	0.1	0.0	0.0
03/14/17	0.3	0.3	0.3	0.4	0.3	0.4
04/17/17	0.0	0.0	0.0	0.0	0.5	0.5
05/15/17	0.0	0.0	0.0	0.0	0.0	0.1
06/06/17	0.0	0.1	0.0	0.3	0.8	1.0
07/11/17	0.0	0.0	0.0	0.3	0.8	1.0
08/14/17	0.0	0.0	0.0	0.8	2.7	2.0
09/25/17	0.0	0.0	0.0	0.8	1.6	1.3
10/16/17	0.0	0.0	0.0	0.8	1.9	1.8
01/18/18	0.0	0.0	0.0	0.4	0.8	0.8
04/05/18	0.0	0.0	0.0	0.0	0.0	0.0
07/09/18	0.0	0.0	0.0	0.8	1.1	1.6
10/10/18	0.0	0.0	0.0	0.2	0.3	0.4
01/28/19	0.0	0.0	0.0	0.2	0.5	0.3
04/05/19	0.1	0.1	0.1	0.3	0.4	0.4
07/08/19	0.0	0.0	0.0	0.0	0.0	0.0
10/21/19	0.0	0.0	0.0	0.0	0.0	0.0
01/08/20	0.0	0.0	0.0	0.0	0.0	0.0
07/06/20	0.0	0.0	0.0	0.0	0.0	0.0

NOTES:

[1]PID readings performed at sample ports on individual legs using MultiRAE 4-gas meter calibrated to 100 ppm isobutylene.

PID = photoionization detector
ppm = parts per million

Table 4
SVE System Soil Gas Analytical Results
AMLI AVTECH
3400 Wallingford Avenue
Seattle, Washington

Sample Date	Sample ID	Sample Location	Analytical Results (mg/m^3)				
			PCE[(1)]	TCE[(1)]	cis-DCE[(1)]	trans-DCE[(1)]	VC[(1)]
1/17/17	0789-004_EFF_20170117	Effluent	<1	5.1	<1	<1	<0.2
1/17/17	0789-004_SVE08_20170117	SVE08	<1	58 ve	<1	<1	<0.2
1/18/17	0789-004_EFF_20170118	Effluent	<1	3.0	<1	<1	<0.2
1/24/17	0789-004_EFF_20170124	Effluent	<1	<1	<1	<1	<0.2
2/24/17	0789-004_EFF_20170224	Effluent	<1	<1	<1	<1	<0.2
3/14/17	0789-004_EFF_20170314	Effluent	<1	<1	<1	<1	<0.2
4/17/17	0789-004_EFF_20170417	Effluent	<1	<1	<1	<1	<0.2
5/15/17	0789-004_EFF_20170515	Effluent	<1	<1	<1	<1	<0.2 jl
6/6/17	0789-004_EFF_20170606	Effluent	<1	<1	<1	<1	<0.2
6/6/17	0789-004_VIMSPERF_20170606	Effluent	<1	<1	<1	<1	<0.2
8/14/17	0789-004_PERF_20170814	Effluent	<1	1.8	<1	<1	<0.2
10/16/17	0789-004_EFFPERF_20171016	Effluent	<1	<1	<1	<1	<0.2
04/05/18	0789-004_EFF_20180405	Effluent	<1	<1	<1	<1	<0.2
10/10/18	0789-004_EFF_20181010	Effluent	<1	<1	<1	<1	<0.2
01/28/19	0789-004_EFF_20190128	Effluent	<1	<1	<1	<1	<0.2
04/05/19	0789-004_EFF_20190405	Effluent	<1	<1	<1	<1	<0.2
07/08/19	0789-004_EFF_20190708	Effluent	<1	<1	<1	<1	<0.2
10/21/19	0789-004_EFF_20191021	Effluent	<1 jl	<1 jl	<1 jl	<1 jl	<0.2 jl
01/08/20	0789-004_EFF_20200108	Effluent	<1	<1	<1	<1	<0.2
07/06/20	0789-004_EFF_20200706	Effluent	<1	<1	<1	<1	<0.2

NOTES:

(1) Analyzed by EPA Method 8260C or 8260D.

Laboratory Notes:

jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

ve The analyte response exceeded the valid equipment calibration. The reported value is an estimate.

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

DCE = dichloroethene

EPA = US Environmental Protection Agency

mg/m^3 = milligrams per cubic meter

PCE = tetrachloroethene

RPD = relative percent difference

TCE = trichloroethene

VC = vinyl chloride

ATTACHMENT A

Terrestrial Ecological Evaluation

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Avtech Corp	
Facility/Site Address: 3400 Wallingford Avenue North, Seattle, Washington 98103	
Facility/Site No: 71755531	VCP Project No.: NW2739

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Clare Tochilin			Title: Associate Geologist
Organization: SoundEarth Strategies, Inc.			
Mailing address: 2811 Fairview Avenue East, Suite 2000			
City: Seattle		State: WA	Zip code: 98102
Phone: 206-306-1900	Fax: 206-306-1907	E-mail: ctochilin@soundearthinc.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2**.*

☐ No or Unknown *If you answered **"NO" or "UNKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☒ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

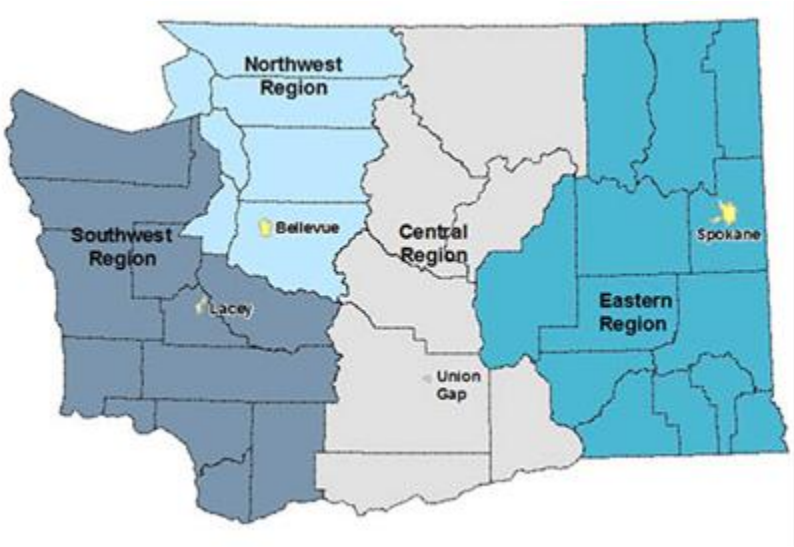
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



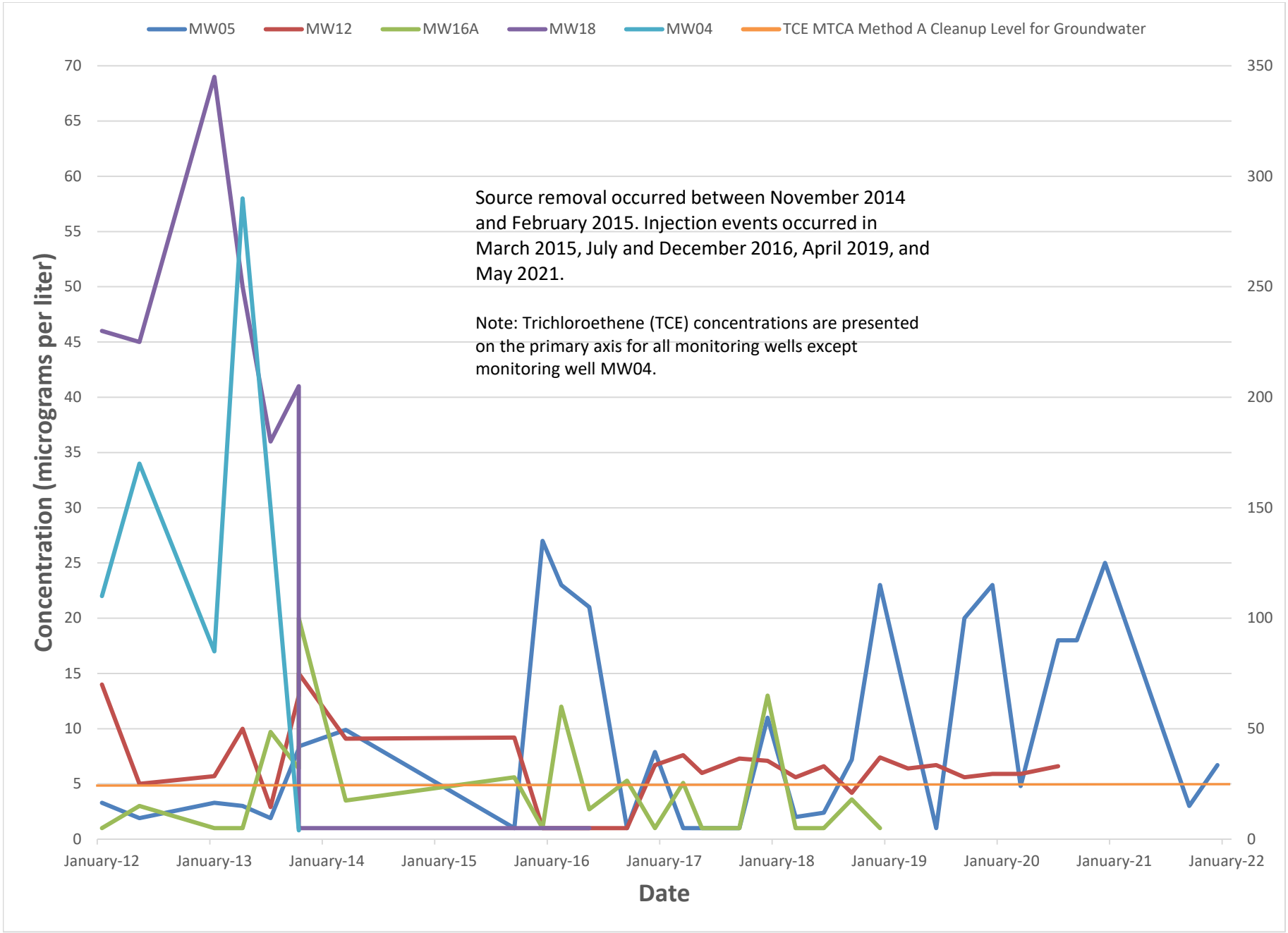
Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.

ATTACHMENT B

TCE Time-Series Plots

Chart 1
Trichloroethene Trend Plots



ATTACHMENT C

SVE System Soil Gas Data Laboratory Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 14, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on June 6, 2017 from the SOU_ 0789-004_ 20170606, F&BI 706099 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ethan Marks
SOU0614R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 6, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_ 0789-004_ 20170606, F&BI 706099 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
706099 -01	0789-004_EFF_20170606

All quality control requirements were acceptable.

Date of Report: 06/14/17
Date Received: 06/06/17
Project: SOU_ 0789-004_ 20170606, F&BI 706099
Date Extracted: 06/09/17
Date Analyzed: 06/09/17

RESULTS FROM THE ANALYSIS OF AIR 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)
0789-004_EFF_ 20170606 706099-01	<0.1	<0.1	<0.1	<0.3	<10	82
Method Blank 07-1195 MB	<0.1	<0.1	<0.1	<0.3	<10	81

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20170606	Client:	SoundEarth Strategies
Date Received:	06/06/17	Project:	SOU_ 0789-004_ 20170606
Date Extracted:	06/07/17	Lab ID:	706099-01
Date Analyzed:	06/07/17	Data File:	060708.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	103	91	108
4-Bromofluorobenzene	93	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_ 0789-004_ 20170606
Date Extracted:	06/07/17	Lab ID:	07-1216 mb
Date Analyzed:	06/07/17	Data File:	060707.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	85	117
Toluene-d8	104	91	108
4-Bromofluorobenzene	95	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 06/14/17
Date Received: 06/06/17
Project: SOU_ 0789-004_ 20170606, F&BI 706099

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

Laboratory Code: 706099-01 (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	84	70-130
Toluene	mg/m^3	5.0	82	70-130
Ethylbenzene	mg/m^3	5.0	90	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	117	86-144

Date of Report: 06/14/17
Date Received: 06/06/17
Project: SOU_ 0789-004_ 20170606, F&BI 706099

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

Laboratory Code: 706099-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	90	96	70-130	6
Chloroethane	mg/m3	5	90	98	70-130	9
1,1-Dichloroethene	mg/m3	5	96	102	70-130	6
Methylene chloride	mg/m3	5	96	104	70-130	8
trans-1,2-Dichloroethene	mg/m3	5	94	100	70-130	6
1,1-Dichloroethane	mg/m3	5	90	94	70-130	4
cis-1,2-Dichloroethene	mg/m3	5	92	96	70-130	4
1,2-Dichloroethane (EDC)	mg/m3	5	84	86	70-130	2
1,1,1-Trichloroethane	mg/m3	5	94	98	70-130	4
Trichloroethene	mg/m3	5	84	88	70-130	5
Tetrachloroethene	mg/m3	5	86	90	70-130	5

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

(706099

SAMPLE CHAIN OF CUSTODY ME 06/06/17

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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. 0789-004	PO #
REMARKS	GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

							ANALYSES REQUESTED								
Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Gx	BTEX by 8021B	CVOCS by 8260						Notes
0789-004_EFF_20170606	Effluent	01 A-B	6/6/17	1140	Air	2	X	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:	Joe Ellingson	SES	6/6/17	1425
Received by:	Nhan Phan	FCBT	6/6/17	1425
Relinquished by:				
Received by:		Samples received at 23 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

January 24, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on January 18, 2017 from the SOU_0789-004_ 20170118, F&BI 701190 project. There are 6 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: Ethan Marks
SOU0124R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 18, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170118, F&BI 701190 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
701190 -01	0789-004_EFF_20170117
701190 -02	0789-004_SVE08_20170117

The 8260C trichloroethene concentration for sample 0789-004_SVE08_20170117 exceeded the calibration range. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20170117	Client:	SoundEarth Strategies
Date Received:	01/18/17	Project:	SOU_0789-004_ 20170118
Date Extracted:	01/19/17	Lab ID:	701190-01
Date Analyzed:	01/19/17	Data File:	011909.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	103	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	5.1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_SVE08_20170117	Client:	SoundEarth Strategies
Date Received:	01/18/17	Project:	SOU_0789-004_ 20170118
Date Extracted:	01/19/17	Lab ID:	701190-02
Date Analyzed:	01/19/17	Data File:	011912.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	85	117
Toluene-d8	102	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	58 ve
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170118
Date Extracted:	01/19/17	Lab ID:	07-080 mb
Date Analyzed:	01/19/17	Data File:	011908.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	91	108
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 01/24/17
Date Received: 01/18/17
Project: SOU_0789-004_ 20170118, F&BI 701190

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

Laboratory Code: 701190-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	5.1	5.3	4
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	100	96	70-130	4
Chloroethane	mg/m3	5	90	86	70-130	5
1,1-Dichloroethene	mg/m3	5	100	98	70-130	2
Methylene chloride	mg/m3	5	108	102	70-130	6
trans-1,2-Dichloroethene	mg/m3	5	102	100	70-130	2
1,1-Dichloroethane	mg/m3	5	100	96	70-130	4
cis-1,2-Dichloroethene	mg/m3	5	98	94	70-130	4
1,2-Dichloroethane (EDC)	mg/m3	5	90	90	70-130	0
1,1,1-Trichloroethane	mg/m3	5	98	96	70-130	2
Trichloroethene	mg/m3	5	94	92	70-130	2
Tetrachloroethene	mg/m3	5	90	86	70-130	5

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

701190

SAMPLE CHAIN OF CUSTODY

ME 01-18-17

Page # 1 of 1

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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. 0789-004

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: CVOCS by 8260	Notes
0789-004_EFF_20170117	Effluent	01A-B	1-17-17	1510	Air	2	X	
0789-004_SUB08_20170117	SUB08	02T	1-17-17	1520	AIR	2	X	

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	1-18-17	1225
Received by:		Nhan Phan	FEBI	1/18/17	1225
Relinquished by:					
Received by:					

Samples received at 2 °C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

January 24, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on January 18, 2017 from the SOU_0789-004_ 20170118, F&BI 701191 project. There are 5 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: Ethan Marks
SOU0124R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 18, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170118, F&BI 701191 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
701191 -01	0789-004_EFF_20170118

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20170118	Client:	SoundEarth Strategies
Date Received:	01/18/17	Project:	SOU_0789-004_ 20170118
Date Extracted:	01/19/17	Lab ID:	701191-01
Date Analyzed:	01/19/17	Data File:	011911.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	104	91	108
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	3.0
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170118
Date Extracted:	01/19/17	Lab ID:	07-080 mb
Date Analyzed:	01/19/17	Data File:	011908.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	91	108
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 01/24/17
Date Received: 01/18/17
Project: SOU_0789-004_ 20170118, F&BI 701191

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

Laboratory Code: 701190-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	5.1	5.3	4
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	100	96	70-130	4
Chloroethane	mg/m3	5	90	86	70-130	5
1,1-Dichloroethene	mg/m3	5	100	98	70-130	2
Methylene chloride	mg/m3	5	108	102	70-130	6
trans-1,2-Dichloroethene	mg/m3	5	102	100	70-130	2
1,1-Dichloroethane	mg/m3	5	100	96	70-130	4
cis-1,2-Dichloroethene	mg/m3	5	98	94	70-130	4
1,2-Dichloroethane (EDC)	mg/m3	5	90	90	70-130	0
1,1,1-Trichloroethane	mg/m3	5	98	96	70-130	2
Trichloroethene	mg/m3	5	94	92	70-130	2
Tetrachloroethene	mg/m3	5	90	86	70-130	5

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

701191

SAMPLE CHAIN OF CUSTODY

ME 01-18-19

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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. 0789-004

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: CVOCs by 8260								Notes
0789-004_EFF_20170118	Effluent	01A8	1-18-17	1050	Air	2	X								

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ethan Marks	SES	1-18-17	1225
Received by:		Nhan Phan	FEBT	1-18-17	1225
Relinquished by:					
Received by:					

Samples received at 22 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

January 31, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on January 24, 2017 from the SOU_0789-004_ 20170124, F&BI 701259 project. There are 5 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: Ethan Marks
SOU0131R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 24, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170124, F&BI 701259 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
701259 -01	0789-004-EFF_20170124

The 8260C chloroethane laboratory control sample exceeded the acceptance criteria. In addition, the relative percent difference for several analytes exceeded the acceptance criteria. These analytes were not detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004-EFF_20170124	Client:	SoundEarth Strategies
Date Received:	01/24/17	Project:	SOU_0789-004_ 20170124
Date Extracted:	01/26/17	Lab ID:	701259-01
Date Analyzed:	01/26/17	Data File:	012621.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	92	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170124
Date Extracted:	01/26/17	Lab ID:	07-0148 mb
Date Analyzed:	01/26/17	Data File:	012620.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	93	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 01/31/17
Date Received: 01/24/17
Project: SOU_0789-004_ 20170124, F&BI 701259

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

Laboratory Code: 701259-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	128	86	70-130	39 vo
Chloroethane	mg/m3	5	134 vo	76	70-130	55 vo
1,1-Dichloroethene	mg/m3	5	82	84	70-130	2
Methylene chloride	mg/m3	5	92	84	70-130	9
trans-1,2-Dichloroethene	mg/m3	5	84	88	70-130	5
1,1-Dichloroethane	mg/m3	5	98	82	70-130	18
cis-1,2-Dichloroethene	mg/m3	5	82	82	70-130	0
1,2-Dichloroethane (EDC)	mg/m3	5	90	78	70-130	14
1,1,1-Trichloroethane	mg/m3	5	92	82	70-130	11
Trichloroethene	mg/m3	5	78	82	70-130	5
Tetrachloroethene	mg/m3	5	78	96	70-130	21 vo

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

70259

SAMPLE CHAIN OF CUSTODY

MG 1/24/17

Page # 1 of 1

Report To Rob Roberts; Ethan Marks

Company SoundEarth

Address 2811 Fairview Ave E. #2000

City, State, ZIP Seattle, WA, 98102

Phone 206.306.1900 Email emarks@soundearthinc.com

SAMPLERS (*signature*)

PROJECT NAME: 0789-004

PO #

REMARKS

INVOICE TO

TURNAROUND TIME
- ☑ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	cVOCs 8260				Notes
0789-004-EFF-20170124	01A-B	1-24-17	AIR	1455	2								✓				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ethan Marks	SES	1-24-17	1625
Received by:	Jon Shuman	FBI	1	2
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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March 3, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on February 24, 2017 from the SOU_0789-004_ 20170224, F&BI 702392 project. There are 6 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: Joe Ellingson
SOU0303R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 24, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170224, F&BI 702392 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
702392 -01	0789-004_EFF_20170224

Several compounds in the 8260C laboratory control sample and laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20170224	Client:	SoundEarth Strategies
Date Received:	02/24/17	Project:	SOU_0789-004_ 20170224
Date Extracted:	02/27/17	Lab ID:	702392-01
Date Analyzed:	02/27/17	Data File:	022708.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	98	91	108
4-Bromofluorobenzene	101	76	126

Compounds:	Concentration mg/m3	Compounds:	Concentration mg/m3
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1 jl
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1 jl
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10 jl	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1 jl
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1 jl
2-Butanone (MEK)	<10 jl	1,2,3-Trichloropropane	<1 jl
1,2-Dichloroethane (EDC)	<1 jl	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1 jl
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1 jl
Dibromomethane	<1	1,2-Dichlorobenzene	<1 jl
4-Methyl-2-pentanone	<10 jl	1,2-Dibromo-3-chloropropane	<10 jl
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1 jl
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1 jl
1,1,2-Trichloroethane	<1 jl	1,2,3-Trichlorobenzene	<1 jl
2-Hexanone	<10 jl		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170224
Date Extracted:	02/27/17	Lab ID:	07-0353 mb
Date Analyzed:	02/27/17	Data File:	022707.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration mg/m3	Compounds:	Concentration mg/m3
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1 jl
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1 jl
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10 jl	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1 jl
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1 jl
2-Butanone (MEK)	<10 jl	1,2,3-Trichloropropane	<1 jl
1,2-Dichloroethane (EDC)	<1 jl	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1 jl
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1 jl
Dibromomethane	<1	1,2-Dichlorobenzene	<1 jl
4-Methyl-2-pentanone	<10 jl	1,2-Dibromo-3-chloropropane	<10 jl
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1 jl
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1 jl
1,1,2-Trichloroethane	<1 jl	1,2,3-Trichlorobenzene	<1 jl
2-Hexanone	<10 jl		

Date of Report: 03/03/17
Date Received: 02/24/17
Project: SOU_0789-004_ 20170224, F&BI 702392

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

Laboratory Code: 702392-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Dichlorodifluoromethane	mg/m3	<1	<1	nm
Chloromethane	mg/m3	<10	<10	nm
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Bromomethane	mg/m3	<1	<1	nm
Chloroethane	mg/m3	<1	<1	nm
Trichlorofluoromethane	mg/m3	<1	<1	nm
Acetone	mg/m3	<10 jl	<10 jl	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Hexane	mg/m3	<5	<5	nm
Methylene chloride	mg/m3	<5	<5	nm
Methyl t-butyl ether (MTBE)	mg/m3	<1	<1	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
2,2-Dichloropropane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
Chloroform	mg/m3	<1	<1	nm
2-Butanone (MEK)	mg/m3	<10 jl	<10 jl	nm
1,2-Dichloroethane (EDC)	mg/m3	<1 jl	<1 jl	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
1,1-Dichloropropene	mg/m3	<1	<1	nm
Carbon tetrachloride	mg/m3	<1	<1	nm
Benzene	mg/m3	<0.35	<0.35	nm
Trichloroethene	mg/m3	<1	<1	nm
1,2-Dichloropropane	mg/m3	<1	<1	nm
Bromodichloromethane	mg/m3	<1	<1	nm
Dibromomethane	mg/m3	<1	<1	nm
4-Methyl-2-pentanone	mg/m3	<10 jl	<10 jl	nm
cis-1,3-Dichloropropene	mg/m3	<1	<1	nm
Toluene	mg/m3	<1	<1	nm
trans-1,3-Dichloropropene	mg/m3	<1	<1	nm
1,1,2-Trichloroethane	mg/m3	<1 jl	<1 jl	nm
2-Hexanone	mg/m3	<10 jl	<10 jl	nm
1,3-Dichloropropane	mg/m3	<1 jl	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm
Dibromochloromethane	mg/m3	<1	<1	nm
1,2-Dibromoethane (EDB)	mg/m3	<1 jl	<1 jl	nm
Chlorobenzene	mg/m3	<1	<1	nm
Ethylbenzene	mg/m3	<1	<1	nm
1,1,1,2-Tetrachloroethane	mg/m3	<1	<1	nm
m,p-Xylene	mg/m3	<2	<2	nm
o-Xylene	mg/m3	<1	<1	nm
Styrene	mg/m3	<1	<1	nm
Isopropylbenzene	mg/m3	<1	<1	nm
Bromoform	mg/m3	<1 jl	<1 jl	nm
n-Propylbenzene	mg/m3	<1	<1	nm
Bromobenzene	mg/m3	<1	<1	nm
1,3,5-Trimethylbenzene	mg/m3	<1	<1	nm
1,1,2,2-Tetrachloroethane	mg/m3	<1 jl	<1 jl	nm
1,2,3-Trichloropropane	mg/m3	<1 jl	<1 jl	nm
2-Chlorotoluene	mg/m3	<1	<1	nm
4-Chlorotoluene	mg/m3	<1	<1	nm
tert-Butylbenzene	mg/m3	<1	<1	nm
1,2,4-Trimethylbenzene	mg/m3	<1	<1	nm
sec-Butylbenzene	mg/m3	<1	<1	nm
p-Isopropyltoluene	mg/m3	<1	<1	nm
1,3-Dichlorobenzene	mg/m3	<1 jl	<1 jl	nm
1,4-Dichlorobenzene	mg/m3	<1 jl	<1 jl	nm
1,2-Dichlorobenzene	mg/m3	<1 jl	<1 jl	nm
1,2-Dibromo-3-chloropropane	mg/m3	<10 jl	<10 jl	nm
1,2,4-Trichlorobenzene	mg/m3	<1 jl	<1 jl	nm
Hexachlorobutadiene	mg/m3	<1	<1	nm
Naphthalene	mg/m3	<1 jl	<1 jl	nm
1,2,3-Trichlorobenzene	mg/m3	<1 jl	<1 jl	nm

Date of Report: 03/03/17
Date Received: 02/24/17
Project: SOU_0789-004_ 20170224, F&BI 702392

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/m³	5	76	78	70-130	3
Chloromethane	mg/m³	5	70	74	70-130	6
Vinyl chloride	mg/m³	5	76	78	70-130	3
Bromomethane	mg/m³	5	102	104	70-130	2
Chloroethane	mg/m³	5	94	96	70-130	2
Trichlorofluoromethane	mg/m³	5	82	84	70-130	2
Acetone	mg/m³	25	46 vo	60 vo	70-130	26 vo
1,1-Dichloroethene	mg/m³	5	78	76	70-130	3
Hexane	mg/m³	5	88	94	70-130	7
Methylene chloride	mg/m³	5	84	88	70-130	5
Methyl t-butyl ether (MTBE)	mg/m³	5	76	78	70-130	3
trans-1,2-Dichloroethene	mg/m³	5	76	80	70-130	5
1,1-Dichloroethane	mg/m³	5	76	78	70-130	3
2,2-Dichloropropane	mg/m³	5	82	84	70-130	2
cis-1,2-Dichloroethene	mg/m³	5	76	82	70-130	8
Chloroform	mg/m³	5	74	76	70-130	3
2-Butanone (MEK)	mg/m³	25	52 vo	64 vo	70-130	21 vo
1,2-Dichloroethane (EDC)	mg/m³	5	68 vo	74	70-130	8
1,1,1-Trichloroethane	mg/m³	5	74	76	70-130	3
1,1-Dichloropropene	mg/m³	5	80	84	70-130	5
Carbon tetrachloride	mg/m³	5	78	84	70-130	7
Benzene	mg/m³	5	76	80	70-130	5
Trichloroethene	mg/m³	5	70	76	70-130	8
1,2-Dichloropropane	mg/m³	5	70	78	70-130	11
Bromodichloromethane	mg/m³	5	74	82	70-130	10
Dibromomethane	mg/m³	5	70	78	70-130	11
4-Methyl-2-pentanone	mg/m³	25	60 vo	68 vo	70-130	12
cis-1,3-Dichloropropene	mg/m³	5	72	76	70-130	5
Toluene	mg/m³	5	74	78	70-130	5
trans-1,3-Dichloropropene	mg/m³	5	72	78	70-130	8
1,1,2-Trichloroethane	mg/m³	5	68 vo	72	70-130	6
2-Hexanone	mg/m³	25	52 vo	60 vo	70-130	14
1,3-Dichloropropane	mg/m³	5	68 vo	74	70-130	8
Tetrachloroethene	mg/m³	5	76	78	70-130	3
Dibromochloromethane	mg/m³	5	74	76	70-130	3
1,2-Dibromoethane (EDB)	mg/m³	5	66 vo	72	70-130	9
Chlorobenzene	mg/m³	5	72	76	70-130	5
Ethylbenzene	mg/m³	5	72	74	70-130	3
1,1,1,2-Tetrachloroethane	mg/m³	5	78	78	70-130	0
m,p-Xylene	mg/m³	10	74	76	70-130	3
o-Xylene	mg/m³	5	74	74	70-130	0
Styrene	mg/m³	5	72	74	70-130	3
Isopropylbenzene	mg/m³	5	76	76	70-130	0
Bromoform	mg/m³	5	68 vo	72	70-130	6
n-Propylbenzene	mg/m³	5	76	74	70-130	3
Bromobenzene	mg/m³	5	72	72	70-130	0
1,3,5-Trimethylbenzene	mg/m³	5	76	74	70-130	3
1,1,2,2-Tetrachloroethane	mg/m³	5	64 vo	60 vo	70-130	6
1,2,3-Trichloropropane	mg/m³	5	62 vo	64 vo	70-130	3
2-Chlorotoluene	mg/m³	5	74	72	70-130	3
4-Chlorotoluene	mg/m³	5	72	70	70-130	3
tert-Butylbenzene	mg/m³	5	76	74	70-130	3
1,2,4-Trimethylbenzene	mg/m³	5	72	70	70-130	3
sec-Butylbenzene	mg/m³	5	80	76	70-130	5
p-Isopropyltoluene	mg/m³	5	78	72	70-130	8
1,3-Dichlorobenzene	mg/m³	5	70	64 vo	70-130	9
1,4-Dichlorobenzene	mg/m³	5	68 vo	64 vo	70-130	6
1,2-Dichlorobenzene	mg/m³	5	68 vo	64 vo	70-130	6
1,2-Dibromo-3-chloropropane	mg/m³	5	48 vo	46 vo	70-130	4
1,2,4-Trichlorobenzene	mg/m³	5	56 vo	44 vo	70-130	24 vo
Hexachlorobutadiene	mg/m³	5	94	74	70-130	24 vo
Naphthalene	mg/m³	5	48 vo	38 vo	70-130	23 vo
1,2,3-Trichlorobenzene	mg/m³	5	52 vo	42 vo	70-130	21 vo

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

702392

SAMPLE CHAIN OF CUSTODY ME 2/24/17

Page # 1 of 1

Report To Joe Ellingson, Rob Roberts

Company SES

Address

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME: AMLI Antech

PO #: 0789-004

REMARKS

INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
0789-004-EFR-20170224	01 AB	2.24.17	1205	Vapor	2					X							
																	21 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Joe Ellingson	SES	2.24.17	1340
Received by:	Nhan Pham	FEBI	2/24/17	1340
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 21, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on March 14, 2017 from the SOU_0789-004_ 20170314, F&BI 703246 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ethan Marks
SOU0321R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 14, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170314, F&BI 703246 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
703246 -01	0789-004_EFF_20170314

The NWTPH-Gx laboratory control sample exceeded the acceptance criteria. This analyte was not detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 03/21/17
Date Received: 03/14/17
Project: SOU_0789-004_ 20170314, F&BI 703246
Date Extracted: 03/16/17
Date Analyzed: 03/16/17

RESULTS FROM THE ANALYSIS OF AIR 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)
0789-004_EFF_ 20170314 703246-01	<0.1	<0.1	<0.1	<0.3	<10	106
Method Blank 07-563 MB	<0.1	<0.1	<0.1	<0.3	<10	104

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20170314	Client:	SoundEarth Strategies
Date Received:	03/14/17	Project:	SOU_0789-004_ 20170314
Date Extracted:	03/15/17	Lab ID:	703246-01
Date Analyzed:	03/15/17	Data File:	031509.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170314
Date Extracted:	03/15/17	Lab ID:	07-530 mb
Date Analyzed:	03/15/17	Data File:	031508.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 03/21/17
Date Received: 03/14/17
Project: SOU_0789-004_ 20170314, F&BI 703246

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

Laboratory Code: 703271-01 (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	88	70-130
Ethylbenzene	mg/m^3	5.0	98	70-130
Xylenes	mg/m^3	15	96	70-130
Gasoline	mg/m^3	100	148 vo	70-130

Date of Report: 03/21/17
Date Received: 03/14/17
Project: SOU_0789-004_ 20170314, F&BI 703246

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

Laboratory Code: 703246-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	86	86	70-130	0
Chloroethane	mg/m3	5	94	96	70-130	2
1,1-Dichloroethene	mg/m3	5	92	94	70-130	2
Methylene chloride	mg/m3	5	94	94	70-130	0
trans-1,2-Dichloroethene	mg/m3	5	86	88	70-130	2
1,1-Dichloroethane	mg/m3	5	90	90	70-130	0
cis-1,2-Dichloroethene	mg/m3	5	86	86	70-130	0
1,2-Dichloroethane (EDC)	mg/m3	5	88	90	70-130	2
1,1,1-Trichloroethane	mg/m3	5	88	90	70-130	2
Trichloroethene	mg/m3	5	88	90	70-130	2
Tetrachloroethene	mg/m3	5	86	88	70-130	2

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

703246

SAMPLE CHAIN OF CUSTODY

ME 03/14/17

Page # 1 of 1

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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.: 0789-004	PO #
REMARKS	GEMS Y / N

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Gx	BTEX by 8021B	CVOCS by 8260					Notes
0789-004_EFF_20170314	Effluent	AB	3/14/17	1210	Air	2	X	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:	Isaac Ellingson	SoundEarth	3/14/17	1515
Received by:	Nham Phan	FRBT	3/14/17	1515
Relinquished by:				
Received by:				

Samples received at 20 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

April 25, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on April 17, 2017 from the SOU_0789-004_ 20170417, F&BI 704270 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ethan Marks
SOU0425R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170417, F&BI 704270 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
704270 -01	0789-004_EFF_20170417

All quality control requirements were acceptable.

Date of Report: 04/25/17
Date Received: 04/17/17
Project: SOU_0789-004_ 20170417, F&BI 704270
Date Extracted: 04/20/17
Date Analyzed: 04/20/17

RESULTS FROM THE ANALYSIS OF AIR 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)
0789-004_EFF_ 20170417 704270-01	<0.1	<0.1	<0.1	<0.3	<10	98
Method Blank 07-825 MB	<0.1	<0.1	<0.1	<0.3	<10	92

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20170417	Client:	SoundEarth Strategies
Date Received:	04/17/17	Project:	SOU_0789-004_ 20170417
Date Extracted:	04/19/17	Lab ID:	704270-01
Date Analyzed:	04/19/17	Data File:	041908.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	96	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170417
Date Extracted:	04/19/17	Lab ID:	07-806 mb
Date Analyzed:	04/19/17	Data File:	041907.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	96	91	108
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 04/25/17
Date Received: 04/17/17
Project: SOU_0789-004_ 20170417, F&BI 704270

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

Laboratory Code: 704270-01 (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	78	70-130
Toluene	mg/m^3	5.0	79	70-130
Ethylbenzene	mg/m^3	5.0	90	70-130
Xylenes	mg/m^3	15	87	70-130
Gasoline	mg/m^3	100	118	86-144

Date of Report: 04/25/17
Date Received: 04/17/17
Project: SOU_0789-004_ 20170417, F&BI 704270

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

Laboratory Code: 704270-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	98	94	70-130	4
Chloroethane	mg/m3	5	96	90	70-130	6
1,1-Dichloroethene	mg/m3	5	102	96	70-130	6
Methylene chloride	mg/m3	5	90	84	70-130	7
trans-1,2-Dichloroethene	mg/m3	5	92	90	70-130	2
1,1-Dichloroethane	mg/m3	5	92	88	70-130	4
cis-1,2-Dichloroethene	mg/m3	5	94	90	70-130	4
1,2-Dichloroethane (EDC)	mg/m3	5	82	80	70-130	2
1,1,1-Trichloroethane	mg/m3	5	98	96	70-130	2
Trichloroethene	mg/m3	5	82	82	70-130	0
Tetrachloroethene	mg/m3	5	88	88	70-130	0

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

704270

SAMPLE CHAIN OF CUSTODY

ME 04/17/17

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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. 0789-004

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Gx	BTEX by 8021B	CVOCS by 8260					Notes
0789-004_EFF_20170417	Effluent	01 AB	4/17/17	1325	Air	2	X	X	X					
														Samples received at 19 °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:	Joe Ellingson	SoundEarth	4/17/17	1405
Received by:	Eric Young	FB	4/17/17	1405
Relinquished by:				
Received by:				

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

May 24, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on May 16, 2017 from the SOU_0789-004_ 20170516, F&BI 705289 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ethan Marks
SOU0524R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 16, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170516, F&BI 705289 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
705289 -01	0789-004_EFF_20170515

The 8260C vinyl chloride and chloroethane laboratory control sample did not meet the acceptance criteria. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 05/24/17
Date Received: 05/16/17
Project: SOU_0789-004_ 20170516, F&BI 705289
Date Extracted: 05/18/17
Date Analyzed: 05/18/17

RESULTS FROM THE ANALYSIS OF AIR 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)
0789-004_EFF_ 20170515 705289-01	<0.1	<0.1	<0.1	<0.3	<10	88
Method Blank 07-987 MB	<0.1	<0.1	<0.1	<0.3	<10	88

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20170515	Client:	SoundEarth Strategies
Date Received:	05/16/17	Project:	SOU_0789-004_ 20170516
Date Extracted:	05/17/17	Lab ID:	705289-01
Date Analyzed:	05/17/17	Data File:	051723.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	96	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2 jl
Chloroethane	<1 jl
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170516
Date Extracted:	05/17/17	Lab ID:	07-1021 mb
Date Analyzed:	05/17/17	Data File:	051722.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2 jl
Chloroethane	<1 jl
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/24/17
Date Received: 05/16/17
Project: SOU_0789-004_ 20170516, F&BI 705289

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

Laboratory Code: 705289-01 (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	81	70-130
Toluene	mg/m^3	5.0	79	70-130
Ethylbenzene	mg/m^3	5.0	86	70-130
Xylenes	mg/m^3	15	87	70-130
Gasoline	mg/m^3	100	128	86-144

Date of Report: 05/24/17
Date Received: 05/16/17
Project: SOU_0789-004_ 20170516, F&BI 705289

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

Laboratory Code: 705289-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	68 vo	70	70-130	3
Chloroethane	mg/m3	5	68 vo	70	70-130	3
1,1-Dichloroethene	mg/m3	5	72	74	70-130	3
Methylene chloride	mg/m3	5	78	80	70-130	3
trans-1,2-Dichloroethene	mg/m3	5	80	82	70-130	2
1,1-Dichloroethane	mg/m3	5	82	84	70-130	2
cis-1,2-Dichloroethene	mg/m3	5	82	84	70-130	2
1,2-Dichloroethane (EDC)	mg/m3	5	82	84	70-130	2
1,1,1-Trichloroethane	mg/m3	5	82	84	70-130	2
Trichloroethene	mg/m3	5	78	80	70-130	3
Tetrachloroethene	mg/m3	5	92	90	70-130	2

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

705289

SAMPLE CHAIN OF CUSTODY

ME 05/16/17

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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.: 0789-004

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Gx	BTEX by 8021B	CVOCS by 8260					Notes
0789-004_EFF_20170515	Effluent	01 AB	5/15/17	1225	Air	2	X	X	X					
			5/15/17											

Samples received at 20°

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:		Joe Ellingson	SES	5.16.17	13:51
Received by:		VINH	FBI	5-16-17	13:51
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

June 14, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on June 6, 2017 from the SOU_0789-004_ 20170606, F&BI 706100 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Ethan Marks
SOU0614R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 6, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170606, F&BI 706100 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
706100 -01	0789-004_VIMSPERF_20170606

All quality control requirements were acceptable.

Date of Report: 06/14/17
Date Received: 06/06/17
Project: SOU_0789-004_ 20170606, F&BI 706100
Date Extracted: 06/09/17
Date Analyzed: 06/09/17

RESULTS FROM THE ANALYSIS OF AIR 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)
0789-004_VIMSPERF_ 20170606 706100-01	<0.1	<0.1	<0.1	<0.3	<10	84
Method Blank 07-1195 MB	<0.1	<0.1	<0.1	<0.3	<10	81

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_VIMSPERF_20170606	Client:	SoundEarth Strategies
Date Received:	06/06/17	Project:	SOU_0789-004_ 20170606
Date Extracted:	06/07/17	Lab ID:	706100-01
Date Analyzed:	06/07/17	Data File:	060710.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	95	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170606
Date Extracted:	06/07/17	Lab ID:	07-1216 mb
Date Analyzed:	06/07/17	Data File:	060707.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	85	117
Toluene-d8	104	91	108
4-Bromofluorobenzene	95	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 06/14/17
Date Received: 06/06/17
Project: SOU_0789-004_ 20170606, F&BI 706100

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

Laboratory Code: 706099-01 (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	84	70-130
Toluene	mg/m^3	5.0	82	70-130
Ethylbenzene	mg/m^3	5.0	90	70-130
Xylenes	mg/m^3	15	91	70-130
Gasoline	mg/m^3	100	117	86-144

Date of Report: 06/14/17
Date Received: 06/06/17
Project: SOU_0789-004_ 20170606, F&BI 706100

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

Laboratory Code: 706099-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	90	96	70-130	6
Chloroethane	mg/m3	5	90	98	70-130	9
1,1-Dichloroethene	mg/m3	5	96	102	70-130	6
Methylene chloride	mg/m3	5	96	104	70-130	8
trans-1,2-Dichloroethene	mg/m3	5	94	100	70-130	6
1,1-Dichloroethane	mg/m3	5	90	94	70-130	4
cis-1,2-Dichloroethene	mg/m3	5	92	96	70-130	4
1,2-Dichloroethane (EDC)	mg/m3	5	84	86	70-130	2
1,1,1-Trichloroethane	mg/m3	5	94	98	70-130	4
Trichloroethene	mg/m3	5	84	88	70-130	5
Tetrachloroethene	mg/m3	5	86	90	70-130	5

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

706100

SAMPLE CHAIN OF CUSTODY

ME 06/06/17

Page # 1 of 1

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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. 0789-004

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Gx	BTEX by 8021B	CVOCS by 8260					Notes
0789-004 FEE	Effluent				Air	2	X	X	X					
0789-004-VIMSPERF2.0170606	EFF	01AB	6/6/17		Air	2	X	XX	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:	Joe Ellingson	SES	6/6/17	1425
Received by:	Nhan Phan	FCBT	6/6/17	1425
Relinquished by:				
Received by:		Samples received at 23 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

August 23, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on August 14, 2017 from the SOU_0789-004_ 20170814, F&BI 708261 project. There are 8 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: Ethan Marks, Joe Ellingson
SOU0823R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 14, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20170814, F&BI 708261 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
708261 -01	0789-004_PERF-20170814

All quality control requirements were acceptable.

Date of Report: 08/23/17
Date Received: 08/14/17
Project: SOU_0789-004_ 20170814, F&BI 708261
Date Extracted: 08/17/17
Date Analyzed: 08/17/17

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

Results Reported as mg/m^3

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
0789-004_PERF-20170814 708261-01	<10	84
Method Blank 07-1747 MB	<10	98

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_PERF-20170814	Client:	SoundEarth Strategies
Date Received:	08/14/17	Project:	SOU_0789-004_ 20170814, F&BI 708261
Date Extracted:	08/17/17	Lab ID:	708261-01
Date Analyzed:	08/17/17	Data File:	081713.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	98	91	108
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	1.8
Toluene	<1
Tetrachloroethene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20170814, F&BI 708261
Date Extracted:	08/17/17	Lab ID:	07-1765 mb
Date Analyzed:	08/17/17	Data File:	081712.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	102	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Benzene	<0.35
Trichloroethene	<1
Toluene	<1
Tetrachloroethene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

Date of Report: 08/23/17
Date Received: 08/14/17
Project: SOU_0789-004_ 20170814, F&BI 708261

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

Laboratory Code: 708261-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	mg/m^3	<10	<10	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/m^3	100	147 vo	86-144

Date of Report: 08/23/17
Date Received: 08/14/17
Project: SOU_0789-004_ 20170814, F&BI 708261

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

Laboratory Code: 708261-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Benzene	mg/m3	<0.35	<0.35	nm
Trichloroethene	mg/m3	1.8	1.7	6
Toluene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm
Ethylbenzene	mg/m3	<1	<1	nm
m,p-Xylene	mg/m3	<2	<2	nm
o-Xylene	mg/m3	<1	<1	nm

Date of Report: 08/23/17
Date Received: 08/14/17
Project: SOU_0789-004_ 20170814, F&BI 708261

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m^3	5	78	78	70-130	0
Chloroethane	mg/m^3	5	78	80	70-130	3
1,1-Dichloroethene	mg/m^3	5	80	76	70-130	5
Methylene chloride	mg/m^3	5	88	90	70-130	2
trans-1,2-Dichloroethene	mg/m^3	5	90	88	70-130	2
1,1-Dichloroethane	mg/m^3	5	88	88	70-130	0
cis-1,2-Dichloroethene	mg/m^3	5	90	90	70-130	0
1,2-Dichloroethane (EDC)	mg/m^3	5	86	88	70-130	2
1,1,1-Trichloroethane	mg/m^3	5	84	82	70-130	2
Benzene	mg/m^3	5	88	88	70-130	0
Trichloroethene	mg/m^3	5	90	90	70-130	0
Toluene	mg/m^3	5	88	88	70-130	0
Tetrachloroethene	mg/m^3	5	96	98	70-130	2
Ethylbenzene	mg/m^3	5	90	90	70-130	0
m,p-Xylene	mg/m^3	10	90	90	70-130	0
o-Xylene	mg/m^3	5	88	88	70-130	0

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

708261

SAMPLE CHAIN OF CUSTODY

ME 8/14/17

Send Report To Rob Roberts, Ethan Marks, Joe Ellingson

Company SoundEarth Strategies

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. 0789-004

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Gx	BTEX by 8021B	CVOCS by 8260					Notes
0789-004-EFF-	~~Effluent~~				Air	2	X	X	X					
0789-004-EFF-20170814	EFF	01 A B	8/14/17	1200	Air	2	X	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:	Joe Ellingson	SES	8/14/17	1612
Received by:	Eric Young	FB	8/14/17	1612
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

October 19, 2017

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on October 16, 2017 from the SOU_0789-004_ 20171016, F&BI 710240 project. There are 5 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: Ethan Marks, Joe Ellingson
SOU1019R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 16, 2017 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20171016, F&BI 710240 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
710240 -01	0789-004_EFFPERF_20171016

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFFPERF_20171016		Client: SoundEarth Strategies
Date Received:	10/16/17	Project:	SOU_0789-004_ 20171016
Date Extracted:	10/17/17	Lab ID:	710240-01
Date Analyzed:	10/17/17	Data File:	101720.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	101	91	108
4-Bromofluorobenzene	101	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20171016
Date Extracted:	10/17/17	Lab ID:	07-2292 mb
Date Analyzed:	10/17/17	Data File:	101719.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	101	91	108
4-Bromofluorobenzene	101	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 10/19/17
Date Received: 10/16/17
Project: SOU_0789-004_ 20171016, F&BI 710240

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

Laboratory Code: 710240-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	96	92	70-130	4
Chloroethane	mg/m3	5	88	84	70-130	5
1,1-Dichloroethene	mg/m3	5	98	92	70-130	6
Methylene chloride	mg/m3	5	104	88	70-130	17
trans-1,2-Dichloroethene	mg/m3	5	96	90	70-130	6
1,1-Dichloroethane	mg/m3	5	94	90	70-130	4
cis-1,2-Dichloroethene	mg/m3	5	94	92	70-130	2
1,2-Dichloroethane (EDC)	mg/m3	5	84	84	70-130	0
1,1,1-Trichloroethane	mg/m3	5	98	94	70-130	4
Trichloroethene	mg/m3	5	90	88	70-130	2
Tetrachloroethene	mg/m3	5	92	88	70-130	4

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

710240

SAMPLE CHAIN OF CUSTODY

ME 10-16-17

Send Report To Rob Roberts, Ethan Marks Joe E

Company SoundEarth Strategies

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. 0789-004

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	ANALYSES REQUESTED: NWTPH-Gx	BTEX by 8021B	CVOCS by 8260					Notes
0789-004_EFF_	Effluent				Air	2	X	X	X					
0789-004_EFFPERF_20170616	EFF	01A-B	10/16/17	1255	Air	2			X					
				10/16/17										
				JME										

Samples received at 20 °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:	Joe Ellingham	SES	10/16/17	1345
Received by:	DO VO	FBE	10-16	13-45
Relinquished by:				
Received by:				

Samples received at 20 °C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

October 16, 2018

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on October 10, 2018 from the SOU_ 0789-004_22_ 20181010, F&BI 810205 project. There are 5 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: Ethan Marks
SOU1016R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 10, 2018 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_ 0789-004_22_ 20181010, F&BI 810205 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
810205 -01	0789-004_EFF_20181010

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20181010	Client:	SoundEarth Strategies
Date Received:	10/10/18	Project:	SOU_ 0789-004_22_ 20181010
Date Extracted:	10/11/18	Lab ID:	810205-01
Date Analyzed:	10/11/18	Data File:	101110.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_ 0789-004_22_ 20181010
Date Extracted:	Not Applicable	Lab ID:	08-2286 mb
Date Analyzed:	10/11/18	Data File:	101109.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 10/16/18
Date Received: 10/10/18
Project: SOU_ 0789-004_22_ 20181010, F&BI 810205

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

Laboratory Code: 810205-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	93	101	70-130	8
Chloroethane	mg/m3	5	97	105	70-130	8
1,1-Dichloroethene	mg/m3	5	95	101	70-130	6
Methylene chloride	mg/m3	5	88	91	70-130	3
trans-1,2-Dichloroethene	mg/m3	5	91	98	70-130	7
1,1-Dichloroethane	mg/m3	5	90	98	70-130	9
cis-1,2-Dichloroethene	mg/m3	5	90	98	70-130	9
1,2-Dichloroethane (EDC)	mg/m3	5	76	89	70-130	16
1,1,1-Trichloroethane	mg/m3	5	95	101	70-130	6
Trichloroethene	mg/m3	5	77	90	70-130	16
Tetrachloroethene	mg/m3	5	77	88	70-130	13

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

810205

SAMPLE CHAIN OF CUSTODY

ME 10/10/18 +

Page # 1 of 1

Send Report To Rob Roberts, Ethan Marks

Company SOUNDEARTH STRATEGIES

Address 2811 FAIRVIEW AVENUE EAST

City, State, ZIP SEATTLE, WASHINGTON 98102

Phone # (206)306-1900 Fax #

Email Address

SAMPLERS (signature) Brandon Gutierrez

PROJECT NAME/NO. Amli Avtech

PO # 0789-004_22

PROJECT ADDRESS 340 Wallingford Ave, Seattle WA 98103

• ELECTRONIC DATA REQUESTED

TURNAROUND TIME
• Standard Turnaround ✓
• RUSH
Rush charges authorized by:

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

Samples Received at ____ °C

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	CVOCs by 8260	SVOCs by 8270	HFS						Notes
0789-004_EFF_20181010	01AB	2018/10/10	1250	vapor	2				✓								

ANALYSES REQUESTED

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Brandon Gutierrez	Brandon Gutierrez	SOUNDEARTH	2018/10/10	1355
Received by:	Nhan Phan	Nhan Phan	FEBI	10/10/18	1355
Relinquished by:					
Received by:			Samples received at 20 °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.
Arina Podnozova, B.S.
Eric Young, B.S.

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

April 11, 2018

Joe Ellingson, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Ellingson:

Included are the results from the testing of material submitted on April 6, 2018 from the SOU_0789-004-22_ 20180406, F&BI 804096 project. There are 5 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: Rob Roberts
SOU0411R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 6, 2018 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004-22_ 20180406, F&BI 804096 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
804096 -01	0789-004_EFF_20180405

Methylene chloride was detected in method blank associated with the sample. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20180405	Client:	SoundEarth Strategies
Date Received:	04/06/18	Project:	SOU_0789-004-22_ 20180406
Date Extracted:	04/06/18	Lab ID:	804096-01
Date Analyzed:	04/06/18	Data File:	040623.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m^3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	93	91	108
4-Bromofluorobenzene	94	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	8.5 fb
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004-22_ 20180406
Date Extracted:	Not Applicable	Lab ID:	08-0742 mb
Date Analyzed:	04/06/18	Data File:	040621.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m^3	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	92	91	108
4-Bromofluorobenzene	94	76	126

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	6.8 lc
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 04/11/18
Date Received: 04/06/18
Project: SOU_0789-004-22_ 20180406, F&BI 804096

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

Laboratory Code: 804096-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	8.5 fb	7.8 fb	9
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1 js	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	106	104	70-130	2
Chloroethane	mg/m3	5	114	114	70-130	0
1,1-Dichloroethene	mg/m3	5	128	128	70-130	0
Methylene chloride	mg/m3	5	82	94	70-130	14
trans-1,2-Dichloroethene	mg/m3	5	102	102	70-130	0
1,1-Dichloroethane	mg/m3	5	106	108	70-130	2
cis-1,2-Dichloroethene	mg/m3	5	102	104	70-130	2
1,2-Dichloroethane (EDC)	mg/m3	5	86	90	70-130	5
1,1,1-Trichloroethane	mg/m3	5	120	122	70-130	2
Trichloroethene	mg/m3	5	94	96	70-130	2
Tetrachloroethene	mg/m3	5	108	108	70-130	0

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

SAMPLE CHAIN OF CUSTODY

804096

NE 04-06-18

Page # 1 of 1

Send Report to Joe E, Rob R

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, Washington 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO. AMLI Antech

PO # 0789-004-22

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	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	cVOCs by 8260	SVOCs by 8270				Notes
~~0789-004-22~~																
0789-004-EFF-20180405	EFF	—	01A-B	4/5/18	1410	Vapor	2				X					
																Samples received at 20 °C

JME 4/6/18

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Joe Ellingson	SES	4/6/18	1030
Received by:	Matt Langston	FBInc	4/6/18	1030
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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Arina Podnozova, B.S.
Eric Young, B.S.

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

April 11, 2019

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on April 5, 2019 from the SOU_ 0789-004_ 20190405, F&BI 904137 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Ethan Marks
SOU0411R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 5, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_ 0789-004_ 20190405, F&BI 904137 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
904137 -01	0789-004_EFF_20190405

All quality control requirements were acceptable.

Date of Report: 04/11/19
Date Received: 04/05/19
Project: SOU_ 0789-004_ 20190405, F&BI 904137
Date Extracted: 04/05/19
Date Analyzed: 04/05/19

RESULTS FROM THE ANALYSIS OF AIR 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)
0789-004_EFF_ 20190405 904137-01	<0.1	<0.1	<0.1	<0.3	<10	104
Method Blank 09-529 MB	<0.1	<0.1	<0.1	<0.3	<10	98

Analysis For Volatile Compounds By EPA Method 8260C Screen

Client Sample ID:	0789-004_EFF_20190405	Client:	SoundEarth Strategies
Date Received:	04/05/19	Project:	SOU_ 0789-004_ 20190405
Date Extracted:	04/08/19	Lab ID:	904137-01
Date Analyzed:	04/08/19	Data File:	040772.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_ 0789-004_ 20190405
Date Extracted:	04/08/19	Lab ID:	09-733 MB
Date Analyzed:	04/08/19	Data File:	040771.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 04/11/19
Date Received: 04/05/19
Project: SOU_ 0789-004_ 20190405, F&BI 904137

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

Laboratory Code: 904101-01 (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	92	70-130
Toluene	mg/m^3	5.0	96	70-130
Ethylbenzene	mg/m^3	5.0	112	70-130
Xylenes	mg/m^3	15	109	70-130
Gasoline	mg/m^3	100	95	86-144

Date of Report: 04/11/19
Date Received: 04/05/19
Project: SOU_ 0789-004_ 20190405, F&BI 904137

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

Laboratory Code: 904137-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	91	92	70-130	1
Chloroethane	mg/m3	5	89	91	70-130	2
1,1-Dichloroethene	mg/m3	5	85	91	70-130	7
Methylene chloride	mg/m3	5	87	90	70-130	3
trans-1,2-Dichloroethene	mg/m3	5	89	92	70-130	3
1,1-Dichloroethane	mg/m3	5	99	101	70-130	2
cis-1,2-Dichloroethene	mg/m3	5	94	94	70-130	0
1,2-Dichloroethane (EDC)	mg/m3	5	93	96	70-130	3
1,1,1-Trichloroethane	mg/m3	5	102	104	70-130	2
Trichloroethene	mg/m3	5	93	94	70-130	1
Tetrachloroethene	mg/m3	5	90	92	70-130	2

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

904137

SAMPLE CHAIN OF CUSTODY

ME 04/05/19

Page # 1 of 1

Send Report To Rob Roberts, Ethan Marks

Company SoundEarth Strategies

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.: 0789-004 Antech

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

							ANALYSES REQUESTED								
Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Gx	BTEX by 8021B	CVOCS by 8260						Notes
0789-004_EFF_20190405	Effluent	01 A/B	4/5/19	1400	Air	2	X	X	X						

Samples received at 20 °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:	Brandon Gutierrez	SES	4/5/19	1445
Received by:	Khan Phan	FEBT	4/5/19	1445
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

October 30, 2019

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on October 21, 2019 from the SOU_ 0789-004_ 20191021, F&BI 910413 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Brandon Gutierrez, Joe Ellingson
SOU1030R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 21, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_ 0789-004_ 20191021, F&BI 910413 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
910413 -01	0789-004_20191021

Most of compounds in the 8260C laboratory control sample, laboratory control sample duplicate, and the associated relative percent difference failed the acceptance criteria. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Screen

Client Sample ID:	0789-004_20191021	Client:	SoundEarth Strategies
Date Received:	10/21/19	Project:	SOU_ 0789-004_ 20191021
Date Extracted:	10/23/19	Lab ID:	910413-01
Date Analyzed:	10/23/19	Data File:	102324.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	93	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2 jl
Chloroethane	<1 jl
1,1-Dichloroethene	<1 jl
Methylene chloride	<5 jl
trans-1,2-Dichloroethene	<1 jl
1,1-Dichloroethane	<1 jl
cis-1,2-Dichloroethene	<1 jl
1,2-Dichloroethane (EDC)	<1 jl
1,1,1-Trichloroethane	<1 jl
Trichloroethene	<1 jl
Tetrachloroethene	<1 jl

Analysis For Volatile Compounds By EPA Method 8260C Screen

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_ 0789-004_ 20191021
Date Extracted:	10/23/19	Lab ID:	09-2562 mb
Date Analyzed:	10/23/19	Data File:	102308.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	96	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2 jl
Chloroethane	<1 jl
1,1-Dichloroethene	<1 jl
Methylene chloride	<5 jl
trans-1,2-Dichloroethene	<1 jl
1,1-Dichloroethane	<1 jl
cis-1,2-Dichloroethene	<1 jl
1,2-Dichloroethane (EDC)	<1 jl
1,1,1-Trichloroethane	<1 jl
Trichloroethene	<1 jl
Tetrachloroethene	<1 jl

Date of Report: 10/30/19
Date Received: 10/21/19
Project: SOU_ 0789-004_ 20191021, F&BI 910413

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY EPA METHOD 8260C SCREEN

Laboratory Code: 910413-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m^3	<0.2	<0.2	nm
Chloroethane	mg/m^3	<1	<1	nm
1,1-Dichloroethene	mg/m^3	<1	<1	nm
Methylene chloride	mg/m^3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,1-Dichloroethane	mg/m^3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m^3	<1	<1	nm
1,1,1-Trichloroethane	mg/m^3	<1	<1	nm
Trichloroethene	mg/m^3	<1	<1	nm
Tetrachloroethene	mg/m^3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m^3	5	72	52 vo	70-130	32 vo
Chloroethane	mg/m^3	5	60 vo	45 vo	70-130	29 vo
1,1-Dichloroethene	mg/m^3	5	64 vo	46 vo	70-130	33 vo
Methylene chloride	mg/m^3	5	80	59 vo	70-130	30 vo
trans-1,2-Dichloroethene	mg/m^3	5	74	57 vo	70-130	26 vo
1,1-Dichloroethane	mg/m^3	5	65 vo	52 vo	70-130	22 vo
cis-1,2-Dichloroethene	mg/m^3	5	69 vo	55 vo	70-130	23 vo
1,2-Dichloroethane (EDC)	mg/m^3	5	60 vo	53 vo	70-130	12
1,1,1-Trichloroethane	mg/m^3	5	78	59 vo	70-130	28 vo
Trichloroethene	mg/m^3	5	61 vo	53 vo	70-130	14
Tetrachloroethene	mg/m^3	5	66 vo	59 vo	70-130	11

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

910413

SAMPLE CHAIN OF CUSTODY

ME 10/21/19

Page # 1 of 1

Send Report To Rob Roberts, Brandon Gutierrez, Joe E.

Company SOUNDEARTH STRATEGIES

Address 2811 FAIRVIEW AVENUE EAST

City, State, ZIP SEATTLE, WASHINGTON 98102

Phone # (206)306-1900 Fax #

Email Address

SAMPLERS (signature) Brandon Gutierrez

PROJECT NAME/NO. Avtech Wallingford

PO # 0789-004

PROJECT ADDRESS 3400 Wallingford

· ELECTRONIC DATA REQUESTED

TURNAROUND TIME
- Standard Turnaround ✓
- RUSH

Rush charges authorized by:

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

Samples Received at ___ °C

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	CVOCs by 8260	SVOCs by 8270	HFS					Notes
0789-004_20191021	01AB	10/21/19	1315	Vapor	2				✓							CVOCs

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Brandon Gutierrez	Brandon Gutierrez	SOUNDEARTH	10/21/19	1353
Received by: Nhan Phan	Nhan Phan	FCB_T	10/21/19	1353
Relinquished by:				
Received by:				

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

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

February 1, 2019

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Roberts:

Included are the results from the testing of material submitted on January 28, 2019 from the SOU_0789-004_ 20190128, F&BI 901368 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Ethan Marks, Brandon Gutierrez
SOU0201R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 28, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20190128, F&BI 901368 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
901368 -01	0789-004_EFF_20190128

All quality control requirements were acceptable.

Date of Report: 02/01/19
Date Received: 01/28/19
Project: SOU_0789-004_ 20190128, F&BI 901368
Date Extracted: 01/30/19
Date Analyzed: 01/30/19

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
0789-004_EFF _20190128 901368-01	<0.1	<0.1	<0.1	<0.3	<10	80
Method Blank 09-0114 MB	<0.1	<0.1	<0.1	<0.3	<10	79

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	0789-004_EFF_20190128	Client:	SoundEarth Strategies
Date Received:	01/28/19	Project:	SOU_0789-004_ 20190128
Date Extracted:	01/30/19	Lab ID:	901368-01
Date Analyzed:	01/30/19	Data File:	013008.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS/JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	94	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20190128
Date Extracted:	Not Applicable	Lab ID:	09-0195 mb
Date Analyzed:	01/30/19	Data File:	013007.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS/JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	96	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 02/01/19
Date Received: 01/28/19
Project: SOU_0789-004_ 20190128, F&BI 901368

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

Laboratory Code: 901368-01 (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	84	70-130
Toluene	mg/m^3	5.0	79	70-130
Ethylbenzene	mg/m^3	5.0	84	70-130
Xylenes	mg/m^3	15	82	70-130
Gasoline	mg/m^3	100	135	86-144

Date of Report: 02/01/19
Date Received: 01/28/19
Project: SOU_0789-004_ 20190128, F&BI 901368

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

Laboratory Code: 901368-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m3	<0.2	<0.2	nm
Chloroethane	mg/m3	<1	<1	nm
1,1-Dichloroethene	mg/m3	<1	<1	nm
Methylene chloride	mg/m3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,1-Dichloroethane	mg/m3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m3	<1	<1	nm
1,1,1-Trichloroethane	mg/m3	<1	<1	nm
Trichloroethene	mg/m3	<1	<1	nm
Tetrachloroethene	mg/m3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m3	5	94	88	70-130	7
Chloroethane	mg/m3	5	92	83	70-130	10
1,1-Dichloroethene	mg/m3	5	99	92	70-130	7
Methylene chloride	mg/m3	5	116	98	70-130	17
trans-1,2-Dichloroethene	mg/m3	5	102	95	70-130	7
1,1-Dichloroethane	mg/m3	5	100	95	70-130	5
cis-1,2-Dichloroethene	mg/m3	5	102	95	70-130	7
1,2-Dichloroethane (EDC)	mg/m3	5	82	82	70-130	0
1,1,1-Trichloroethane	mg/m3	5	94	86	70-130	9
Trichloroethene	mg/m3	5	91	89	70-130	2
Tetrachloroethene	mg/m3	5	102	96	70-130	6

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

901368

SAMPLE CHAIN OF CUSTODY

ME 01-28-19

Page # 1 of 1

Send Report To Rob Roberts, Erinn Marks, Brandon Gutierrez

Company SoundEarth Strategies

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.
AMLI Wallingford, Autech
0789-004

PO # 0789-004

REMARKS

GEMS Y / N

TURNAROUND TIME
Standard (2 Weeks) [X]
RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Lab ID	Date Sampled	Time Sampled	Matrix	# of samples	NWTPH-Gx	BTEX by 8021B	CVOCS by 8260					Notes
						BLG 3								
0789-004_EFF_20190128	Effluent	QA-01	1/28/19	1500	Air	2	X	X	X					

ANALYSES REQUESTED

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:	Brandon Gutierrez	SES	01/28/19	1600
Received by:	Jon Shirmer	FBI	01/28/19	1600
Relinquished by:				
Received by:				

Samples received at 21 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 15, 2019

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

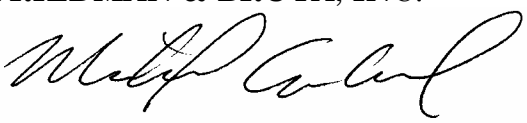
Dear Mr Roberts:

Included are the results from the testing of material submitted on July 8, 2019 from the SOU_0789-004_ 20190708, F&BI 907121 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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: Brandon Gutierrez
SOU0715R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 8, 2019 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20190708, F&BI 907121 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
907121 -01	0789-004_EFF_20190708

All quality control requirements were acceptable.

Date of Report: 07/15/19
Date Received: 07/08/19
Project: SOU_0789-004_ 20190708, F&BI 907121
Date Extracted: 07/11/19
Date Analyzed: 07/11/19

RESULTS FROM THE ANALYSIS OF AIR 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)
0789-004_EFF_ 20190708 907121-01	<0.1	<0.2	<0.2	<0.6	11	82
Method Blank 09-1590 MB	<0.1	<0.2	<0.2	<0.6	<10	83

Analysis For Volatile Compounds By EPA Method 8260C Screen

Client Sample ID:	0789-004_EFF_20190708	Client:	SoundEarth Strategies
Date Received:	07/08/19	Project:	SOU_0789-004_ 20190708
Date Extracted:	07/11/19	Lab ID:	907121-01
Date Analyzed:	07/11/19	Data File:	071116.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C Sreen

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20190708
Date Extracted:	07/11/19	Lab ID:	09-1633 mb
Date Analyzed:	07/11/19	Data File:	071111.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	93	107
Toluene-d8	100	87	110
4-Bromofluorobenzene	97	85	112

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 07/15/19
Date Received: 07/08/19
Project: SOU_0789-004_ 20190708, F&BI 907121

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

Laboratory Code: 907122-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	mg/m^3	<0.1	<0.1	nm
Toluene	mg/m^3	<0.2	<0.2	nm
Ethylbenzene	mg/m^3	<0.2	<0.2	nm
Xylenes	mg/m^3	<0.6	<0.6	nm
Gasoline	mg/m^3	20	20	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/m^3	5.0	88	70-130
Toluene	mg/m^3	5.0	95	70-130
Ethylbenzene	mg/m^3	5.0	107	70-130
Xylenes	mg/m^3	15	106	70-130
Gasoline	mg/m^3	100	131	86-144

Date of Report: 07/15/19
Date Received: 07/08/19
Project: SOU_0789-004_ 20190708, F&BI 907121

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

Laboratory Code: 907121-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m^3	<0.2	<0.2	nm
Chloroethane	mg/m^3	<1	<1	nm
1,1-Dichloroethene	mg/m^3	<1	<1	nm
Methylene chloride	mg/m^3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,1-Dichloroethane	mg/m^3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m^3	<1	<1	nm
1,1,1-Trichloroethane	mg/m^3	<1	<1	nm
Trichloroethene	mg/m^3	<1	<1	nm
Tetrachloroethene	mg/m^3	<1	<1	nm

Date of Report: 07/15/19
Date Received: 07/08/19
Project: SOU_0789-004_ 20190708, F&BI 907121

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m^3	5	98	107	70-130	9
Chloroethane	mg/m^3	5	106	114	70-130	7
1,1-Dichloroethene	mg/m^3	5	117	132 vo	70-130	12
Methylene chloride	mg/m^3	5	95	102	70-130	7
trans-1,2-Dichloroethene	mg/m^3	5	109	123	70-130	12
1,1-Dichloroethane	mg/m^3	5	104	119	70-130	13
cis-1,2-Dichloroethene	mg/m^3	5	95	107	70-130	12
1,2-Dichloroethane (EDC)	mg/m^3	5	91	105	70-130	14
1,1,1-Trichloroethane	mg/m^3	5	113	123	70-130	8
Trichloroethene	mg/m^3	5	95	109	70-130	14
Tetrachloroethene	mg/m^3	5	97	107	70-130	10

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

907121

SAMPLE CHAIN OF CUSTODY

ME 07-08-19

Page # 1 of 1

Send Report To Rob Roberts, Brandon Gutierrez

Company SOUNDEARTH STRATEGIES

Address 2811 FAIRVIEW AVENUE EAST

City, State, ZIP SEATTLE, WASHINGTON 98102

Phone # (206)306-1900 Fax #

Email Address

SAMPLERS *(signature)*

PROJECT NAME/NO. Avtech

PO # 0789-004

PROJECT ADDRESS 3400 Wallingford Ave

• ELECTRONIC DATA REQUESTED

TURNAROUND TIME
• Standard Turnaround ✓
• RUSH
Rush charges authorized by:

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

Samples Received at ___°C

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	cVOCs by 8260	SVOCs by 8270	HFS						Notes
0789-004_EFF_20190708	01-A-B	7/8/19	1405	Tedlar	2		J	J	✓								Gasoline, BTEX, cVOC's
	02		0														

ANALYSES REQUESTED

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Brandon Gutierrez	SOUNDEARTH	7/8/19	1630
Received by:		HONG NGUYEN	FBI	V	✓
Relinquished by:					
Received by:					

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

FORMS\COC\COC.DOC

Samples received at 23 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

January 17, 2020

Brandon Gutierrez, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Gutierrez:

Included are the results from the testing of material submitted on January 8, 2020 from the SOU_0789-004_ 20200108, F&BI 001085 project. There are 5 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Joe Ellingson, Terry Montoya
SOU0117R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20200108, F&BI 001085 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
001085 -01	0789-004_EFF_20200108

Chloroethane in the 8260D laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

The 8260D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for 1,2-dichloroethane. The analyte was not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D Screen

Client Sample ID:	0789-004_EFF_20200108	Client:	SoundEarth Strategies
Date Received:	01/08/20	Project:	SOU_0789-004_ 20200108, F&BI 001085
Date Extracted:	01/10/20	Lab ID:	001085-01
Date Analyzed:	01/10/20	Data File:	011022.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1 jl
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D Screen

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20200108, F&BI 001085
Date Extracted:	01/10/20	Lab ID:	00-096 mb
Date Analyzed:	01/10/20	Data File:	011018.D
Matrix:	Air	Instrument:	GCMS9
Units:	mg/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	114	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1 jl
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 01/17/20
Date Received: 01/08/20
Project: SOU_0789-004_ 20200108, F&BI 001085

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 001085-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m^3	<0.2	<0.2	nm
Chloroethane	mg/m^3	<1	<1	nm
1,1-Dichloroethene	mg/m^3	<1	<1	nm
Methylene chloride	mg/m^3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,1-Dichloroethane	mg/m^3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m^3	<1	<1	nm
1,1,1-Trichloroethane	mg/m^3	<1	<1	nm
Trichloroethene	mg/m^3	<1	<1	nm
Tetrachloroethene	mg/m^3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m^3	5	83	83	70-130	0
Chloroethane	mg/m^3	5	73	69 vo	70-130	6
1,1-Dichloroethene	mg/m^3	5	81	83	70-130	2
Methylene chloride	mg/m^3	5	110	114	70-130	4
trans-1,2-Dichloroethene	mg/m^3	5	90	95	70-130	5
1,1-Dichloroethane	mg/m^3	5	85	94	70-130	10
cis-1,2-Dichloroethene	mg/m^3	5	82	98	70-130	18
1,2-Dichloroethane (EDC)	mg/m^3	5	76	101	70-130	28 vo
1,1,1-Trichloroethane	mg/m^3	5	96	101	70-130	5
Trichloroethene	mg/m^3	5	77	89	70-130	14
Tetrachloroethene	mg/m^3	5	78	88	70-130	12

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

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

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

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

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

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

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

001085

SAMPLE CHAIN OF CUSTODY ME 01-08-20

Page # 1 of 1

Report To Brandon G., Terry Montagne, Joe Ellingson
Company Sound Earth Strategies
Address 2811 Fairview Ave East
City, State, ZIP Seattle, WA, 98102
Phone (206)306 1900 Email

SAMPLERS (*signature*)

PROJECT NAME: Amli Wallingford Avtech
PO #: 0789-004

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☑ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
0789-004_EFF_20200108	01A-B	1/8/2020	1340	Vapor	2					✓							CVOCs

Samples received at 20°C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Brandon G	Sound Earth	1/9/2020	1305
Received by:	DO VO	FBT	1-8-20	15:05
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 14, 2020

Levi Fernandes, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Fernandes:

Included are the results from the testing of material submitted on July 6, 2020 from the SOU_0789-004_ 20200706, F&BI 007062 project. There are 5 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
SOU0714R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 6, 2020 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_ 20200706, F&BI 007062 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
007062 -01	0789-004-EFF-20200706

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D Screen

Client Sample ID:	0789-004-EFF-20200706	Client:	SoundEarth Strategies
Date Received:	07/06/20	Project:	SOU_0789-004_ 20200706
Date Extracted:	07/09/20	Lab ID:	007062-01
Date Analyzed:	07/09/20	Data File:	070913.D
Matrix:	Air	Instrument:	GCMS4
Units:	mg/m3	Operator:	MS

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

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D Screen

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_ 20200706
Date Extracted:	07/09/20	Lab ID:	00-1508 mb
Date Analyzed:	07/09/20	Data File:	070910.D
Matrix:	Air	Instrument:	GCMS4
Units:	mg/m3	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	145
Toluene-d8	100	55	145
4-Bromofluorobenzene	96	65	139

Compounds:	Concentration mg/m3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 07/14/20
Date Received: 07/06/20
Project: SOU_0789-004_ 20200706, F&BI 007062

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY EPA METHOD 8260D SCREEN

Laboratory Code: 007062-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Vinyl chloride	mg/m^3	<0.2	<0.2	nm
Chloroethane	mg/m^3	<1	<1	nm
1,1-Dichloroethene	mg/m^3	<1	<1	nm
Methylene chloride	mg/m^3	<5	<5	nm
trans-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,1-Dichloroethane	mg/m^3	<1	<1	nm
cis-1,2-Dichloroethene	mg/m^3	<1	<1	nm
1,2-Dichloroethane (EDC)	mg/m^3	<1	<1	nm
1,1,1-Trichloroethane	mg/m^3	<1	<1	nm
Trichloroethene	mg/m^3	<1	<1	nm
Tetrachloroethene	mg/m^3	<1	<1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/m^3	5	86	91	70-130	6
Chloroethane	mg/m^3	5	84	104	70-130	21 vo
1,1-Dichloroethene	mg/m^3	5	91	95	70-130	4
Methylene chloride	mg/m^3	5	80	84	70-130	5
trans-1,2-Dichloroethene	mg/m^3	5	94	97	70-130	3
1,1-Dichloroethane	mg/m^3	5	90	95	70-130	5
cis-1,2-Dichloroethene	mg/m^3	5	93	99	70-130	6
1,2-Dichloroethane (EDC)	mg/m^3	5	82	88	70-130	7
1,1,1-Trichloroethane	mg/m^3	5	94	99	70-130	5
Trichloroethene	mg/m^3	5	87	90	70-130	3
Tetrachloroethene	mg/m^3	5	90	93	70-130	3

Data Qualifiers & Definitions

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

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

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

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

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

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

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jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

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

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

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

SAMPLE CHAIN OF CUSTODY

007062 ME 07/06/20

Page # 1 of 1

Report To Lavi Fernandes
Company SandEarth Strategies
Address 2811 Fairview Ave E Suite 200
City, State, ZIP Seattle, WA 98102
Phone 206 306-1900 Email —

SAMPLERS (signature) [signature]

PROJECT NAME: Autech
PO #: 0789-004

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☑ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	cVOC's				Notes
0789-004-EFF-20200706	01A-B	7/6/20	1500	A	2								X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Sarah Welter	SES	7/6/20	1615
Received by: [signature]	Isaac Lessig	FBI	7/6/20	16:15
Relinquished by:				
Received by:				

Samples received at 22 °C

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