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

*Draft – Issued for Client Review*

October 29, 2018

Mrs. Kim Kuhl
Kane Properties, LLC
19427 136th Place Southeast
Renton, Washington 98058

**SUBJECT: SUPPLEMENTAL SUBSURFACE INVESTIGATION SUMMARY LETTER**
**Rainier Mall Property**
**4208 Rainier Avenue South**
**Seattle, Washington**
**Project Number: 1276-001-03**

Dear Mrs. Kuhl:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this summary letter report to present the results of the supplemental subsurface investigation for the Rainier Mall Property (King County Parcel No. 795030-1480), located at 4208 Rainier Avenue South in Seattle, Washington (the Property; Figure 1). The Property consists of an irregularly shaped tax parcel that covers approximately 101,537 square feet (2.33 acres) of land. The Property is relatively level at an elevation of approximately 32 to 37 feet above mean sea level. The Property is currently developed with a one-story retail building that occupies 36,071 square feet, and the remainder of the Property is covered with an asphalt-paved parking lot. The Property location is shown on Figure 1.

The purpose of the supplemental subsurface investigation was to investigate the west and south Property boundaries and adjoining portions of the right-of-way (ROW) for the potential presence of chlorinated solvents in soil and groundwater that may have migrated off the Property.

This letter report summarizes the Property history and the field activities and results of the subsurface investigations, and provides SoundEarth's conclusions regarding the nature and extent of soil and groundwater impacts beneath the Property.

**PROPERTY BACKGROUND**

The Property was previously developed with three separate dry cleaners on the southwestern portion of the Property with several other commercial retail spaces (Figure 2). In addition, several residences were present on the eastern portion of the Property in the 1929 Sanborn Fire Insurance Map. Based on aerial photographs, the residences were removed by 1943. The dry cleaners operated between approximately 1930 and 1968. All the buildings associated with the former dry cleaning operations were removed between 1985 and 1990. The Property is currently developed with an asphalt-paved parking lot.

A one-story retail building occupies 36,071 square feet of the Rainier Mall North Property. The retail building is currently vacant and was previously occupied by a former Safeway, Inc. grocery store that was converted into a mixed-use retail mall in 1998.

**PREVIOUS INVESTIGATIONS**

Previous investigation activities completed at the Property, including a Phase II Environmental Site Assessment completed by Hahn and Associates, Inc. in 2000, and previous subsurface investigation activities completed by SoundEarth between January 2017 and February 2018. Boring and well locations from previous investigations are shown on Figure 3. Details from the previous investigations are included in the following documents:

- Hahn and Associates, Inc. *Phase I Environmental Site Assessment, Rainier Mall, 4208 Rainier Avenue South, Seattle, Washington*, prepared May 23, 2000
- Hahn and Associates, Inc. *Phase II Environmental Site Assessment, Rainier Mall, 4208 Rainier Avenue South, Seattle, Washington*, prepared August 1, 2000
- SoundEarth Strategies, Inc. *Subsurface Investigation Summary Letter, Rainier Mall Property, 4208 Rainier Avenue South, Seattle, Washington*, prepared March 31, 2017
- SoundEarth Strategies, Inc. *Subsurface Investigation Summary Letter, Rainier Mall Property, 4208 Rainier Avenue South, Seattle, Washington,* prepared March 22, 2018

**SOUNDEARTH SUPPLEMENTAL 2018 SUBSURFACE FIELD INVESTIGATION**

To further assess the extent of chlorinated solvents in soil and groundwater at the western and southern property boundaries, SoundEarth completed an additional supplemental subsurface investigation on the Property. Field work included advancing hollow-stem auger soil borings, installing two additional on-Property monitoring wells, installing two additional angled monitoring wells that extended beyond the western Property boundary beneath the adjacent ROW, and sampling the newly installed monitoring wells. All field work was observed by a SoundEarth licensed geologist. Private and public utility locates were completed prior to each phase of field work to determine the presence of any underground utilities. Details of the field work are outlined below.

**Monitoring Well Installation and Soil Borings**

On October 1 and 2, 2018, Cascade Drilling, under the direction of a licensed SoundEarth geologist, advanced four soil borings (B15 through B18), completing all four as monitoring wells. Borings locations were selected to further delineate the lateral extent of chlorinated volatile organic compound (CVOC) impacts in soil and groundwater on the Property and the adjoining ROW. Soil borings were advanced using a hollow-stem auger drill rig, and discrete soil samples were collected from each boring at 2.5- to 5-foot depth intervals. Vertical borings B17 and B18 were advanced to depths of 35 and 30 feet below ground surface (bgs), respectively, at the locations shown on Figure 2. Angle borings B15 and B16 were advanced along the western Property boundary to a depth of 29 feet bgs. These borings were advanced 41.5 linear feet at an approximate angle of 46 degrees to evaluate soil conditions beneath the west-adjoining sidewalk ROW. Boring directions were measured with a declination-adjustable sighting compass relative to the western Property boundary, as shown on Figure 2, and boring angles were confirmed at the time of drilling with a digital angle measure.

Based on boring locations, field screening results, sampling depths, and observed soil characteristics, soil samples were selected from each soil boring, placed on ice in a cooler, and delivered to Friedman & Bruya, Inc. (F&B) of Seattle, Washington, under standard chain-of-custody protocol for chemical analysis of CVOCs.

SoundEarth soil borings B15, B16, B17, and B18 were completed as 2-inch-diameter monitoring wells (MW07, MW06, MW09, and MW08, respectively). Boring B18 (well MW08) was completed with 15 feet of 0.010-inch slotted well screen, extending from 15 to 30 linear feet from the top of well casing. Boring B17 (well MW09) was completed with 10 feet of 0.010-inch slotted well screen, extending from 25 to 35 linear feet from the top of well casing and screened entirely within the observed saturated coarse sand formation. Angle borings/wells B15/MW07 and B16/MW06 were completed with 15 feet of 0.010-inch slotted well screen, extending from 25 to 40 linear feet from the top of well casing and screened entirely to the west of the Property boundary. The bottom of each well was fitted with a threaded PVC bottom cap, and the top of each well was fitted with a slip cap. The annuli of the monitoring wells were filled with 2/12 sand from the bottom of the well to approximately 6 inches above the well screen, and sealed with approximately 2 feet of bentonite and a concrete cap. The wells were completed at the surface with flush-mounted, traffic-rated well boxes set in concrete. Each monitoring well was developed following installation by pumping with a submersible development pump until low turbidity was achieved. Between 18 and 40 gallons of water were removed from each monitoring well during development.

Soil cuttings, decontamination water, and purge water generated during drilling and well development activities were contained on the Property in labeled 55-gallon drums pending analytical results.

**Groundwater Sampling**

On October 5, 2018, SoundEarth collected groundwater samples from new monitoring wells MW06 through MW09, and opened all nine wells and permitted groundwater levels to equilibrate with atmospheric pressure for a minimum of 30 minutes before obtaining depth-to-water measurements. Groundwater levels were measured to an accuracy of 0.01 feet, relative to the top of well casing, using an electronic water level indicator.

Groundwater samples were collected using low-flow sampling methods. Purging and sampling of each well was performed using a peristaltic pump and dedicated polyethylene tubing at rates ranging from approximately 100 to 220 milliliters per minute. The tubing intake was placed in the middle of the submerged well screen intervals. Water quality was monitored during purging using a YSI 556 water quality system, or equivalent, equipped with a flow-through cell. Turbidity was monitored using either a separate turbidimeter or a turbidimeter-equipped water quality system. Water quality parameters monitored and recorded included temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported to F&B under standard chain-of-custody protocols for laboratory analysis. Samples were analyzed for CVOCs by U.S. Environmental Protection Agency Method 8260C.

## INVESTIGATION RESULTS

Soil and groundwater results generated during the supplemental subsurface investigations are discussed below. Groundwater elevation contours are presented on Figure 4. Analytical data is depicted on Figures 5 and 6 and presented in Tables 1 through 3. Cross sections detailing observed soil conditions and analytical results in borings across the Property are shown on Figures 7 and 8. Laboratory analytical results from the supplemental investigation are included in Attachment A.

### Soil Observations and Analytical Results

Soil observed during drilling activities typically consisted of fill and/or reworked native soils consisting of silty sand to sandy silt with gravel and trace amounts of brick to depths of approximately 10 feet bgs. The fill material was underlain by soft to very dense silt and silty clay with variable amounts of sand and thin sand lenses to the maximum depth of exploration in borings B15, B16, and B18 (30 feet bgs). A zone of saturated sand with silt was observed below the silt and silty clay in boring B17 from approximately 25 feet bgs to the maximum depth of the exploration (35 feet bgs).

Soil analytical results from new borings B15 through B18 indicated the following:

- Concentrations of tetrachloroethene (PCE) exceeding the Washington State Model Toxics Control Act (MTCA) Method A cleanup level (CUL) were detected in soil samples collected from boring B18, located near the western Property boundary, at depths of 12.5 to 17.5 feet bgs. PCE concentrations were not detected above laboratory reporting limits in other soil samples submitted for analysis from borings B15 through B18.
- Concentrations of trichloroethene (TCE) exceeding the MTCA Method A CUL were detected in soil samples collected from boring B18, located near the western Property boundary, at depths of 12.5 to 17.5 feet bgs. TCE exceeding the MTCA Method A CUL was additionally detected in the soil sample collected from angle boring B16, located near the western Property boundary, at 10.5 to 11.5 feet bgs (approximately 5.5 to 6.5 feet east of the western Property boundary). TCE concentrations were not detected above laboratory reporting limits in other soil samples submitted for analysis from borings B15 through B18.
- Degradation product cis-1,2-dichloroethene (cis-1,2-DCE) was detected at concentrations below the applicable MTCA Method B CUL in soil samples collected from boring B18 at depths of 10 to 15 feet bgs.
- Trans-1,2-dichloroethene (trans-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and vinyl chloride were not detected above laboratory reporting limits in other samples submitted for analysis from borings B15 through B18.

### Groundwater Results

Depths to groundwater measured in wells MW01 through MW05, MW08, and MW09 ranged from 6.99 feet (well MW03) to 15.62 feet (well MW09). Angled wells MW06 and MW07 were not included in the groundwater elevation assessment. Calculated groundwater elevation contours indicate that groundwater beneath the Property is generally flowing in a variable southerly direction at a gradient of 0.03 feet per foot (Figure 4). Groundwater analytical results from monitoring wells MW06 through MW09 indicated the following:

- Concentrations of PCE, TCE, cis-1,2-DCE, and vinyl chloride exceeding the applicable MTCA Method A CULs were detected in groundwater samples collected from monitoring wells MW08 and MW09.
- Concentrations of TCE and cis-1,2-DCE above the laboratory reporting limit, but below the applicable MTCA Method B CULs, were detected in the groundwater sample collected from monitoring well MW06.
- Concentrations of trans-1,2-DCE, above the laboratory reporting limit but below the applicable MTCA Method B CUL, were detected in the groundwater samples collected from monitoring well MW08.

**CONCLUSIONS**

Based on the soil sampling results discussed in this summary letter, there does not appear to be a widespread release of CVOCs exceeding the MTCA CULs to the soil in the western and southern ROWs adjoining the Property.

Based on groundwater sampling results discussed in this summary letter, CVOC concentrations exceeding the applicable MTCA CULs in groundwater are primarily confined to the Property with the exception of groundwater sampled in MW09 near the southeast Property boundary. Based on the mapped direction of groundwater flow and observed zone of saturated coarse sand in the southeast portion of the Property, it is likely that concentrations of CVOCs in groundwater are migrating off-Property to the southeast. The extent of potential off-Property impacts in groundwater to the southeast of the Property has not been evaluated.

**RECOMMENDATIONS**

SoundEarth recommends additional subsurface investigation to further delineate the lateral extent of groundwater contamination to the southeast of the Property, beyond the Property boundary. Subsurface investigation work would include installation of at least three off-Property monitoring wells, within the South Genesee Street arterial and/or 36th Avenue South ROW. Dependent on observed soil conditions and groundwater analytical results, installation of additional off-Property monitoring wells may be necessary to fully characterize groundwater contamination on and beyond the southeast Property boundary.

**LIMITATIONS**

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

Opinions and recommendations contained in this report are derived, in part, from data gathered by others, and from conditions evaluated when services were performed, and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We do not warrant and are not responsible for the accuracy or validity of work performed by others, nor from the impacts of changes

in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the use of segregated portions of this report.

Respectfully,

**SoundEarth Strategies, Inc.**

***DRAFT***

Logan Schumacher
Project Geologist

***DRAFT***

Chris Carter
Managing Principal

Attachments: Figure 1, Property Location Map
Figure 2, Property Plan
Figure 3, Exploration Location Plan
Figure 4, Groundwater Contour Map – October 2018
Figure 5, Soil Analytical Results
Figure 6, Groundwater Analytical Results
Figure 7, Geologic Cross Section A–A'
Figure 8, Geologic Cross Section B–B'
Table 1, Summary of Soil Analytical Results for CVOCs
Table 2, Summary of Soil Analytical Results for Total Metals
Table 3, Summary of Groundwater Analytical Results for CVOCs
A, Laboratory Analytical Reports
*Friedman & Bruya, Inc. #810054*
*Friedman & Bruya, Inc. #810141*
*Friedman & Bruya, Inc. #810142*

LDS/CMC:dnm

# FIGURES

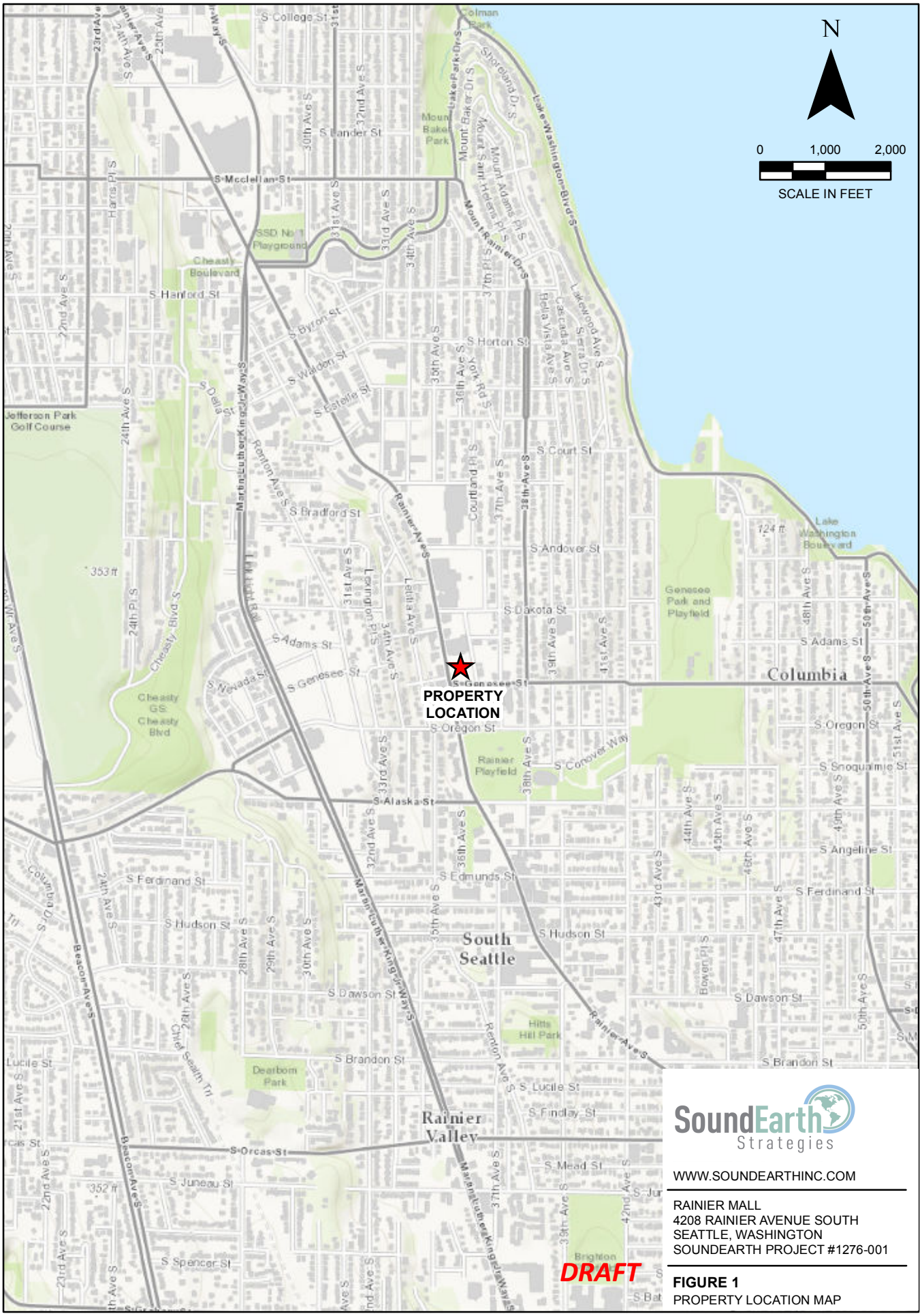


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**FIGURE 1**
PROPERTY LOCATION MAP

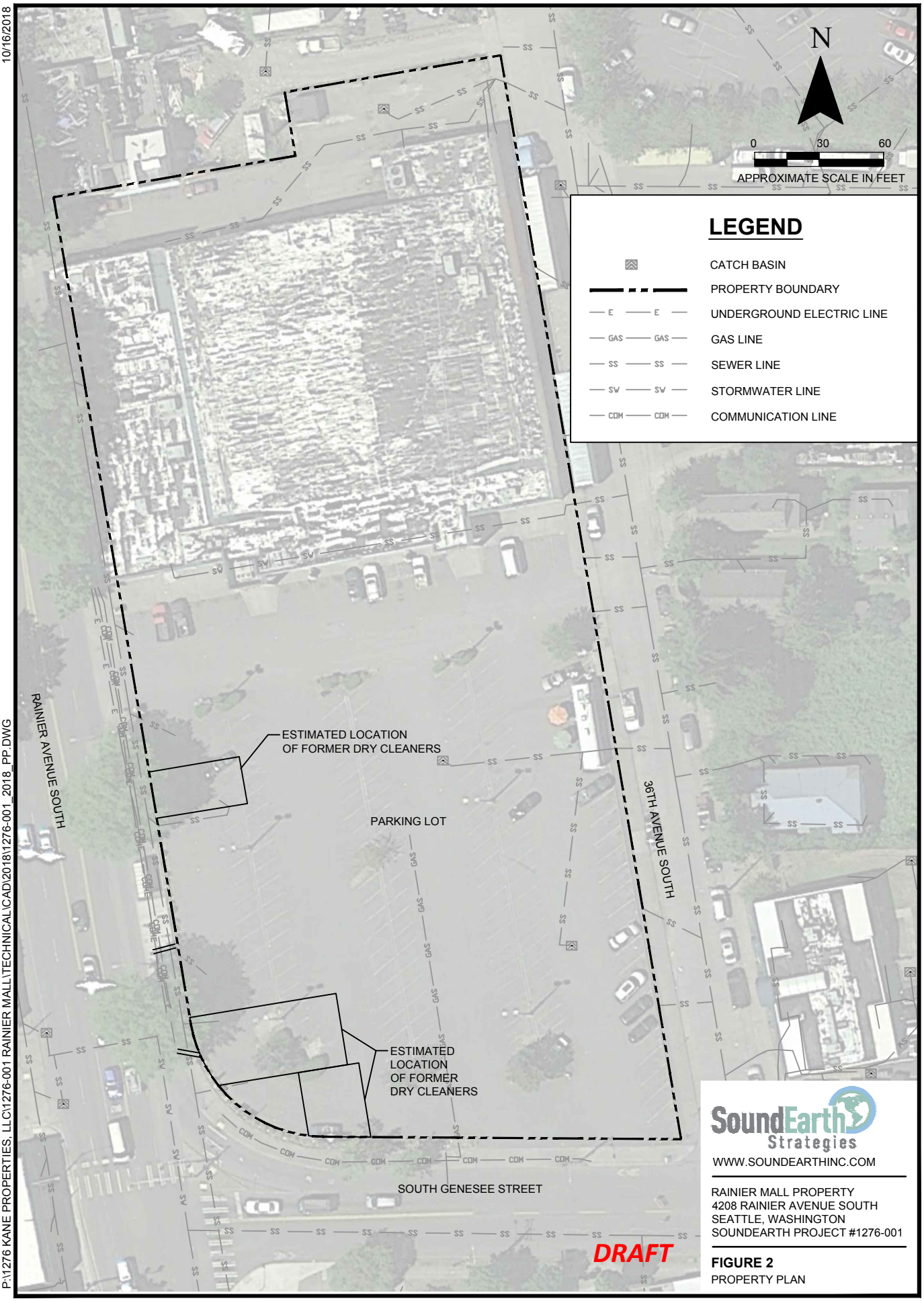


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**FIGURE 2**
PROPERTY PLAN

10/16/2018
P:\1276 KANE PROPERTIES, LLC\1276-001 RAINIER MALL\TECHNICAL\CAD\2018\1276-001_2018_PP.DWG

10/16/2018

P:\1276 KANE PROPERTIES, LLC\1276-001 RAINIER MALL\TECHNICAL\CAD\2018\1276-001_2018_EL.DWG

TB05

B10

B-7

SB07

SB06

B11

B-8

B-6

B-5

B14

B06

B04

B02

B16/MW06

B18/MW08

TB08/MW05

B12

B15/MW07

B13

B-2

TB07/MW04

SB05

B-3

B07/MW03

PARKING LOT

B08

B03

B09/MW02

SB08

SB02

SB01

B01/
MW01

B05

B-1

SB03

SB04

B-4

TB03

B17/MW09

TB06

RAINIER AVENUE SOUTH

36TH AVENUE SOUTH

SOUTH GENESEE STREET

ESTIMATED LOCATION
OF FORMER DRY CLEANERS

ESTIMATED
LOCATION
OF FORMER
DRY CLEANERS

A

A'

B

B'

N

0 15 30

APPROXIMATE SCALE IN FEET

## LEGEND

- CATCH BASIN
- B07/MW03 GROUNDWATER MONITORING WELL
- TB08/MW05 TERRA MONITORING WELL
- B12 ANGLED HOLLOW-STEM AUGER GROUNDWATER MONITORING WELL
- SB08 PUSH-PROBE SOIL BORING
- B04 HOLLOW-STEM AUGER SOIL BORING
- B12 ANGLED HOLLOW-STEM AUGER SOIL BORING
- B-8 SOIL BORING (HAHN AND ASSOCIATES, INC, 2000)
- B05 SONIC SOIL BORING
- T6 TERRA GEOTECHNICAL BORING
- H6 PASSIVE SAMPLE SURVEY LOCATION
- PROPERTY BOUNDARY
- E E UNDERGROUND ELECTRIC LINE
- GAS GAS GAS LINE
- SS SS SEWER LINE
- SW SW STORMWATER LINE
- COM COM COMMUNICATION LINE
- CROSS SECTION LOCATION

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**FIGURE 3**
EXPLORATION LOCATION PLAN

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10/23/2018

P:\1276 KANE PROPERTIES, LLC\1276-001 RAINIER MALL\TECHNICAL\CAD\2018\1276-001_2018_CM.DWG

N

0 15 30

APPROXIMATE SCALE IN FEET

RAINIER AVENUE SOUTH

36TH AVENUE SOUTH

SOUTH GENESEE STREET

ESTIMATED LOCATION OF FORMER DRY CLEANERS

PARKING LOT

B07/MW03 (89.47')

B16/MW06

(88.83') B18/MW08

TB08/MW05 (88.22')

B09/MW02 (88.41')

B15/MW07

B01/MW01 (85.38')

TB07/MW04 (85.43')

B17/MW09 (84.97')

89.00'

88.00'

87.00'

86.00'

85.00'

ESTIMATED LOCATION OF FORMER DRY CLEANERS

## LEGEND

- CATCH BASIN
- B07/MW03 GROUNDWATER MONITORING WELL
- TB08/MW05 TERRA MONITORING WELL
- B12 ANGLED HOLLOW-STEM AUGER GROUNDWATER MONITORING WELL
- PROPERTY BOUNDARY
- E E UNDERGROUND ELECTRIC LINE
- GAS GAS GAS LINE
- SS SS SEWER LINE
- SW SW STORMWATER LINE
- COM COM COMMUNICATION LINE
- 1-FOOT-INTERVAL GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- (84.97') GROUNDWATER ELEVATION

**NOTE:** RELATIVE ELEVATIONS BASED ON MW01 TOC = 100.00'

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**FIGURE 4**
GROUNDWATER CONTOUR MAP - OCTOBER 2018

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10/26/2018

| Well/Boring ID | Date Sampled | Depth (feet bgs) | Analytical Results (mg/kg) Tetrachloroethene | Trichloroethene |
|---|---|---|---|---|
| SB01 | 01/18/17 | 5.0 | <0.025 | <0.02 |
| | | 10.0 | <0.025 | <0.02 |
| | | 20.0 | 29 | 0.31 |
| | | 22.5 | 1.8 | <0.02 |
| | | 24.5 | <0.025 | <0.02 |
| SB02 | 01/18/17 | 5.0 | <0.025 | <0.02 |
| | | 10.0 | <0.025 | <0.02 |
| | | 12.5 | <0.025 | <0.02 |
| | | 16.0 | 4.1 | 2.2 |
| SB03 | 01/18/17 | 12.5 | <0.025 | <0.02 |
| | | 16.0 | <0.025 | <0.02 |
| SB04 | 01/18/17 | 5.0 | <0.025 | <0.02 |
| | | 12.5 | <0.025 | <0.02 |
| | | 16.0 | <0.025 | <0.02 |
| SB05 | 01/18/17 | 5.0 | <0.025 | <0.02 |
| | | 12.5 | <0.025 | <0.02 |
| | | 16.0 | <0.025 | <0.02 |
| SB06 | 01/18/17 | 10.0 | <0.025 | <0.02 |
| | | 24.0 | <0.025 | <0.02 |
| SB07 | 01/18/17 | 10.0 | <0.025 | <0.02 |
| | | 16.0 | <0.025 | <0.02 |
| SB08 | 01/18/17 | 5.0 | <0.025 | <0.02 |
| | | 10.0 | <0.025 | <0.02 |
| | | 12.5 | <0.025 | 0.29 |
| | | 16.0 | 7.1 | 8.6 |
| B01/MW01 | 02/09/17 | 12.5 | <0.025 | <0.02 |
| | | 17.5 | 58 | 0.45 |
| | | 20.0 | 510 | 0.33 |
| | | 22.5 | 20 | 0.28 |
| | | 27.5 | 0.40 | 0.073 |
| | | 32.5 | 0.31 | <0.02 |
| | | 35.0 | 0.049 | <0.02 |
| B02 | 02/09/17 | 10.0 | <0.025 | <0.02 |
| | | 15.0 | 0.085 | 4.9 |
| | | 20.0 | <0.025 | <0.02 |
| B03 | 02/10/17 | 12.5 | <0.025 | <0.02 |
| | | 15.0 | <0.025 | <0.02 |
| | | 17.5 | 0.36 | 1.5 |
| | | 20.0 | 0.67 | 0.57 |
| | | 22.5 | <0.025 | <0.02 |
| B04 | 02/10/17 | 10.0 | <0.025 | <0.02 |
| | | 12.5 | <0.025 | 0.10 |
| | | 17.5 | <0.025 | <0.02 |
| B05 | 03/22/17 | 40.0 | <0.025 | <0.02 |
| TB01 | 01/24/18 | 15 | <0.025 | <0.02 |
| TB02 | 01/24/18 | 15 | <0.025 | <0.02 |
| TB07 | 01/26/18 | 5 | <0.025 | <0.02 |
| | | 15.0 | <0.025 | <0.02 |
| | | 20 | <0.025 | <0.02 |
| | | 30 | <0.025 | <0.02 |
| TB08 | 01/26/18 | 10.0 | <0.025 | <0.02 |
| | | 12.5 | 0.46 | 0.55 |
| | | 17.5 | 24 | 1.7 |
| | | 20.0 | 2.0 | 0.17 |
| | | 25 | <0.025 | <0.02 |
| B06 | 01/26/18 | 12.5 | <0.025 | 0.097 |
| | | 15 | <0.025 | 0.19 |
| | | 20 | <0.025 | <0.02 |
| | | 50 | <0.025 | <0.02 |
| B07 | 01/25/18 | 12.5 | <0.025 | <0.02 |
| | | 20 | <0.025 | <0.02 |
| B08 | 01/25/18 | 15 | <0.025 | <0.02 |
| | | 20 | <0.025 | <0.02 |
| B09 | 01/25/18 | 17.5 | <0.025 | <0.02 |
| | | 20 | <0.025 | <0.02 |
| B10 | 01/26/18 | 2.5 | <0.025 | <0.02 |
| B11 | 01/26/18 | 15 | <0.025 | <0.02 |
| B12 | 02/07/18 | 10.5-11.5 | 1.2 | 3.1 |
| | | 14-15 | 0.097 | 0.023 |
| | | 17-18 | <0.025 | <0.02 |
| | | 20-21 | <0.025 | <0.02 |
| B13 | 02/07/18 | 15 | <0.025 | <0.02 |
| B14 | 02/07/18 | 15 | <0.025 | 0.13 |
| B15 | 10/01/18 | 10.5-11.5 | <0.025 | <0.02 |
| | | 14-15 | <0.025 | <0.02 |
| | | 17-18 | <0.025 | <0.02 |
| | | 20-21 | <0.025 | <0.02 |
| B16 | 10/01/18 | 10.5-11.5 | <0.025 | 0.072 |
| | | 14-15 | <0.025 | <0.02 |
| | | 17-18 | <0.025 | <0.02 |
| | | 20-21 | <0.025 | <0.02 |
| B17 | 10/02/18 | 15 | <0.025 | <0.02 |
| | | 17.5 | <0.025 | <0.02 |
| | | 20 | <0.025 | <0.02 |
| B18 | 10/02/18 | 10 | <0.025 | <0.02 |
| | | 12.5 | 2.1 | 1.7 |
| | | 15 | 1.8 | 0.43 |
| | | 17.5 | 0.085 | 0.030 |
| | | 20 | <0.025 | <0.02 |
| MTCA Cleanup Level for Soil | | | 0.05 | 0.03 |

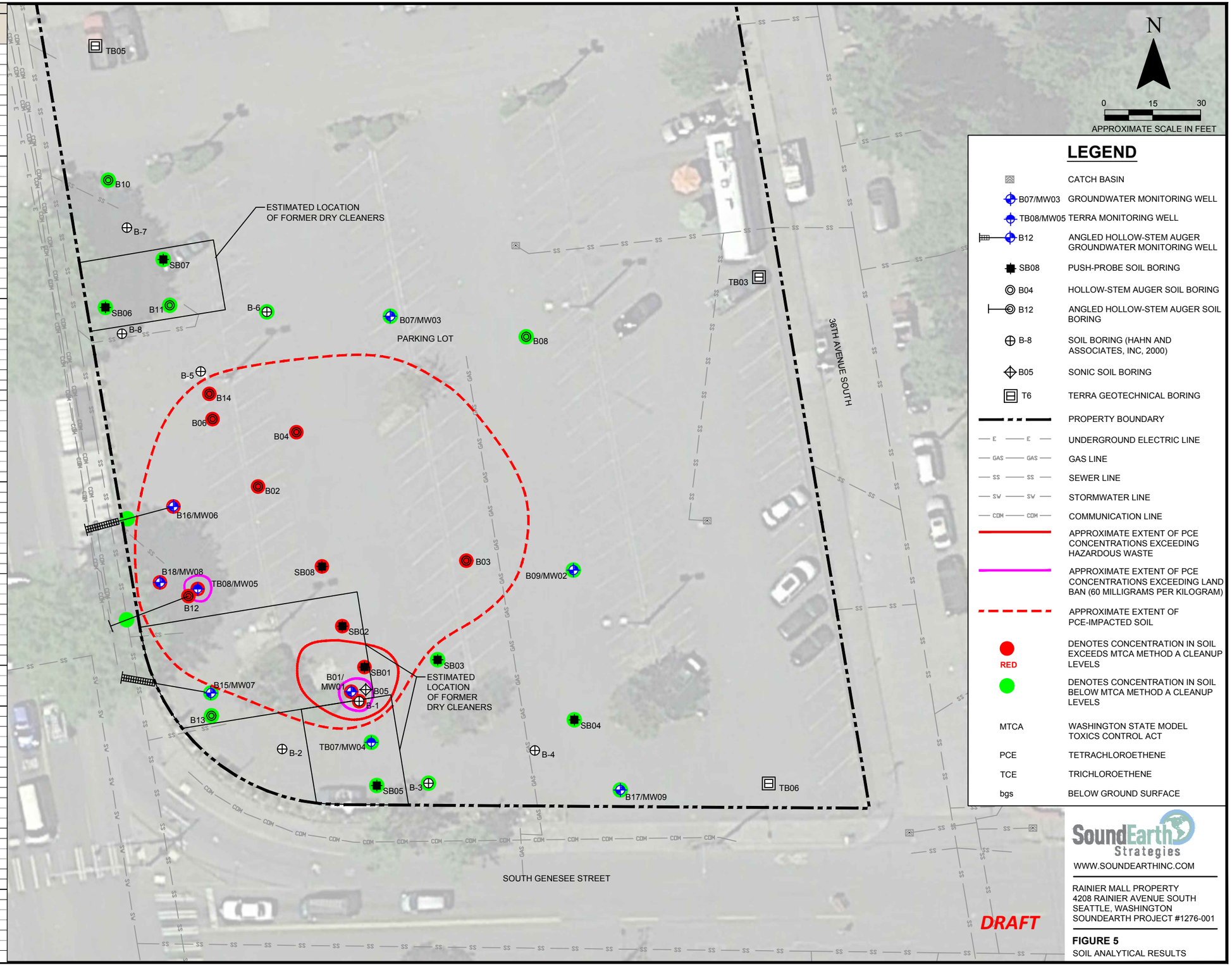


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**FIGURE 5**
SOIL ANALYTICAL RESULTS

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10/15/2018

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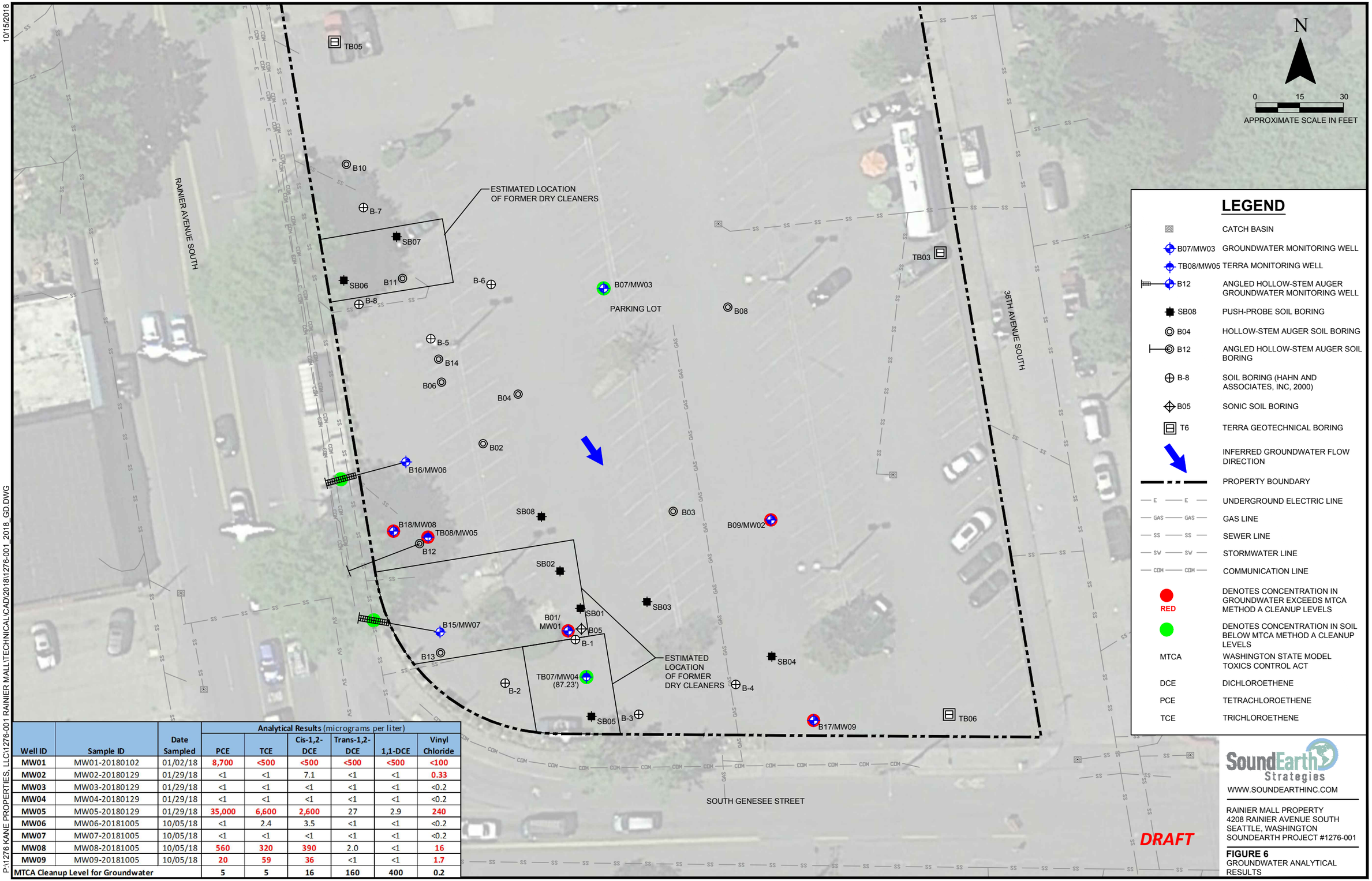


## LEGEND

- CATCH BASIN
- B07/MW03 — GROUNDWATER MONITORING WELL
- TB08/MW05 — TERRA MONITORING WELL
- B12 — ANGLED HOLLOW-STEM AUGER GROUNDWATER MONITORING WELL
- SB08 — PUSH-PROBE SOIL BORING
- B04 — HOLLOW-STEM AUGER SOIL BORING
- B12 — ANGLED HOLLOW-STEM AUGER SOIL BORING
- B-8 — SOIL BORING (HAHN AND ASSOCIATES, INC, 2000)
- B05 — SONIC SOIL BORING
- T6 — TERRA GEOTECHNICAL BORING
- INFERRED GROUNDWATER FLOW DIRECTION
- PROPERTY BOUNDARY
- E — E — UNDERGROUND ELECTRIC LINE
- GAS — GAS — GAS LINE
- SS — SS — SEWER LINE
- SW — SW — STORMWATER LINE
- COM — COM — COMMUNICATION LINE
- RED — DENOTES CONCENTRATION IN GROUNDWATER EXCEEDS MTCA METHOD A CLEANUP LEVELS
- DENOTES CONCENTRATION IN SOIL BELOW MTCA METHOD A CLEANUP LEVELS
- MTCA — WASHINGTON STATE MODEL TOXICS CONTROL ACT
- DCE — DICHLOROETHENE
- PCE — TETRACHLOROETHENE
- TCE — TRICHLOROETHENE

| Well ID | Sample ID | Date Sampled | Analytical Results (micrograms per liter) PCE | TCE | Cis-1,2-DCE | Trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
|---|---|---|---|---|---|---|---|---|
| MW01 | MW01-20180102 | 01/02/18 | 8,700 | <500 | <500 | <500 | <500 | <100 |
| MW02 | MW02-20180129 | 01/29/18 | <1 | <1 | 7.1 | <1 | <1 | 0.33 |
| MW03 | MW03-20180129 | 01/29/18 | <1 | <1 | <1 | <1 | <1 | <0.2 |
| MW04 | MW04-20180129 | 01/29/18 | <1 | <1 | <1 | <1 | <1 | <0.2 |
| MW05 | MW05-20180129 | 01/29/18 | 35,000 | 6,600 | 2,600 | 27 | 2.9 | 240 |
| MW06 | MW06-20181005 | 10/05/18 | <1 | 2.4 | 3.5 | <1 | <1 | <0.2 |
| MW07 | MW07-20181005 | 10/05/18 | <1 | <1 | <1 | <1 | <1 | <0.2 |
| MW08 | MW08-20181005 | 10/05/18 | 560 | 320 | 390 | 2.0 | <1 | 16 |
| MW09 | MW09-20181005 | 10/05/18 | 20 | 59 | 36 | <1 | <1 | 1.7 |
| MTCA Cleanup Level for Groundwater | | | 5 | 5 | 16 | 160 | 400 | 0.2 |

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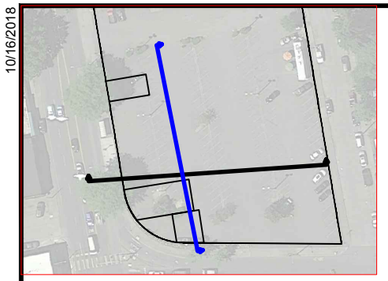
**FIGURE 6**
GROUNDWATER ANALYTICAL RESULTS

10/16/2018



RAINIER MALL PROPERTY

PROPERTY LINE

SOUTH GENESEE STREET

**A** NORTH — **A'** SOUTH

B-6 (6' WEST) | B07/MW03 (26' EAST) | B06 (34' WEST) | B04 (4' WEST) | B02 (19' WEST) | SB08 (4' WEST) | SB02 (1' WEST) | SB01 (1' EAST) | B01/ MW01 (2' WEST) | B05 (2' EAST) | B-1 (1' WEST) | B-2 (27' WEST) | TB07/MW04 | SB05 | B-3 (15' EAST)

FEET BELOW GROUND SURFACE (bgs)

0' / 10' / 20' / 30' / 40' / 50'

FILL

CL/ML

SM

ML

<0.005 <0.005

<0.025 <0.02

<0.025 0.097

<0.025 0.19

<0.025 0.10

0.085 4.9

<0.025 0.29

7.1 8.6

4.1 2.2

29 0.31

1.8 <0.02

58 0.45

510 0.33

83.3 0.272

20 0.28

8,700 <500

0.40 0.073

1,980 288

0.31 <0.02

<0.049 <0.02

<1.0 <1.0

<1 <1

BORING TERMINATED AT 90' BELOW GROUND SURFACE

## LEGEND

(6' WEST) OFFSET 6' WEST

MONITORING WELL

SCREEN INTERVAL

GROUNDWATER LEVEL

APPROXIMATE SCALE IN FEET (0, 5, 10; 10, 20)

**FILL** - SILTY SAND WITH GRAVEL

**CL/ML** - CLAY/SILT WITH THIN SAND LENSES

**SM** - SILTY/ FINE TO COARSE SAND

**ML** - DENSE SILT

APPROXIMATE EXTENT OF PCE CONCENTRATION EXCEEDING HAZARDOUS WASTE (14 mg/kg)

APPROXIMATE EXTENT OF PCE-IMPACTED SOIL

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

- CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL

**SOIL RESULTS (mg/kg):**

0.31 PCE
<0.02 TCE

APPROXIMATE EXTENT OF PCE CONCENTRATION EXCEEDING LAND BAN LIMITS (60 mg/kg)

**CONCENTRATIONS OF CHEMICALS OF CONCERN IN PERCHED GROUNDWATER SAMPLES (µg/L):**

- CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL

**PERCHED GROUNDWATER RESULTS (µg/L):**

8,700 PCE
<500 TCE

| | |
|---|---|
| mg/kg | MILLIGRAMS PER KILOGRAM |
| µg/L | MICROGRAMS PER LITER |
| RED | DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS |
| PCE | TETRACHLOROETHENE |
| TCE | TRICHLOROETHENE |
| MTCA | WASHINGTON STATE MODEL TOXICS CONTROL ACT |
| bgs | BELOW GROUND SURFACE |

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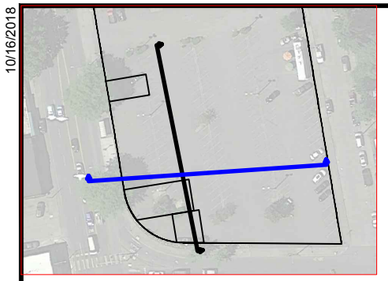
**FIGURE 7**
GEOLOGIC CROSS SECTION A-A'

P:\1276 KANE PROPERTIES, LLC\1276-001 RAINIER MALL\TECHNICAL\CAD\20181\1276-001_2018_XAA.DWG

10/16/2018



RAINIER MALL PROPERTY

**B** **WEST** — **B'** **EAST**

RAINIER AVENUE SOUTH | SIDEWALK | PROPERTY LINE

B18/MW08 (2' NORTH) | B12 | TB08/MW05 (1' SOUTH) | SB08 (3' NORTH) | SB02 (16' SOUTH) | B03 (2' NORTH) | B09/MW02 (3' SOUTH)

FEET BELOW GROUND SURFACE (bgs): 0' | 10' | 20' | 30' | 40' | 50'

APPROXIMATE SIDE SEWER LOCATION

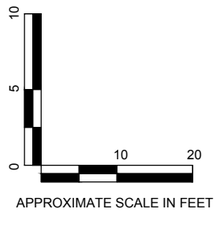
APPROXIMATE GAS LINE LOCATION

FILL

CL/ML

SM

SM




APPROXIMATE SCALE IN FEET

## LEGEND

(1' SOUTH) OFFSET 1' SOUTH

MONITORING WELL

SCREEN INTERVAL

GROUNDWATER LEVEL

**FILL** - SILTY SAND WITH GRAVEL

**CL/ML** - CLAY/SILT WITH THIN SAND LENSES

**SM** - SILTY/ FINE TO COARSE SAND

APPROXIMATE EXTENT OF PCE CONCENTRATION EXCEEDING HAZARDOUS WASTE (14 mg/kg)

APPROXIMATE EXTENT OF PCE-IMPACTED SOIL

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

- CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL

**SOIL RESULTS (mg/kg):**

<0.025 PCE
0.29 TCE

**CONCENTRATIONS OF CHEMICALS OF CONCERN IN PERCHED GROUNDWATER SAMPLES (µg/L):**

- CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL

**PERCHED GROUNDWATER RESULTS (µg/L):**

560 PCE
320 TCE

| | |
|---|---|
| mg/kg | MILLIGRAMS PER KILOGRAM |
| µg/L | MICROGRAMS PER LITER |
| RED | DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS |
| PCE | TETRACHLOROETHENE |
| TCE | TRICHLOROETHENE |
| MTCA | WASHINGTON STATE MODEL TOXICS CONTROL ACT |
| bgs | BELOW GROUND SURFACE |
| VC | VINYL CHLORIDE |

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**FIGURE 8**
GEOLOGIC CROSS SECTION B-B'

P:\1276 KANE PROPERTIES, LLC\1276-001 RAINIER MALL\TECHNICAL\CAD\2018\1276-001_2018_XBB.DWG

# TABLES

SoundEarth Strategies

**Table 1**
**Summary of Soil Analytical Results for CVOCs**
**Rainier Mall Property**
**Seattle, Washington**

***DRAFT***

| Well/Boring ID | Sample ID | Sampled by | Date Sampled | Depth (feet bgs) | Analytical Results[1] (milligrams per kilogram) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Tetrachloroethene | Trichloroethene | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **B-1** | 5015-000628-005 | Hahn | 06/28/00 | 19.5 | **83.3** | **0.272** | <0.005 | -- | -- | <0.01 |
| **B-3** | 5015-000628-018 | Hahn | 06/28/00 | 4.5 | <0.005 | <0.005 | <0.005 | -- | -- | <0.01 |
| **B-6** | 5015-000628-039 | Hahn | 06/29/00 | 7.0 | <0.005 | <0.005 | <0.005 | -- | -- | <0.01 |
| **B-8** | 5015-000628-055 | Hahn | 06/29/00 | 4.5 | <0.005 | <0.005 | <0.005 | -- | -- | <0.01 |
| **SB01** | SB01-5.0 | SoundEarth | 01/18/17 | 5.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB01-10.0 | | | 10.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB01-20.0 | | | 20.0 | **29** | **0.31** | <0.05 | <0.05 | -- | <0.05 |
| | SB01-22.5 | | | 22.5 | **1.8** | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB01-24.5 | | | 24.5 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **SB02** | SB02-5.0 | SoundEarth | 01/18/17 | 5.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB02-10.0 | | | 10.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB02-12.5 | | | 12.5 | <0.025 | <0.02 | 6.7 | 0.052 | -- | **2.2** |
| | SB02-16.0 | | | 16.0 | **4.1** | **2.2** | 1.1 | <0.05 | -- | 0.052 |
| **SB03** | SB03-12.5 | SoundEarth | 01/18/17 | 12.5 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB03-16.0 | | | 16.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **SB04** | SB04-5.0 | SoundEarth | 01/18/17 | 5.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB04-12.5 | | | 12.5 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB04-16.0 | | | 16.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **SB05** | SB05-5.0 | SoundEarth | 01/18/17 | 5.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB05-12.5 | | | 12.5 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB05-16.0 | | | 16.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **SB06** | SB06-10.0 | SoundEarth | 01/18/17 | 10.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB06-24.0 | | | 24.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **SB07** | SB07-10.0 | SoundEarth | 01/18/17 | 10.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB07-16.0 | | | 16.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **SB08** | SB08-5.0 | SoundEarth | 01/18/17 | 5.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB08-10 | | | 10.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | SB08-12.5 | | | 12.5 | <0.025 | **0.29** | 1.3 | 0.086 | -- | <0.05 |
| | SB08-16.0 | | | 16.0 | **7.1** | **8.6** | 10 | 0.056 | -- | 0.24 |
| **B01/MW01** | B01-12.5 | SoundEarth | 02/09/17 | 12.5 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | B01-17.5 | | | 17.5 | **58** | **0.45** | <0.05 | <0.05 | -- | <0.05 |
| | B01-20 | | | 20.0 | **510** | **0.33** | <0.05 | <0.05 | -- | <0.05 |
| | B01-22.5 | | | 22.5 | **20** | **0.28** | <0.05 | <0.05 | -- | <0.05 |
| | B01-27.5 | | | 27.5 | **0.40**[ht] | **0.073**[ht] | <0.05[ht] | <0.05[ht] | -- | <0.05[ht] |
| | B01-32.5 | | | 32.5 | **0.31**[ht] | <0.02[ht] | <0.05[ht] | <0.05[ht] | -- | <0.05[ht] |
| | B01-35 | | | 35.0 | 0.049[ht] | <0.02[ht] | <0.05[ht] | <0.05[ht] | -- | <0.05[ht] |
| **MTCA Cleanup Level for Soil** | | | | | **0.05**[(2)] | **0.03**[(2)] | **160**[(3)] | **1,600**[(3)] | **4,000**[(3)] | **0.67**[(4)] |

SoundEarth Strategies

**Table 1**
**Summary of Soil Analytical Results for CVOCs**
**Rainier Mall Property**
**Seattle, Washington**

***DRAFT***

| Well/Boring ID | Sample ID | Sampled by | Date Sampled | Depth (feet bgs) | Analytical Results[1] (milligrams per kilogram) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Tetrachloroethene | Trichloroethene | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **B02** | B02-10 | SoundEarth | 02/09/17 | 10.0 | <0.025 | <0.02 | 0.13 | <0.05 | -- | <0.05 |
| | B02-15 | | | 15.0 | **0.085** | **4.9** | 6.7 | 0.25 | -- | 0.097 |
| | B02-20 | | | 20.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **B03** | B03-12.5 | SoundEarth | 02/10/17 | 12.5 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | B03-15 | | | 15.0 | <0.025 | <0.02 | 0.082 | <0.05 | -- | <0.05 |
| | B03-17.5 | | | 17.5 | **0.36** | **1.5** | 1.1 | <0.05 | -- | <0.05 |
| | B03-20 | | | 20.0 | **0.67** | **0.57** | 0.41 | <0.05 | -- | <0.05 |
| | B03-22.5 | | | 22.5 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **B04** | B04-10 | SoundEarth | 02/10/17 | 10.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| | B04-12.5 | | | 12.5 | <0.025 | **0.10** | 0.79 | 0.12 | -- | <0.05 |
| | B04-17.5 | | | 17.5 | <0.025 | <0.02 | 0.32 | <0.05 | -- | <0.05 |
| **B05** | B05-40 | SoundEarth | 03/22/17 | 40.0 | <0.025 | <0.02 | <0.05 | <0.05 | -- | <0.05 |
| **TB01** | TB01-15 | SoundEarth | 01/24/18 | 15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **TB02** | TB02-15 | SoundEarth | 01/24/18 | 15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **TB07** | TB07-05 | SoundEarth | 01/26/18 | 5 | <0.025 | <0.02 | <0.05 | -- | <0.05 | <0.05 |
| | TB07-15 | | | 15.0 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | TB07-20 | | | 20 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | TB07-30 | | | 30 | <0.025 | <0.02 | <0.05 | -- | <0.05 | <0.05 |
| **TB08** | TB08-10 | SoundEarth | 01/26/18 | 10.0 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | TB02-12.5 | | | 12.5 | **0.46** | **0.55** | 0.21 | -- | <0.05 | <0.05 |
| | TB08-17.5 | | | 17.5 | **24** | **1.7** | 0.45 | -- | <0.05 | <0.05 |
| | TB08-20 | | | 20.0 | **2.0** | **0.17** | 0.06 | -- | <0.05 | <0.05 |
| | TB08-25 | | | 25 | <0.025 | <0.02 | <0.05 | -- | <0.05 | <0.05 |
| **B06** | B06-12.5 | SoundEarth | 01/26/18 | 12.5 | <0.025 | **0.097** | 0.15 | -- | <0.05 | <0.05 |
| | B06-15 | | | 15 | <0.025 | **0.19** | 0.47 | <0.05 | <0.05 | <0.05 |
| | B06-20 | | | 20 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B06-50 | | | 50 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B07** | B07-12.5 | SoundEarth | 01/25/18 | 12.5 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B07-20 | | | 20 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B08** | B08-15 | SoundEarth | 01/25/18 | 15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B08-20 | | | 20 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B09** | B09-17.5 | SoundEarth | 01/25/18 | 17.5 | <0.025 | <0.02 | <0.05 | -- | <0.05 | <0.05 |
| | B09-20 | | | 20 | <0.025 | <0.02 | <0.05 | -- | <0.05 | <0.05 |
| **MTCA Cleanup Level for Soil** | | | | | **0.05**[2] | **0.03**[2] | **160**[3] | **1,600**[3] | **4,000**[3] | **0.67**[4] |

SoundEarth Strategies

**Table 1**
**Summary of Soil Analytical Results for CVOCs**
**Rainier Mall Property**
**Seattle, Washington**

*DRAFT*

| Well/Boring ID | Sample ID | Sampled by | Date Sampled | Depth (feet bgs) | Analytical Results[1] (milligrams per kilogram) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Tetrachloroethene | Trichloroethene | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **B10** | B10-2.5 | SoundEarth | 01/26/18 | 2.5 | <0.025 | <0.02 | -- | -- | <0.05 | <0.05 |
| **B11** | B11-15 | SoundEarth | 01/26/18 | 15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B12** | B12-10.5 | SoundEarth | 02/07/18 | 10.5–11.5 | **1.2** | **3.1** | 0.88 | <0.05 | <0.05 | <0.05 |
| | B12-14 | | | 14–15 | **0.097** | **0.023** | <0.05 | <0.05 | <0.05 | <0.05 |
| | B12-17 | | | 17–18 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B12-20 | | | 20–21 | <0.025 | <0.02 | <0.05 | -- | <0.05 | <0.05 |
| **B13** | B13-15 | SoundEarth | 02/07/18 | 15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B14** | B14-15 | SoundEarth | 02/07/18 | 15 | <0.025 | **0.13** | 0.40 | <0.05 | <0.05 | <0.05 |
| **B15** | B15-11 | SoundEarth | 10/01/18 | 10.5–11.5 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B15-14 | | | 14–15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B15-17 | | | 17–18 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B15-20 | | | 20–21 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B16** | B16-11 | SoundEarth | 10/01/18 | 10.5–11.5 | <0.025 | **0.072** | <0.05 | <0.05 | <0.05 | <0.05 |
| | B16-14 | | | 14–15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B16-17 | | | 17–18 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B16-20 | | | 20–21 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B17** | B17-15 | SoundEarth | 10/02/18 | 15 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B17-17.5 | | | 17.5 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| | B17-20 | | | 20 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **B18** | B18-10 | SoundEarth | 10/02/18 | 10 | <0.025 | <0.02 | 0.51 | <0.05 | <0.05 | <0.05 |
| | B18-12.5 | | | 12.5 | **2.1** | **1.7** | 0.93 | <0.05 | <0.05 | <0.05 |
| | B18-15 | | | 15 | **1.8** | **0.43** | 0.38 | <0.05 | <0.05 | <0.05 |
| | B18-17.5 | | | 17.5 | **0.085** | **0.030** | <0.05 | <0.05 | <0.05 | <0.05 |
| | B18-20 | | | 20 | <0.025 | <0.02 | <0.05 | <0.05 | <0.05 | <0.05 |
| **MTCA Cleanup Level for Soil** | | | | | **0.05**[2] | **0.03**[2] | **160**[3] | **1,600**[3] | **4,000**[3] | **0.67**[4] |

NOTES:

**Red** denotes concentration exceeds MTCA cleanup level for soil.

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

Hahn samples analyzed by Environmental Services Laboratory, Inc. in Portland, Oregon.

[1]Samples analyzed by EPA Method 8260C.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Noncancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

[4]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Cancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

Laboratory Notes:

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

-- = not analyzed/not applicable

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

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

CVOC = chlorinated volatile organic compound

EPA = U.S. Environmental Protection Agency

Hahn = Hahn and Associates, Inc.

MTCA = Washington State Model Toxics Control Act

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washington Administrative Code

SoundEarth Strategies

**Table 2**
**Summary of Soil Analytical Results for Total Metals**
**Rainier Mall Property**
**Seattle, Washington**

***DRAFT***

| Well/Boring ID | Sample ID | Date Sampled | Depth (feet bgs) | Analytical Results[1] (milligrams per kilogram) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Silver |
| **TB01** | TB01-05 | 01/24/18 | 5 | 2.54 | -- | <1 | 18.8 | 4.82 | <1 | -- | -- |
| **TB03** | TB03-05 | 01/24/18 | 5 | 2.39 | -- | <1 | 28.2 | 4.26 | <1 | -- | -- |
| **TB04** | TB04-05 | 01/26/18 | 5 | 1.79 | -- | <1 | 12.1 | 8.10 | <1 | -- | -- |
| **B06** | B06-05 | 01/26/18 | 5 | 6.73 | -- | <1 | 18.0 | 8.81 | <1 | -- | -- |
| **B09** | B09-05 | 01/26/18 | 5 | 3.17 | -- | <1 | 26.8 | 4.06 | <1 | -- | -- |
| **MTCA Cleanup Level for Soil** | | | | **20**[2] | **16,000**[3] | **2**[2] | **2,000**[2] | **250**[2] | **2**[2] | **400**[3] | **400**[3] |

NOTES:

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

**Red** denotes concentration exceeds MTCA cleanup level for soil.

[1]Samples analyzed by EPA Method 6020A.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Noncancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

-- = not analyzed/not applicable

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

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

EPA = United States Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

WAC = Washington Administrative Code

SoundEarth Strategies

**Table 3**
**Summary of Groundwater Analytical Results for CVOCs**
**Rainier Mall Property**
**Seattle, Washington**

*DRAFT*

| Well ID | Sample ID | Sampled By | Date Sampled | Analytical Results[1] (micrograms per liter) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Tetrachloroethene | Trichloroethene | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | 1,1-Dichloroethene | Vinyl Chloride |
| **B-1** | B-1 (29-32) | Hahn | 06/28/00 | **1,980** | **288** | **25.7** | -- | <1.0 | <1.2 |
| **B-3** | B-3 (27-30) | Hahn | 06/28/00 | <1.0 | <1.0 | 1.8 | -- | <1.0 | <1.2 |
| **B-4** | B-4 (27-30) | Hahn | 06/28/00 | **3,800** | **1,100** | **40.8** | -- | 2.94 | **4.37** |
| **B-5** | B-5 (23-36) | Hahn | 06/29/00 | <1.0 | <1.0 | <1.0 | -- | <1.0 | <1.2 |
| **B-7** | B-7 (23-26) | Hahn | 06/29/00 | 1.25 | <1.0 | <1.0 | -- | <1.0 | <1.2 |
| **MW01** | MW01-20180102 | SoundEarth | 01/02/18 | **8,700** | **<500** | **<500** | **<500** | **<500** | **<100** |
| **MW02** | MW02-20180129 | SoundEarth | 01/29/18 | <1 | <1 | 7.1 | <1 | <1 | **0.33** |
| **MW03** | MW03-20180129 | SoundEarth | 01/29/18 | <1 | <1 | <1 | <1 | <1 | <0.2 |
| **MW04** | MW04-20180129 | SoundEarth | 01/29/18 | <1 | <1 | <1 | <1 | <1 | <0.2 |
| **MW05** | MW05-20180129 | SoundEarth | 01/29/18 | **35,000** | **6,600** | **2,600** | 27 | 2.9 | **240** |
| **MW06** | MW06-20181005 | SoundEarth | 10/05/18 | <1 | 2.4 | 3.5 | <1 | <1 | <0.2 |
| **MW07** | MW07-20181005 | SoundEarth | 10/05/18 | <1 | <1 | <1 | <1 | <1 | <0.2 |
| **MW08** | MW08-20181005 | SoundEarth | 10/05/18 | **560** | **320** | **390** | 2.0 | <1 | **16** |
| | MW99-20181005 (DUP) | SoundEarth | 10/05/18 | **560** | **320** | **380** | 1.9 | <1 | **16** |
| **MW09** | MW09-20181005 | SoundEarth | 10/05/18 | **20** | **59** | **36** | <1 | <1 | **1.7** |
| **MTCA Cleanup Level for Groundwater** | | | | **5**[2] | **5**[2] | **16**[3] | **160**[3] | **400**[3] | **0.2**[2] |

NOTES:

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

**Red** denotes concentration exceeds MTCA cleanup level for groundwater.

[1]Samples analyzed by U.S. Environmental Protection Agency Method 8260C.

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

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Groundwater, Method B, Non cancer, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

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

-- = not analyzed/not applicable

CLARC = Cleanup Levels and Risk Calculations

CVOC = chlorinated volatile organic compound

DUP = Duplicate sample for quality assurance purposes

EPA = U.S. Environmental Protection Agency

Hahn = Hahn and Associates, Inc.

MTCA = Washington State Model Toxics Control Act

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washington Administrative Code

# ATTACHMENT A
# LABORATORY ANALYTICAL 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.

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

October 11, 2018

Logan Schumacher, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Schumacher:

Included are the results from the testing of material submitted on October 2, 2018 from the SOU_1276-001_ 20181002, F&BI 810054 project. There are 20 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
SOU1011R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 2, 2018 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1276-001_ 20181002, F&BI 810054 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | SoundEarth Strategies |
|---|---|
| 810054 -01 | B16-07 |
| 810054 -02 | B16-11 |
| 810054 -03 | B16-14 |
| 810054 -04 | B16-17 |
| 810054 -05 | B16-20 |
| 810054 -06 | B16-25 |
| 810054 -07 | B16-28 |
| 810054 -08 | B15-07 |
| 810054 -09 | B15-11 |
| 810054 -10 | B15-14 |
| 810054 -11 | B15-17 |
| 810054 -12 | B15-20 |
| 810054 -13 | B15-25 |
| 810054 -14 | B15-28 |
| 810054 -15 | B18-05 |
| 810054 -16 | B18-10 |
| 810054 -17 | B18-12.5 |
| 810054 -18 | B18-15 |
| 810054 -19 | B18-17.5 |
| 810054 -20 | B18-20 |
| 810054 -21 | B18-25 |
| 810054 -22 | B18-30 |
| 810054 -23 | B17-05 |
| 810054 -24 | B17-10 |
| 810054 -25 | B17-12.5 |
| 810054 -26 | B17-15 |
| 810054 -27 | B17-17.5 |
| 810054 -28 | B17-20 |
| 810054 -29 | B17-25 |
| 810054 -30 | B17-30 |
| 810054 -31 | B17-35 |

All quality control requirements were acceptable.

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B16-11 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-02 |
| Date Analyzed: | 10/08/18 | Data File: | 100823.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 100 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | 0.072 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B16-14 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-03 |
| Date Analyzed: | 10/08/18 | Data File: | 100824.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 98 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B16-17 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-04 |
| Date Analyzed: | 10/08/18 | Data File: | 100825.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 97 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B16-20 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-05 |
| Date Analyzed: | 10/08/18 | Data File: | 100826.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 97 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B15-11 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-09 |
| Date Analyzed: | 10/08/18 | Data File: | 100827.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 100 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B15-14 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-10 |
| Date Analyzed: | 10/08/18 | Data File: | 100828.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 101 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B15-17 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-11 |
| Date Analyzed: | 10/08/18 | Data File: | 100829.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 97 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B15-20 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-12 |
| Date Analyzed: | 10/08/18 | Data File: | 100830.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B18-10 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-16 |
| Date Analyzed: | 10/08/18 | Data File: | 100831.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 100 | 55 | 145 |
| 4-Bromofluorobenzene | 97 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | 0.51 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B18-12.5 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-17 |
| Date Analyzed: | 10/08/18 | Data File: | 100832.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 97 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | 0.93 |
| Trichloroethene | 1.7 |
| Tetrachloroethene | 2.1 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B18-15 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-18 |
| Date Analyzed: | 10/08/18 | Data File: | 100833.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 97 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | 0.38 |
| Trichloroethene | 0.43 |
| Tetrachloroethene | 1.8 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B18-17.5 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-19 |
| Date Analyzed: | 10/08/18 | Data File: | 100834.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 97 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | 0.030 |
| Tetrachloroethene | 0.085 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B18-20 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-20 |
| Date Analyzed: | 10/08/18 | Data File: | 100835.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 100 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B17-15 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-26 |
| Date Analyzed: | 10/08/18 | Data File: | 100836.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 98 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B17-17.5 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-27 |
| Date Analyzed: | 10/08/18 | Data File: | 100837.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 98 | 55 | 145 |
| 4-Bromofluorobenzene | 97 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | B17-20 | Client: | SoundEarth Strategies |
| Date Received: | 10/02/18 | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 810054-28 |
| Date Analyzed: | 10/09/18 | Data File: | 100838.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 96 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | Method Blank | Client: | SoundEarth Strategies |
| Date Received: | Not Applicable | Project: | SOU_1276-001_ 20181002 |
| Date Extracted: | 10/08/18 | Lab ID: | 08-2226 mb |
| Date Analyzed: | 10/08/18 | Data File: | 100807.D |
| Matrix: | Soil | Instrument: | GCMS4 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 62 | 142 |
| Toluene-d8 | 99 | 55 | 145 |
| 4-Bromofluorobenzene | 95 | 65 | 139 |

| Compounds: | Concentration mg/kg (ppm) |
|---|---|
| Vinyl chloride | <0.05 |
| 1,1-Dichloroethene | <0.05 |
| trans-1,2-Dichloroethene | <0.05 |
| cis-1,2-Dichloroethene | <0.05 |
| Trichloroethene | <0.02 |
| Tetrachloroethene | <0.025 |

Date of Report: 10/11/18
Date Received: 10/02/18
Project: SOU_1276-001_ 20181002, F&BI 810054

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

Laboratory Code: 810054-28 (Matrix Spike)

| Analyte | Reporting Units | Spike Level | Sample Result (Wet wt) | Percent Recovery MS | Percent Recovery MSD | Acceptance Criteria | RPD (Limit 20) |
|---|---|---|---|---|---|---|---|
| Vinyl chloride | mg/kg (ppm) | 2.5 | <0.05 | 44 | 43 | 10-138 | 2 |
| 1,1-Dichloroethene | mg/kg (ppm) | 2.5 | <0.05 | 65 | 65 | 10-160 | 0 |
| trans-1,2-Dichloroethene | mg/kg (ppm) | 2.5 | <0.05 | 72 | 71 | 14-137 | 1 |
| cis-1,2-Dichloroethene | mg/kg (ppm) | 2.5 | <0.05 | 81 | 82 | 25-135 | 1 |
| Trichloroethene | mg/kg (ppm) | 2.5 | <0.02 | 79 | 80 | 21-139 | 1 |
| Tetrachloroethene | mg/kg (ppm) | 2.5 | <0.025 | 80 | 80 | 20-133 | 0 |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | Percent Recovery LCS | Acceptance Criteria |
|---|---|---|---|---|
| Vinyl chloride | mg/kg (ppm) | 2.5 | 80 | 22-139 |
| 1,1-Dichloroethene | mg/kg (ppm) | 2.5 | 97 | 47-128 |
| trans-1,2-Dichloroethene | mg/kg (ppm) | 2.5 | 95 | 67-127 |
| cis-1,2-Dichloroethene | mg/kg (ppm) | 2.5 | 98 | 72-113 |
| Trichloroethene | mg/kg (ppm) | 2.5 | 95 | 64-117 |
| Tetrachloroethene | mg/kg (ppm) | 2.5 | 95 | 72-114 |

# 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.

810054

# SAMPLE CHAIN OF CUSTODY ME 10-02-18

D041 V5

Page # 1 of 4

Send Report to Logan Schumacher

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. 1276-001

PO #

REMARKS Hold All, PM to determine analysis required.

TURNAROUND TIME
Standard (2 Weeks)
RUSH Hold
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 | VOCs by 8260 | SVOCs by 8270 | CVOCs by 8260C | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B16-07 | B16 | 7 | 01 | 10/1/18 | 0905 | soil | 5 | | | | | | | | | X-per LS |
| ○ B16-11 | | 11 | 02 | | 0915 | | | | | | | | X | | | 10/3/18 |
| ○ B16-14 | | 14 | 03 | | 0930 | | | | | | | | X | | | ME |
| ○ B16-17 | | 17 | 04 | | 0940 | | | | | | | | X | | | |
| ○ B16-20 | | 20 | 05 | | 0950 | | | | | | | | X | | | |
| B16-25 | | 25 | 06 | | 1010 | | | | | | | | | | | |
| B16-28 | ↓ | 28 | 07 | | 1015 | | | | | | | | | | | |
| B15-07 | B15 | 7 | 08 | | 1335 | | | | | | | | | | | |
| ○ B15-11 | ↓ | 11 | 09 | | 1340 | | | | | | | | X | | | |
| ○ B15-14 | ↓ | 14 | 10 | ↓ | 1400 | ↓ | ↓ | | | | | | X | | | |

Samples received at 4 °C

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Sarah Wolter | SES | 10/2/18 | 1057 |
| Received by: | Matt Langston | FBI | 10/2/18 | 1657 |
| 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

# SAMPLE CHAIN OF CUSTODY

810054 HE 10-02-18 004 VES

Page # 2 of 4

Send Report to: Logan Schumacher
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.: 1276-001
PO #:
REMARKS: Hold AM

TURNAROUND TIME
Standard (2 Weeks)
RUSH Hold
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 | VOCs by 8260 | SVOCs by 8270 | CVOCs by 8260C | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B15-17 | B15 | 17 | 11 | 10/1/18 | 1410 | Soil | 5 | | | | | | X | | | |
| B15-20 | | 20 | 12 | | 1420 | | | | | | | | X | | | |
| B15-25 | | 25 | 13 | | 1435 | | | | | | | | | | | |
| B15-28 | | 28 | 14 | | 1445 | | | | | | | | | | | |
| B18-05 | B18 | 5 | 15 | 10/2/18 | 0810 | Soil | 5 | | | | | | | | | |
| B18-10 | | 10 | 16 | | 0845 | | | | | | | | X | | | |
| B18-12.5 | | 12.5 | 17 | | 0850 | | | | | | | | X | | | |
| B18-15 | | 15 | 18 | | 0906 | | | | | | | | X | | | |
| B18-17.5 | | 17.5 | 19 | | 0902 | | | | | | | | X | | | Samples received at 4 °C |
| B18-20 | | 20 | 20 | | 0905 | | | | | | | | X | | | |

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: Sarah Walter | Sarah Walter | SES | 10/2/18 | 1657 |
| Received by: | Matt Langstaff | FBTA | 10/2/18 | 1657 |
| Relinquished by: | | | | |
| Received by: | | | | |

*Friedman & Bruya, Inc.*
*3012 16th Avenue West*
*Seattle, WA 98119-2029*
*Ph. (206) 285-8282*
*Fax (206) 283-5044*
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810054

# SAMPLE CHAIN OF CUSTODY

ME 10-02-18 D04 V35

Page # 3 of 4

Send Report to Logan Schumacher

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. 1276-001

PO #

REMARKS Hold All

**TURNAROUND TIME**
Standard (2 Weeks)
RUSH Hold
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 | VOCs by 8260 | SVOCs by 8270 | CVOCs by 8260C | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B18-25 | B18 | 25 | 21 | 10/2/18 | 0912 | Soil | 5 | | | | | | | | | |
| B18-30 | ↓ | 30 | 22 | ↓ | 0920 | ↓ | ↓ | | | | | | | | | |
| B17-05 | B17 | 05 | 23 | 10/2/18 | 1030 | Soil | 5 | | | | | | | | | |
| B17-10 | | 10 | 24 | | 1033 | | | | | | | | | | | |
| B17-12.5 | | 12.5 | 25 | | 1037 | | | | | | | | | | | |
| B17-15 | | 15 | 26 | | 1042 | | | | | | | | X | | | |
| B17-17.5 | | 17.5 | 27 | | 1048 | | | | | | | | X | | | |
| B17-20 | | 20 | 28 | | 1053 | | | | | | | | X | | | |
| B17-25 | | 25 | 29 | | 1058 | | | | | | | | | | | Samples received at 4 °C |
| B17-30 | ↓ | 30 | 30 | ↓ | 1107 | ↓ | ↓ | | | | | | | | | |


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


FORMS\COC\COC.DOC

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: Sarah Walter | Sarah Walter | SES | 10/2/18 | 1657 |
| Received by: | Matt Langston | FBI | 10/2/18 | 1657 |
| Relinquished by: | | | | |
| Received by: | | | | |

# SAMPLE CHAIN OF CUSTODY

1810054 ME 10-02-18 D04 Page # 4 of 4 VSS

Send Report to Logan Schumacher
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. 1276-001
PO #
REMARKS ~~Hold~~ AM

TURNAROUND TIME
Standard (2 Weeks)
RUSH Hold
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 | VOCs by 8260 | SVOCs by 8270 | CVOCs by 8260C | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B17-35 | B17 | 35 | 3 | 10/2/18 | 1135 | S | 5 | | | | | | | | | |

Samples received at 4 °C

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

FORMS\COC\COC.DOC

| | SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|---|
| Relinquished by: | Sarah Twitty | Sarah Twitty | SES | 10/2/18 | 1657 |
| Received by: | | Matt Langston | FB | 10/2/18 | 1657 |
| 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 12, 2018

Logan Schumacher, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Schumacher:

Included are the results from the testing of material submitted on October 5, 2018 from the SOU_1276-001_ 20181005, F&BI 810141 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
SOU1012R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 5, 2018 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_1276-001_ 20181005, F&BI 810141 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | SoundEarth Strategies |
|---|---|
| 810141 -01 | MW09-20181005 |
| 810141 -02 | MW07-20181005 |
| 810141 -03 | MW06-20181005 |

All quality control requirements were acceptable.

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | MW09-20181005 | Client: | SoundEarth Strategies |
| Date Received: | 10/05/18 | Project: | SOU_1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 810141-01 |
| Date Analyzed: | 10/08/18 | Data File: | 100809.D |
| Matrix: | Water | Instrument: | GCMS9 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 50 | 150 |
| Toluene-d8 | 99 | 50 | 150 |
| 4-Bromofluorobenzene | 96 | 50 | 150 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| Vinyl chloride | 1.7 |
| Chloroethane | <1 |
| 1,1-Dichloroethene | <1 |
| Methylene chloride | <5 |
| trans-1,2-Dichloroethene | <1 |
| 1,1-Dichloroethane | <1 |
| cis-1,2-Dichloroethene | 36 |
| 1,2-Dichloroethane (EDC) | <1 |
| 1,1,1-Trichloroethane | <1 |
| Trichloroethene | 59 |
| Tetrachloroethene | 20 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | MW07-20181005 | Client: | SoundEarth Strategies |
| Date Received: | 10/05/18 | Project: | SOU_1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 810141-02 |
| Date Analyzed: | 10/08/18 | Data File: | 100810.D |
| Matrix: | Water | Instrument: | GCMS9 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 50 | 150 |
| Toluene-d8 | 100 | 50 | 150 |
| 4-Bromofluorobenzene | 97 | 50 | 150 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| 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: | MW06-20181005 | Client: | SoundEarth Strategies |
| Date Received: | 10/05/18 | Project: | SOU_1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 810141-03 |
| Date Analyzed: | 10/08/18 | Data File: | 100811.D |
| Matrix: | Water | Instrument: | GCMS9 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 50 | 150 |
| Toluene-d8 | 99 | 50 | 150 |
| 4-Bromofluorobenzene | 95 | 50 | 150 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| 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 | 3.5 |
| 1,2-Dichloroethane (EDC) | <1 |
| 1,1,1-Trichloroethane | <1 |
| Trichloroethene | 2.4 |
| Tetrachloroethene | <1 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | Method Blank | Client: | SoundEarth Strategies |
| Date Received: | Not Applicable | Project: | SOU_1276-001_ 20181005 |
| Date Extracted: | 10/18/18 | Lab ID: | 08-2224 mb |
| Date Analyzed: | 10/08/18 | Data File: | 100806.D |
| Matrix: | Water | Instrument: | GCMS9 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 50 | 150 |
| Toluene-d8 | 99 | 50 | 150 |
| 4-Bromofluorobenzene | 96 | 50 | 150 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| 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: 10/12/18
Date Received: 10/05/18
Project: SOU_1276-001_ 20181005, F&BI 810141

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

Laboratory Code: 810158-04 (Matrix Spike)

| Analyte | Reporting Units | Spike Level | Sample Result | Percent Recovery MS | Acceptance Criteria |
|---|---|---|---|---|---|
| Vinyl chloride | ug/L (ppb) | 50 | 0.34 | 95 | 61-139 |
| Chloroethane | ug/L (ppb) | 50 | <1 | 98 | 55-149 |
| 1,1-Dichloroethene | ug/L (ppb) | 50 | <1 | 96 | 71-123 |
| Methylene chloride | ug/L (ppb) | 50 | <5 | 96 | 61-126 |
| trans-1,2-Dichloroethene | ug/L (ppb) | 50 | <1 | 95 | 72-122 |
| 1,1-Dichloroethane | ug/L (ppb) | 50 | <1 | 98 | 79-113 |
| cis-1,2-Dichloroethene | ug/L (ppb) | 50 | <1 | 97 | 63-126 |
| 1,2-Dichloroethane (EDC) | ug/L (ppb) | 50 | <1 | 103 | 70-119 |
| 1,1,1-Trichloroethane | ug/L (ppb) | 50 | <1 | 98 | 75-121 |
| Trichloroethene | ug/L (ppb) | 50 | <1 | 96 | 73-122 |
| Tetrachloroethene | ug/L (ppb) | 50 | <1 | 96 | 72-113 |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | Percent Recovery LCS | Percent Recovery LCSD | Acceptance Criteria | RPD (Limit 20) |
|---|---|---|---|---|---|---|
| Vinyl chloride | ug/L (ppb) | 50 | 95 | 95 | 70-128 | 0 |
| Chloroethane | ug/L (ppb) | 50 | 97 | 97 | 66-149 | 0 |
| 1,1-Dichloroethene | ug/L (ppb) | 50 | 100 | 99 | 75-119 | 1 |
| Methylene chloride | ug/L (ppb) | 50 | 100 | 100 | 63-132 | 0 |
| trans-1,2-Dichloroethene | ug/L (ppb) | 50 | 95 | 95 | 76-118 | 0 |
| 1,1-Dichloroethane | ug/L (ppb) | 50 | 98 | 97 | 77-119 | 1 |
| cis-1,2-Dichloroethene | ug/L (ppb) | 50 | 96 | 96 | 76-119 | 0 |
| 1,2-Dichloroethane (EDC) | ug/L (ppb) | 50 | 101 | 100 | 78-114 | 1 |
| 1,1,1-Trichloroethane | ug/L (ppb) | 50 | 99 | 98 | 80-116 | 1 |
| Trichloroethene | ug/L (ppb) | 50 | 96 | 95 | 72-119 | 1 |
| Tetrachloroethene | ug/L (ppb) | 50 | 94 | 93 | 78-109 | 1 |

# Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8/0141

# SAMPLE CH[AIN] OF CUSTODY

ME 10-05-18

PO#

Page # 1 of 1 (2)

Send Report to Logan Schumacher

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. 1276-001

PO #

REMARKS

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

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

| Sample ID | 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 | CVOCs by 8260C | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW09-20181005 | MW09 | — | 01 | 10/5/18 | 0855 | H2O | 4 | | | | X | | | | | |
| MW07-20181005 | MW07 | — | 02 | " | 0907 | " | 1 | | | | X | | | | | |
| MW06-20181005 | MW06 | — | 03 | " | 0944 | " | 1 | | | | X | | | | | |
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Samples received at 4 °C

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

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Clare Tourtin | SoundEarth | 10/5/18 | 1445 |
| Received by: | Liz Wachter-Bye | FBI | 10/5/18 | 1445 |
| Relinquished by: | | | | |
| Received by: | | | | |

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

October 15, 2018

Logan Schumacher, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr Schumacher:

Included are the results from the testing of material submitted on October 5, 2018 from the SOU_ 1276-001_ 20181005, F&BI 810142 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
SOU1015R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 5, 2018 by Friedman & Bruya, Inc. from the SoundEarth Strategies 1276-001 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | SoundEarth Strategies |
|---|---|
| 810142 -01 | MW08-20181005 |
| 810142 -02 | MW99-20181005 |

All quality control requirements were acceptable.

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | MW08-20181005 | Client: | SoundEarth Strategies |
| Date Received: | 10/05/18 | Project: | SOU_ 1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 810142-01 |
| Date Analyzed: | 10/08/18 | Data File: | 100817.D |
| Matrix: | Water | Instrument: | GCMS9 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 50 | 150 |
| Toluene-d8 | 99 | 50 | 150 |
| 4-Bromofluorobenzene | 95 | 50 | 150 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| Vinyl chloride | 16 |
| Chloroethane | <1 |
| 1,1-Dichloroethene | <1 |
| Methylene chloride | <5 |
| trans-1,2-Dichloroethene | 2.0 |
| 1,1-Dichloroethane | <1 |
| cis-1,2-Dichloroethene | 390 ve |
| 1,2-Dichloroethane (EDC) | <1 |
| 1,1,1-Trichloroethane | <1 |
| Trichloroethene | 330 ve |
| Tetrachloroethene | 600 ve |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | MW08-20181005 | Client: | SoundEarth Strategies |
| Date Received: | 10/05/18 | Project: | SOU_ 1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 810142-01 1/10 |
| Date Analyzed: | 10/10/18 | Data File: | 101029.D |
| Matrix: | Water | Instrument: | GCMS4 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 100 | 57 | 121 |
| Toluene-d8 | 99 | 63 | 127 |
| 4-Bromofluorobenzene | 95 | 60 | 133 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| Vinyl chloride | 16 |
| Chloroethane | <10 |
| 1,1-Dichloroethene | <10 |
| Methylene chloride | <50 |
| trans-1,2-Dichloroethene | <10 |
| 1,1-Dichloroethane | <10 |
| cis-1,2-Dichloroethene | 390 |
| 1,2-Dichloroethane (EDC) | <10 |
| 1,1,1-Trichloroethane | <10 |
| Trichloroethene | 320 |
| Tetrachloroethene | 560 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | MW99-20181005 | Client: | SoundEarth Strategies |
| Date Received: | 10/05/18 | Project: | SOU_ 1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 810142-02 |
| Date Analyzed: | 10/08/18 | Data File: | 100818.D |
| Matrix: | Water | Instrument: | GCMS9 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 50 | 150 |
| Toluene-d8 | 100 | 50 | 150 |
| 4-Bromofluorobenzene | 95 | 50 | 150 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| Vinyl chloride | 16 |
| Chloroethane | <1 |
| 1,1-Dichloroethene | <1 |
| Methylene chloride | <5 |
| trans-1,2-Dichloroethene | 1.9 |
| 1,1-Dichloroethane | <1 |
| cis-1,2-Dichloroethene | 380 ve |
| 1,2-Dichloroethane (EDC) | <1 |
| 1,1,1-Trichloroethane | <1 |
| Trichloroethene | 330 ve |
| Tetrachloroethene | 590 ve |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | MW99-20181005 | Client: | SoundEarth Strategies |
| Date Received: | 10/05/18 | Project: | SOU_ 1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 810142-02 1/10 |
| Date Analyzed: | 10/10/18 | Data File: | 101030.D |
| Matrix: | Water | Instrument: | GCMS4 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 57 | 121 |
| Toluene-d8 | 100 | 63 | 127 |
| 4-Bromofluorobenzene | 97 | 60 | 133 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| Vinyl chloride | 16 |
| Chloroethane | <10 |
| 1,1-Dichloroethene | <10 |
| Methylene chloride | <50 |
| trans-1,2-Dichloroethene | <10 |
| 1,1-Dichloroethane | <10 |
| cis-1,2-Dichloroethene | 380 |
| 1,2-Dichloroethane (EDC) | <10 |
| 1,1,1-Trichloroethane | <10 |
| Trichloroethene | 320 |
| Tetrachloroethene | 560 |

## Analysis For Volatile Compounds By EPA Method 8260C

| | | | |
|---|---|---|---|
| Client Sample ID: | Method Blank | Client: | SoundEarth Strategies |
| Date Received: | Not Applicable | Project: | SOU_ 1276-001_ 20181005 |
| Date Extracted: | 10/08/18 | Lab ID: | 08-2224 mb |
| Date Analyzed: | 10/08/18 | Data File: | 100806.D |
| Matrix: | Water | Instrument: | GCMS9 |
| Units: | ug/L (ppb) | Operator: | MS |

| Surrogates: | % Recovery: | Lower Limit: | Upper Limit: |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 50 | 150 |
| Toluene-d8 | 99 | 50 | 150 |
| 4-Bromofluorobenzene | 96 | 50 | 150 |

| Compounds: | Concentration ug/L (ppb) |
|---|---|
| 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: 10/15/18
Date Received: 10/05/18
Project: SOU_ 1276-001_ 20181005, F&BI 810142

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

Laboratory Code: 810158-04 (Matrix Spike)

| Analyte | Reporting Units | Spike Level | Sample Result | Percent Recovery MS | Acceptance Criteria |
|---|---|---|---|---|---|
| Vinyl chloride | ug/L (ppb) | 50 | 0.34 | 95 | 61-139 |
| Chloroethane | ug/L (ppb) | 50 | <1 | 98 | 55-149 |
| 1,1-Dichloroethene | ug/L (ppb) | 50 | <1 | 96 | 71-123 |
| Methylene chloride | ug/L (ppb) | 50 | <5 | 96 | 61-126 |
| trans-1,2-Dichloroethene | ug/L (ppb) | 50 | <1 | 95 | 72-122 |
| 1,1-Dichloroethane | ug/L (ppb) | 50 | <1 | 98 | 79-113 |
| cis-1,2-Dichloroethene | ug/L (ppb) | 50 | <1 | 97 | 63-126 |
| 1,2-Dichloroethane (EDC) | ug/L (ppb) | 50 | <1 | 103 | 70-119 |
| 1,1,1-Trichloroethane | ug/L (ppb) | 50 | <1 | 98 | 75-121 |
| Trichloroethene | ug/L (ppb) | 50 | <1 | 96 | 73-122 |
| Tetrachloroethene | ug/L (ppb) | 50 | <1 | 96 | 72-113 |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | Percent Recovery LCS | Percent Recovery LCSD | Acceptance Criteria | RPD (Limit 20) |
|---|---|---|---|---|---|---|
| Vinyl chloride | ug/L (ppb) | 50 | 95 | 95 | 70-128 | 0 |
| Chloroethane | ug/L (ppb) | 50 | 97 | 97 | 66-149 | 0 |
| 1,1-Dichloroethene | ug/L (ppb) | 50 | 100 | 99 | 75-119 | 1 |
| Methylene chloride | ug/L (ppb) | 50 | 100 | 100 | 63-132 | 0 |
| trans-1,2-Dichloroethene | ug/L (ppb) | 50 | 95 | 95 | 76-118 | 0 |
| 1,1-Dichloroethane | ug/L (ppb) | 50 | 98 | 97 | 77-119 | 1 |
| cis-1,2-Dichloroethene | ug/L (ppb) | 50 | 96 | 96 | 76-119 | 0 |
| 1,2-Dichloroethane (EDC) | ug/L (ppb) | 50 | 101 | 100 | 78-114 | 1 |
| 1,1,1-Trichloroethane | ug/L (ppb) | 50 | 99 | 98 | 80-116 | 1 |
| Trichloroethene | ug/L (ppb) | 50 | 96 | 95 | 72-119 | 1 |
| Tetrachloroethene | ug/L (ppb) | 50 | 94 | 93 | 78-109 | 1 |

# Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

# SAMPLE CHAIN OF CUSTODY

810142

ME 10-05-18

Page # 1 of 1 MW1 DO4

Send Report to Logan Schumacher

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. 1276-001

PO #

REMARKS

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

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

| Sample ID | 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 | CVOCs by 8260C | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW08-20181005 | MW08 | — | 01A | 10/5/18 | 1023 | H2O | 4 | | | | X | | | | | |
| MW99-20181005 | MW99 | — | 021 | 1 | 1053 | 1 | 4 | | | | X | | | | | |
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GT 10/5/18

Samples received at 4 °C

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Clare Tarvin | SoundEarth | 10/5/18 | 1445 |
| Received by: | Liz Webber-Bye | FBI | 10/5/18 | 1445 |
| Relinquished by: | | | | |
| Received by: | | | | |

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