August 6, 2014

Mr. Scott Koppelman AMLI Residential Partners 535 Pontius Avenue North, Suite 120 Seattle, Washington 98109

SUBJECT: RI/FS/CAP ADDENDUM

Avtech Corporation Property 3400 Wallingford Avenue North

Seattle, Washington Job Number: 0789-004-13

Dear Mr. Koppelman:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this letter report to present the results of additional soil and groundwater sampling activities conducted at the Avtech Corporation property, located at 3400 Wallingford Avenue North in Seattle, Washington (the Property), as shown in Figure 1. The Property encompasses 2.04-acres, spanning portions of two city blocks on the north and south sides of North 34<sup>th</sup> Street (North Block, South Block; Figure 2). An avionics manufacturer, Avtech Corporation (Avtech), occupied the Property from 1973 until 2011. Avtech used chlorinated solvents and various other electrical engineering-related chemical compounds typically found in the avionics production process.

#### SITE BACKGROUND

Subsurface investigations conducted by SoundEarth at the Property in 2011 through 2013 were summarized in SoundEarth's Draft Remedial Investigation and Feasibility Study report (Draft RI/FS Report) dated January 10, 2014, and the Draft Cleanup Action Plan (CAP) dated March 14, 2014. The results of the remedial investigation indicated that soil and groundwater contamination has resulted from a release of trichloroethene (TCE) on the north side of North 34<sup>th</sup> Street. Sampling conducted through 2013 indicated that soil was impacted by TCE in the loading dock area of Building 2 at depths ranging from 9 to 20 feet below grade. Soil was likely impacted at other depths, as indicated by the presence of TCE in groundwater present at approximately 25 to 30 feet below grade. Concentrations of tetrachloroethene, lead, and polycyclic aromatic hydrocarbons (PAH) have also been confirmed in soil in localized areas at concentrations that slightly exceed applicable Washington State Model Toxics Control Act (MTCA) Method A cleanup levels.

Groundwater containing TCE concentrations exceeding the MTCA Method A cleanup level is present on the southern half of the North Block, migrating across North 34<sup>th</sup> Street to the South Block. The full lateral and vertical extents of the impacts originating from the releases at the Property constitute the Avtech Corporation Site (the Site).

Based on the results of the RI and completion of a conceptual site model, a feasibility study (FS) was conducted to develop and evaluate cleanup action alternatives that would facilitate selection of a cleanup action for the Site, as defined in the FS and in accordance with Part 350(8) of Chapter 340 of Title 173 of the Washington Administrative Code. The FS identified Cleanup Action Alternative 1 (Excavation of Soil with In Situ Chemical Oxidation of Groundwater by Permanganate) as the recommended alternative for the Site because it ranked comparatively high in environmental benefit and is both technically feasible and cost effective.

Cleanup Action Alternative 1 satisfies MTCA requirements and significantly reduces risk from contamination to the maximum extent practicable via removal of the source by excavation, along with in situ chemical oxidation to address residual groundwater contamination beneath the Property and rights-of-way. As part of a planned redevelopment on both sides of North 34<sup>th</sup> Street, the Property will be excavated from lot-line to lot-line and a large portion of TCE-impacted source soil (located on the North Block) will be removed in the course of the redevelopment excavation. The redevelopment excavation will also remove localized areas of soil impacted with PAHs and lead.

The following summarizes additional soil and groundwater data acquired subsequent to the January 2014 Draft RI/FS Report and March 2014 Draft CAP.

#### **GROUNDWATER MONITORING—MARCH 25 AND APRIL 18, 2014**

The groundwater monitoring events were conducted on March 25 (MW01, MW05, MW07, MW09, MW10, and MW11) and April 16 and 17, 2014 (MW06 and MW15). Wells MW03, MW04, MW12, and MW13 contained purple-colored water from a previous permanganate injection pilot test (September 2013) and were, therefore, not sampled. Groundwater sampling from injection wells (IW01 through IW06) and new monitoring wells MW16 and MW11D was also conducted in April and is discussed in additional sections below.

The groundwater samples were collected in accordance with the U.S. Environmental Protection Agency (EPA) Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures (April 1996). Purging and sampling of each monitoring well were performed using a bladder pump or peristaltic pump and dedicated polyethylene tubing at flow rates ranging from 80 to 125 milliliters per minute. The intake was placed approximately 2 to 3 feet below the surface of the groundwater or mid-screen in each monitoring well. During purging, water quality was monitored using a Quanta water quality meter equipped with a flow-through cell. The water quality parameters that were monitored and recorded included; temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential. Each monitoring well was purged until a minimum subset of pH, specific conductivity, and turbidity or dissolved oxygen stabilized.

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 Friedman & Bruya, Inc., of Seattle, Washington, under standard chain-of-custody protocols for laboratory analysis.

The groundwater samples were submitted for analysis of chlorinated solvents and other volatile organic compounds (VOC) by EPA Method 8260C. Purge water generated during the monitoring event was placed in an appropriately labeled 55-gallon steel drum and temporarily stored on the Property pending receipt of analytical data and proper disposal.

#### **Groundwater Results**

Groundwater levels measured on March 25, 2014, ranged from 24.82 (MW10) to 44.86 (MW11) feet below the top of the monitoring well casings (Table 1). Groundwater elevations ranged from 60.68 feet North American Vertical Datum 1988 (NAVD88) in MW10, to 29.84 feet in MW05. The groundwater elevations indicate groundwater is generally flowing to the south-southeast with an average gradient of 0.07 feet per foot between wells MW10 and MW05. Elevations, gradient, and flow direction were consistent with measurements collected in 2012 and 2013.

Groundwater analytical results from the monitoring events are summarized below (Figure 2; Table 1). Laboratory reports are included in Attachment A.

- Concentrations of TCE exceeding the MTCA Method A cleanup level of 5 micrograms per liter (μg/L) were detected in groundwater collected from monitoring wells MW05 (9.9 μg/L), MW07 (6.4 μg/L), MW09 (51 μg/L), and MW11 (48 μg/L). The remaining VOCs were below their respective laboratory reporting limits and/or MTCA Method A cleanup levels in the groundwater samples collected from these wells.
- Groundwater samples collected from wells MW01, MW06, MW10, and MW15 did not contain concentrations of VOCs that exceeded their respective laboratory reporting limits and/or MTCA Method A cleanup levels.

## **2014 SUPPLEMENTAL SOURCE AREA PHASE II FIELD WORK**

To further evaluate the location and depth of TCE-impacted soil beneath Building 2, SoundEarth advanced a total of 14 hollow-stem auger soil borings to depths of 25 to 45 feet. The borings were advanced inside Building 2, aided by coring of the floor slabs and partial demolition of walls and ceilings. The borings were conducted in potential source areas, including the former hazardous materials storage area, the former 1950s-era machine shop, the former 1970s-era machine shop/production facility, and downgradient areas on the southern end of the building. Six of the borings were completed as future injection wells, and one boring was completed as a future groundwater monitoring compliance well.

# April 2014—Interior Soil Borings and Injection Well Installation and Sampling

On April 1 through 3, 2014, Boretec Inc., under the direction of SoundEarth, advanced 7 hollow-stem auger borings (B-IW01 through B-IW06, and B-MW16). The borings were advanced by a tractor-mounted hollow-stem auger rig to depths up to 45 feet below floor slab (floor slab elevation is 85.5 feet NAVD88). Soil samples were collected at 5-foot depth intervals and field-screened by a photoionization detector (PID) for the presence of VOCs indicative of solvent releases. Soil types were logged by a SoundEarth geologist in accordance with the Unified Soil Classification System.

Based on boring locations, screening results, sampling depths, and observed soil characteristics, selected samples were submitted for analysis of chlorinated VOCs by EPA Method 8260C. Samples were labeled,

placed on ice in a cooler, and transported to Friedman & Bruya, Inc. under standard chain-of-custody protocols for laboratory analysis.

The borings were completed as injection wells IW01 through IW06, and monitoring well MW16 (Figure 3). The wells were screened from 30 to 45 feet (IW02, IW03, and MW16), 28 to 43 feet (IW04), 25 to 40 feet (IW01), 26 to 41 feet (IW05), and 23 to 38 feet (IW06). The wells were developed using a whale pump on April 9, 2014, and sampled with bladder pumps on April 16 2014.

## May 2014—Additional Interior Soil Borings and Soil Sampling

Based on the results of sampling and analysis for the soil samples collected April 1 through April 3 (laboratory results discussed below), seven additional borings were advanced to further define the extent of TCE in soil beneath Building 2. On May 21 and 22, 2014, Boretec Inc., under the direction of SoundEarth, advanced borings SB206 through SB212 to depths of 25 to 30 feet below the floor slab (elevation 85.0 NAVD88). Soil samples were collected at 2.5 to 5-foot depth intervals.

Based on boring locations, sampling depths, and observed soil characteristics, a total of 61 samples were submitted for analysis of chlorinated VOCs by EPA Method 8260C.

Samples were labeled, placed on ice in a cooler, and transported to Friedman & Bruya, Inc. under standard chain-of-custody protocols for laboratory analysis.

No solvent odors or sheens were noted during sampling. PID readings from soil samples were generally less than 2 parts per million per volume (background levels), with most readings showing less than 0.5 part per million by volume.

Copies of boring logs and well logs are in Attachment B. Geologic cross sections of the TCE source area are presented on Figures 4 and 5. Analytical results are discussed below.

#### **Soil Results**

Of the 61 samples submitted for analysis, concentrations of TCE above the MTCA Method A cleanup level of 0.03 milligrams per kilogram (mg/kg) were detected in 6 samples from the following borings and depths:

- B-IW03 at depths of 15 feet (0.044 mg/kg) and 25 feet (0.063 mg/kg)
- B-MW16 at depths of 15 feet (0.034 mg/kg), 25 feet (0.066 mg/kg), and 30 feet (0.042 mg/kg)
- SB209 at a depth of 25 feet (0.090 mg/kg)

Concentrations of TCE below the MTCA Method A cleanup level of 0.03 mg/kg were detected in three samples from the following borings and depths:

- SB206 at a depth of 12.5 feet (0.025 mg/kg)
- SB209 at a depth of 15 feet (0.029 mg/kg)
- SB211 at a depth of 30 feet (0.022 mg/kg)

The borings with detectable concentrations (above and below MTCA) of TCE are highlighted in orange on Figure 4. This includes borings previously identified in the Draft RI/FS Report and CAP (borings B14, B104, SB203, and SB204). These boring areas at the specified depths will require disposal of development excavation soils as "contained-in" material at a Subtitle D landfill.

TCE was not detected in any of the following borings: B-IW01, B-IW02, B-IW04, B-IW05, B-IW06, SB207, SB208, SB210, and SB212. These borings (as well previous borings conducted to at least 20 feet) are highlighted in green on Figure 4. These boring areas are shown to be absent of detectable TCE and will therefore not require special handling or disposal at a regulated landfill.

Soil analytical results for VOCs are summarized on Table 2. The laboratory analytical reports are presented in Attachment A.

#### **Groundwater Results**

Following development and purging, groundwater samples were collected from all of the injection wells (IW01 through IW06) and new monitoring well MW16. TCE was detected in IW03 (17  $\mu$ g/L) and IW04 (44  $\mu$ g/L). Both concentrations exceeded the MTCA Method A cleanup level of 5  $\mu$ g/L.

TCE was not detected in wells IW02 and MW16. This area was treated with permanganate in September 2013 (test pilot injections were made into wells MW04 and MW13). TCE was not detected in any of the other wells. The results are summarized on Figure 2. Laboratory reports are included in Attachment A.

#### **DEEP GROUNDWATER WELL**

To further assess the vertical extent of TCE in groundwater at the Site, deep well MW11D was installed 7 feet west of MW11 on April 28, 2014. A 10.25-inch conductor casing was installed to a depth of 55 feet, with a 4.25-inch-diameter auger drilled to a depth of 75 feet. Soil sampled at 75 feet was described as wet, dense, fine to medium sandy gravel to gravelly sand. The well was screened from 60 to 75 feet. Depth to water was measured at 44.6 feet on April 29, 2014.

The well was developed on April 29, 2014, and sampled on April 30, 2014. The sample was submitted to Freidman & Bruya, Inc. for analysis of chlorinated VOCs by EPA Method 8260C.

Sample MW11D contained no detectable TCE or other chlorinated solvents. Therefore, it appears that TCE impacts are limited to the upper 10 to 15 feet of groundwater at the Site, above a dense silt layer present at 50 to 55 feet.

# **JUNE 2014 INJECTION WELL INSTALLATIONS**

On June 23 through 27, 2014, Cascade Drilling, under the direction of SoundEarth, advanced 13 hollow-stem auger borings on the north and south sides of North 34<sup>th</sup> Street (Figure 6). The borings were generally drilled to depths of 50 feet on the north side (IW07 though IW12, and IW19) and 55 feet on the south side (IW13 through IW18). However, boring IW13 was drilled to a depth of 70 feet to further define soil types in the deeper groundwater zone near well MW11D. Soil types in IW13 included very dense sandy silt at 50 feet, underlain by very dense silty fine sand from 60 to 70 feet. Soil conditions were observed as damp at 50 and 55 feet, moist to wet at 60 feet, and damp at 70 feet (no recovery at

65 feet). The boring was backfilled with bentonite to 50 feet and completed as a well screened from 35 to 50 feet.

Soil samples were collected from borings IW09 to confirm soil types in the screened zone and further assess potential for TCE impacts in vadose zone soil. Very dense silty fine sand was encountered at 30 and 35 feet, with very dense damp clayey silt at 40 feet, wet silt at 44 feet, and wet sand at 45 feet. A soil sample collected at 30 feet was submitted for analysis of chlorinated VOCs by EPA Method 8260C. Sample IW09-30 did not contained detectable TCE or other chlorinated VOCs.

#### **SUMMARY AND CONCLUSIONS**

#### Groundwater

Concentrations of TCE in groundwater are generally consistent with previous sampling. However, the southeastern extent of TCE above the MTCA Method A cleanup level appears to extend beyond well MW05, beneath the Burke Avenue North right of way. The absence of detectable TCE in wells MW16 and IW02 is likely due to permanganate injections conducted in wells MW04 and MW13 in September 2013.

TCE was not detected in deep well MW11D screened at 60 to 75 feet. Therefore, the depth of TCE impacts to groundwater appears to be limited to within approximately 10 feet of the perched water table.

#### Soil

Concentrations of TCE exceeding the MTCA Method A cleanup level in soil were detected in only 6 out of 61 samples collected in the Building 2 source area. The concentrations ranged from 0.034 mg/kg to 0.090 mg/kg. TCE was also detected in 3 samples at concentrations below the MTCA Method A cleanup level.

Including the data obtained in 2012 and 2013, TCE has been detected in eight soil borings advanced beneath Building 2 and two borings immediately east of the Building 2 loading dock. Six borings with TCE detections are within the proposed excavation footprint. Borings with TCE detections are highlighted in orange on Figure 3.

TCE was not detected in the upper 10 feet of soil in any of the borings beneath Building 2 (Elevations 75 to 85 NAVD88).

TCE-containing vadose zone soils were identified at the following depth ranges for each area (Figure 4):

- Area 1. TCE was detected at 12.5 feet below the Building 2 floor slab, and not detected at 10, 15, and 25 feet. Therefore TCE appears limited to the 10- to 15-foot depth range (Elevations 70 to 75 feet NAVD88).
- Area 2. TCE was detected at 15, 25, and 30 feet below the Building 2 floor slab, and at 9 and 20 feet below grade in the loading dock driveway (Elevation 55 to 72 feet NAVD88).

 Area 3. TCE was detected at 15, 25, and 30 feet below the Building 2 floor slab. TCE was not detected at 12.5 feet. Therefore, TCE-containing soil appears to be limited to the 12.5- to 30foot depth range (Elevation 55 to 72.5 feet NAVD88).

# **CLEANUP ACTION PLAN MODIFICATIONS**

Based on the additional soil and groundwater data, modifications to the Draft CAP are described below.

#### Soil

Removal of soils containing TCE above the MTCA Method A cleanup level will be limited mainly to soils excavated for the proposed development. Development plans for the Building 2 TCE source area include excavation of soil to a depth of approximately 17 feet at the southwest corner (elevation 68 NAVD88), 13 to 15 feet and the northwest corner (elevation 72 to 70 NAVD88), and 17 to 20 feet in the loading dock area (elevation 68 to 65 NAVD88), as shown on Figure 4.

**Removal of soil containing detectable TCE.** Assuming the upper 10 feet of soil is absent of detectable TCE as indicated by all of the existing data, the approximate volume of TCE-containing soil by area is summarized as follows:

- Area 1. An area of 1,875 square feet, with average TCE soil depth of 5 feet (350 cubic yards).
- Area 2. An area of 6,325 square feet, with average TCE soil depth of 7 feet (1,640 cubic yards).
- Area 3. An area of 3,600 square feet, with average TCE soil depth of 6 feet (800 cubic yards).

In summary, approximately 2,800 cubic yards, or approximately 4,500 tons of TCE-containing soil are estimated to be removed from TCE Excavation Areas 1, 2, and 3. TCE-containing soils will be handled as "contained-in" material for disposal at a Subtitle D landfill facility (pending Washington State Department of Ecology approval).

**Potential TCE "Hot Spot" Excavation.** Based on the TCE concentrations detected in groundwater, higher concentrations of TCE in soil may exist in a targeted source area. If encountered during the redevelopment excavation and identified by confirmation sampling (from a planned 25-foot sampling grid), an area of localized TCE impacts would, if feasible, be excavated to depths of 17 to 30 feet NAVD88 (the average depth of development excavation and the approximate depth to groundwater in the loading dock area, respectively). For purposes of contingency planning, a 25- by 25-foot source area with a 1H:1V (Horizontal:Vertical) slope, excavated 13 feet below the development would account for approximately 690 cubic yards of soil (1,100 tons of additional TCE-containing soil).

**Treatment of Residual TCE Soils.** Due to the low-level presence of TCE in soil at depths of 25 to 30 feet at the southern edge of the North Block development (as indicated in borings B-IW03, B-MW16, and SB209), excavation of all soil containing exceedances of the MTCA Method A cleanup level for TCE is not practicable. Borings B-IW03 and B-MW16 are outside of the development excavation and, therefore, will not be excavated.

To remediate residual TCE concentrations and be protective of groundwater, a combination of horizontal SVE and permanganate slurry will be used in the remaining impacted vadose zone soils. Slotted PVC piping will be installed in trenches three to five feet deeper than the base of the

development excavation and routed to a central manifold. The horizontal SVE piping includes nine, 20-foot long slotted PVC sections that will be bedded in the trench and surrounded with a permeable backfill material. A vacuum will be applied to the horizontal SVE lines to extract soil vapors. The building footing drains will be configured to allow for a negative pressure to be applied to protect against vapor intrusion, if necessary. A permanganate slurry will be injected into those injection wells in the areas where residual TCE contamination will remain in the vadose zone. Injection wells will be screened so that the permanganate slurry will saturate in soil voids immediately above the water table. The permanganate slurry in the vadose zone would treat any TCE mobilized by by rising groundwater levels and/or surface water infiltration.

#### Groundwater

Based on the recent exceedance of the MTCA Method A cleanup level of TCE in groundwater collected from well MW05, the locations of the 11 southeastern-most injection wells have been repositioned to address this area. If the concentrations in MW05 remain above MTCA cleanup levels, an additional downgradient well will likely be installed in Fall 2014. Injection well locations (existing and proposed) are shown on Figure 6. The wells will be installed following development excavation scheduled for November and December 2014. Injections into existing wells will likely be conducted in September or October 2014.

#### **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 AMLI Residential Partners. This report is solely for the use of AMLI Residential Partners unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

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

#### **CLOSING**

SoundEarth appreciates this opportunity to provide AMLI Residential Partners with environmental consulting services. Please call either of the undersigned at 206-306-1900 if you have any questions or comments regarding the content of this report.

### Respectfully,

SoundEarth Strategies, Inc.

Rob Roberts Senior Scientist



John R. Funderburk, MSPH Senior Principal

John R Funderburk

Terry Montoya, PE Principal

Attachments:

Figure 1, Property Location Map

Figure 2, Groundwater TCE Results

Figure 3, TCE Concentrations in Soil and Boring Location Plan – North Block

Figure 4, Conceptual TCE Excavation Areas

Figure 5, Geologic Cross Sections D-D' and E-E', TCE Source Area Remedial Excavation-

Figure 6, Injection Well Location Plan Table 1, Summary of Groundwater Data

Table 2, Summary of Soil Analytical Results for VOCs

A, Laboratory Analytical Reports

Friedman & Bruya, Inc. #403358

Friedman & Bruya, Inc. #404027

Friedman & Bruya, Inc. #404067

Friedman & Bruya, Inc. #404094 and additional

Friedman & Bruya, Inc. #404097

Friedman & Bruya, Inc. #404323

Friedman & Bruya, Inc. #404540

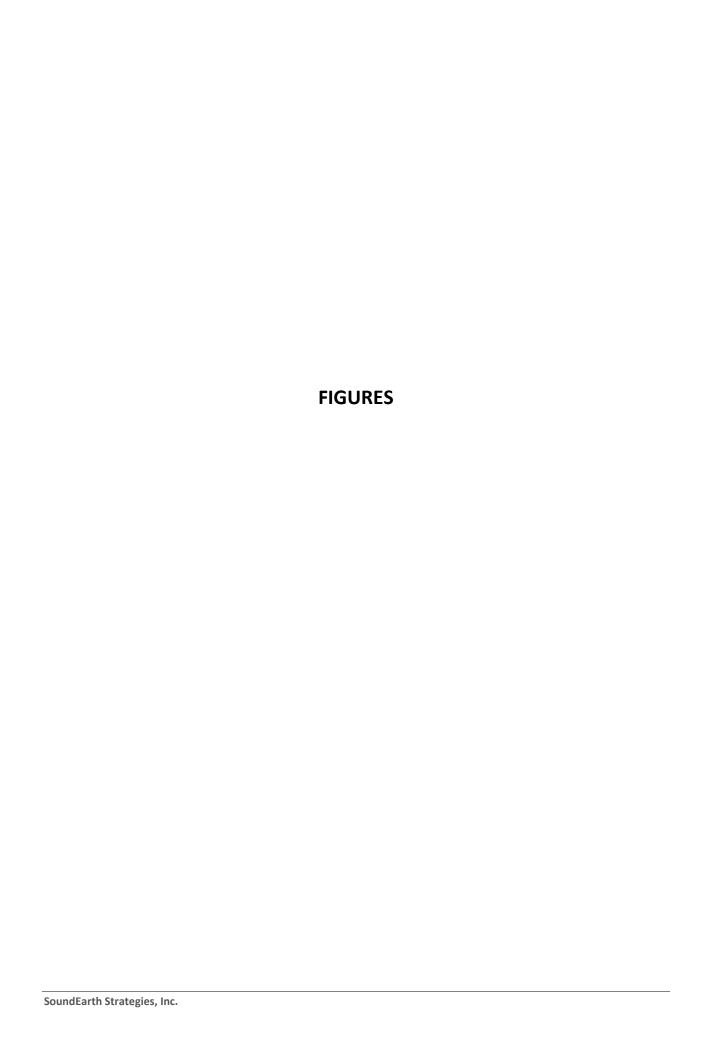
Friedman & Bruya, Inc. #405421

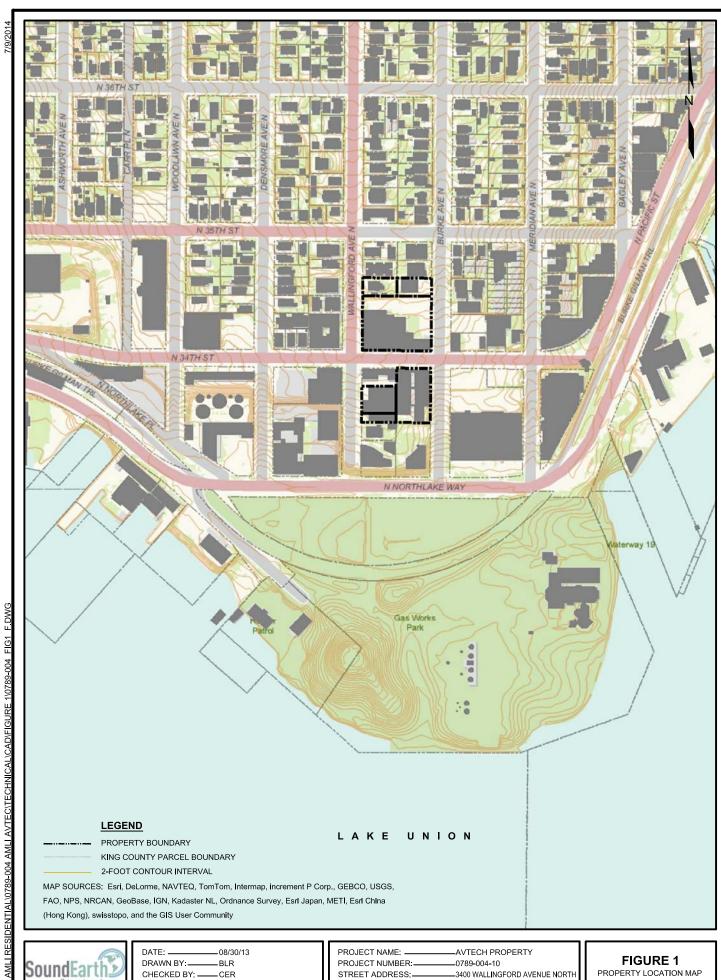
Friedman & Bruya, Inc. #405463 and additional

Friedman & Bruya, Inc. #406425

B, Boring Logs

CER/JRF:dnm/amr



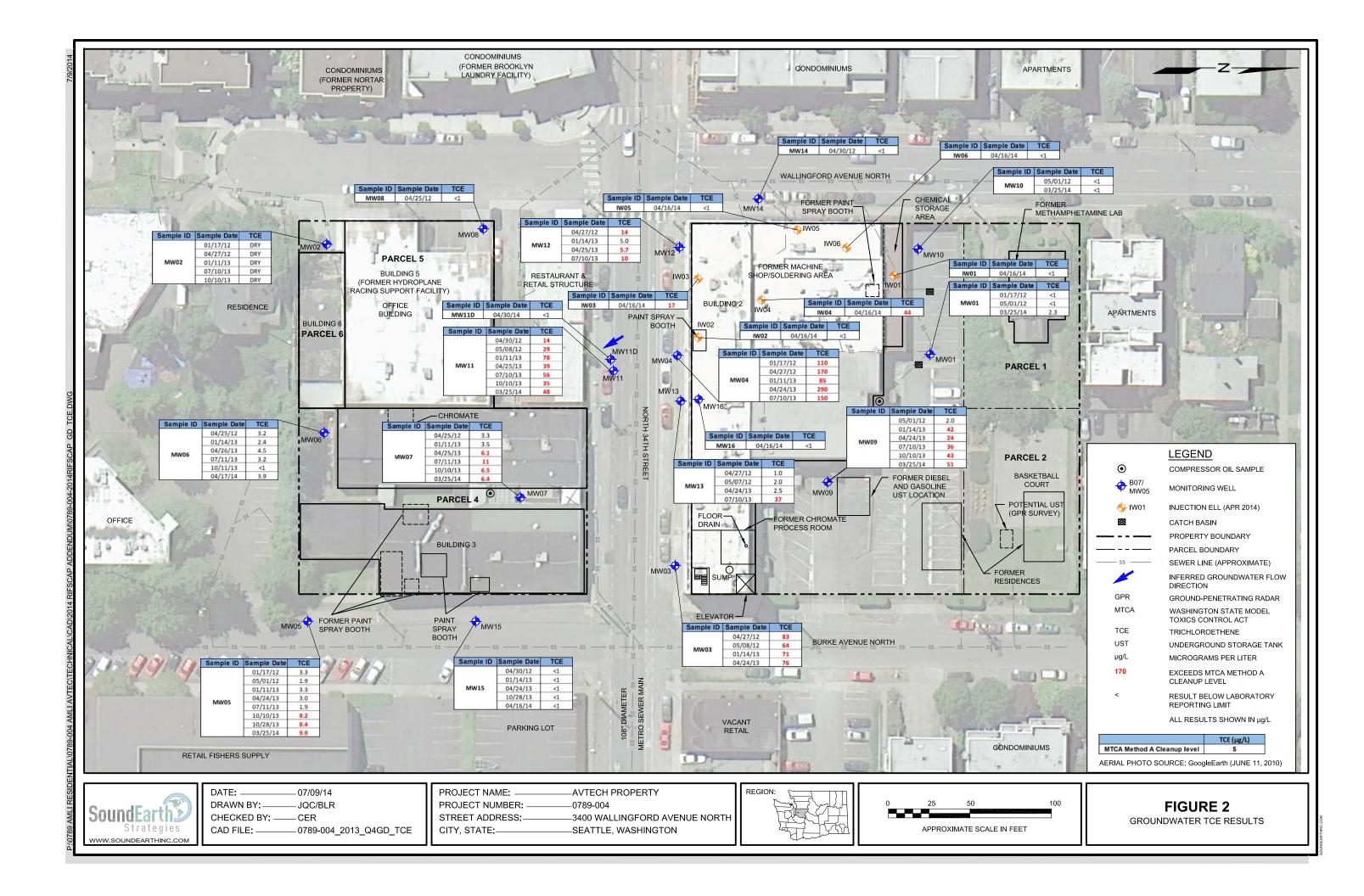


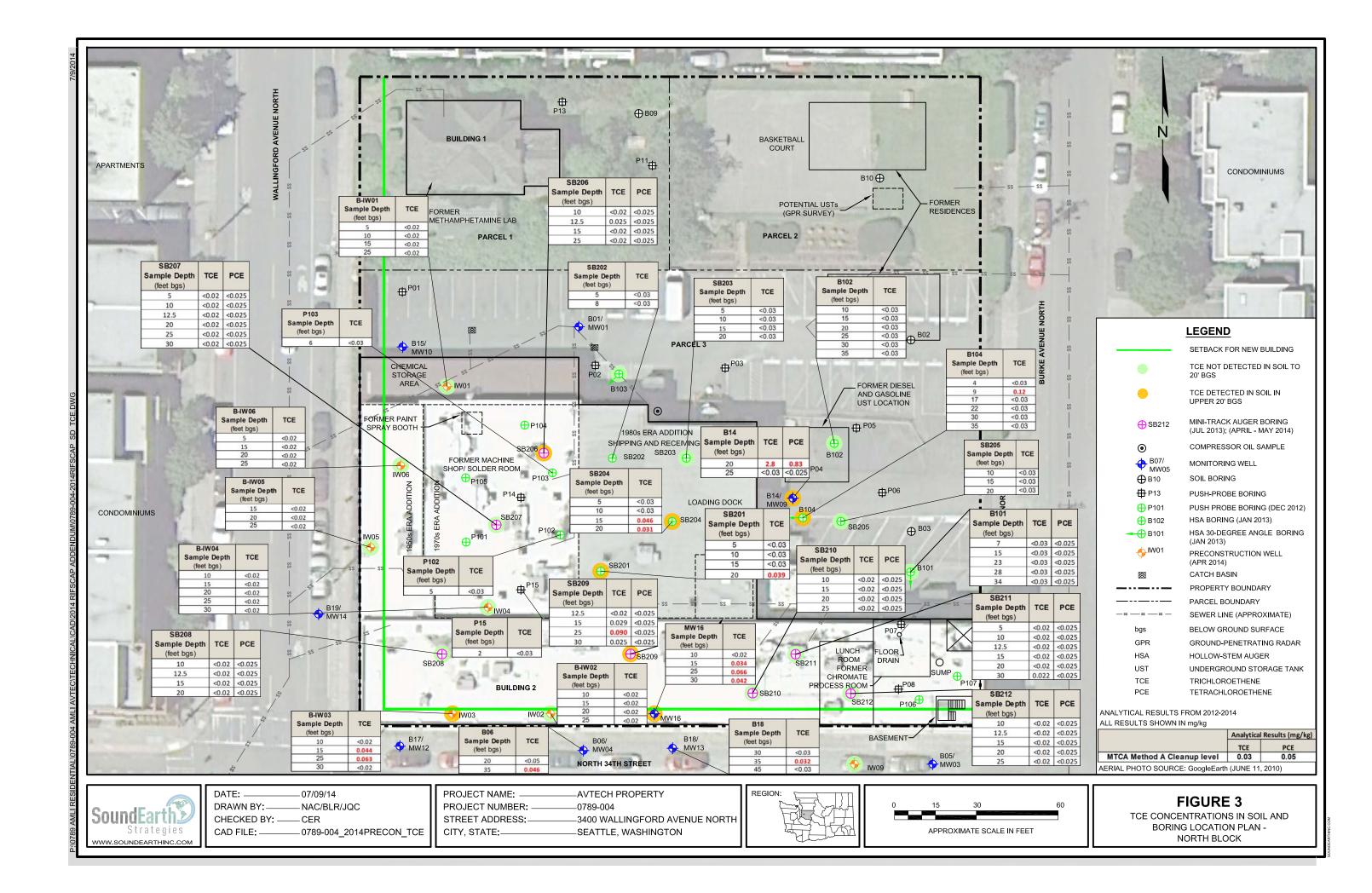


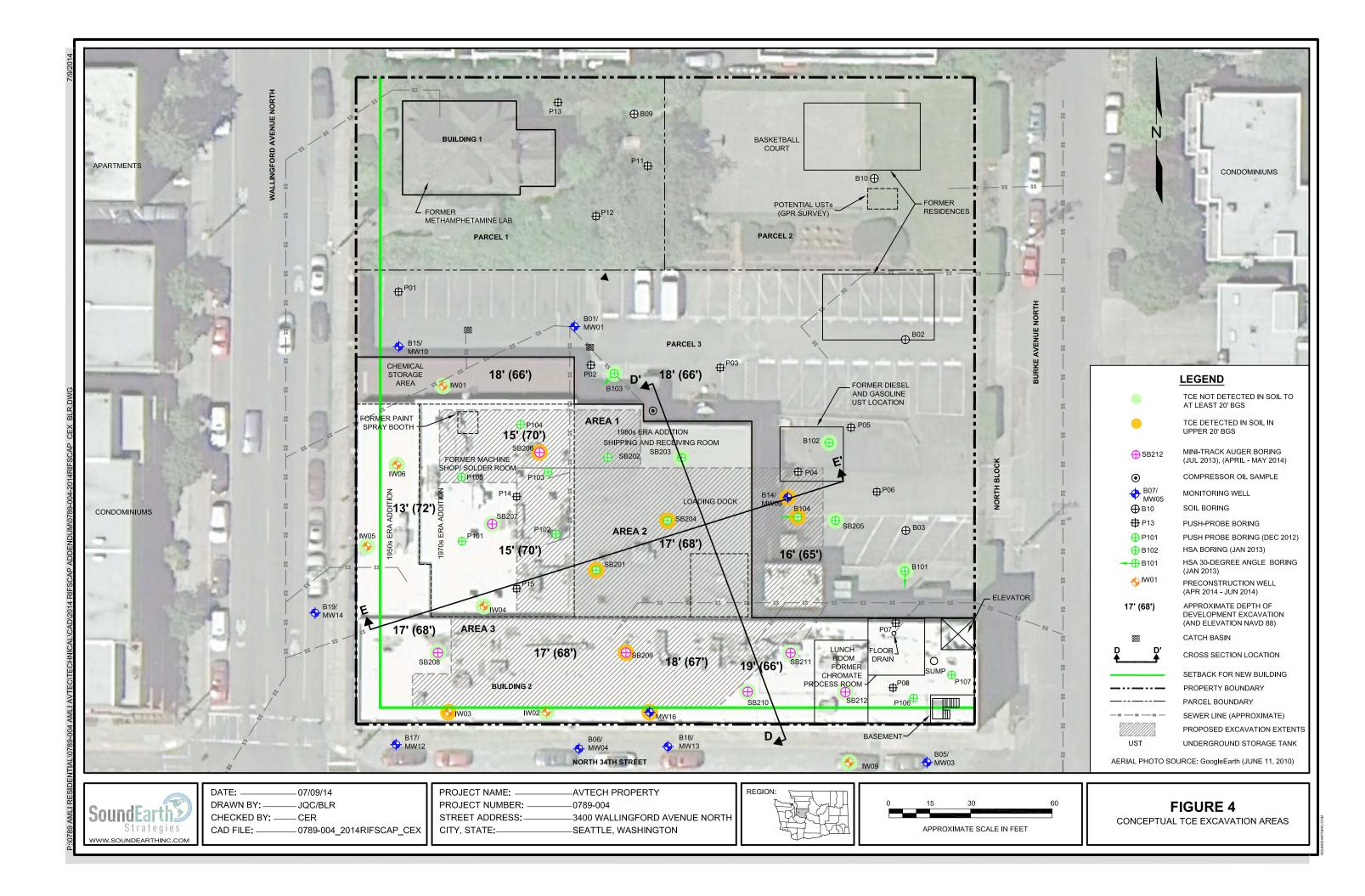
DATE: --08/30/13 DRAWN BY:--BLR CHECKED BY: --CER CAD FILE: --0789-004\_FIG1 PROJECT NAME: AVTECH PROPERTY PROJECT NUMBER:--0789-004-10 \_3400 WALLINGFORD AVENUE NORTH STREET ADDRESS: CITY, STATE: -SEATTLE, WASHINGTON

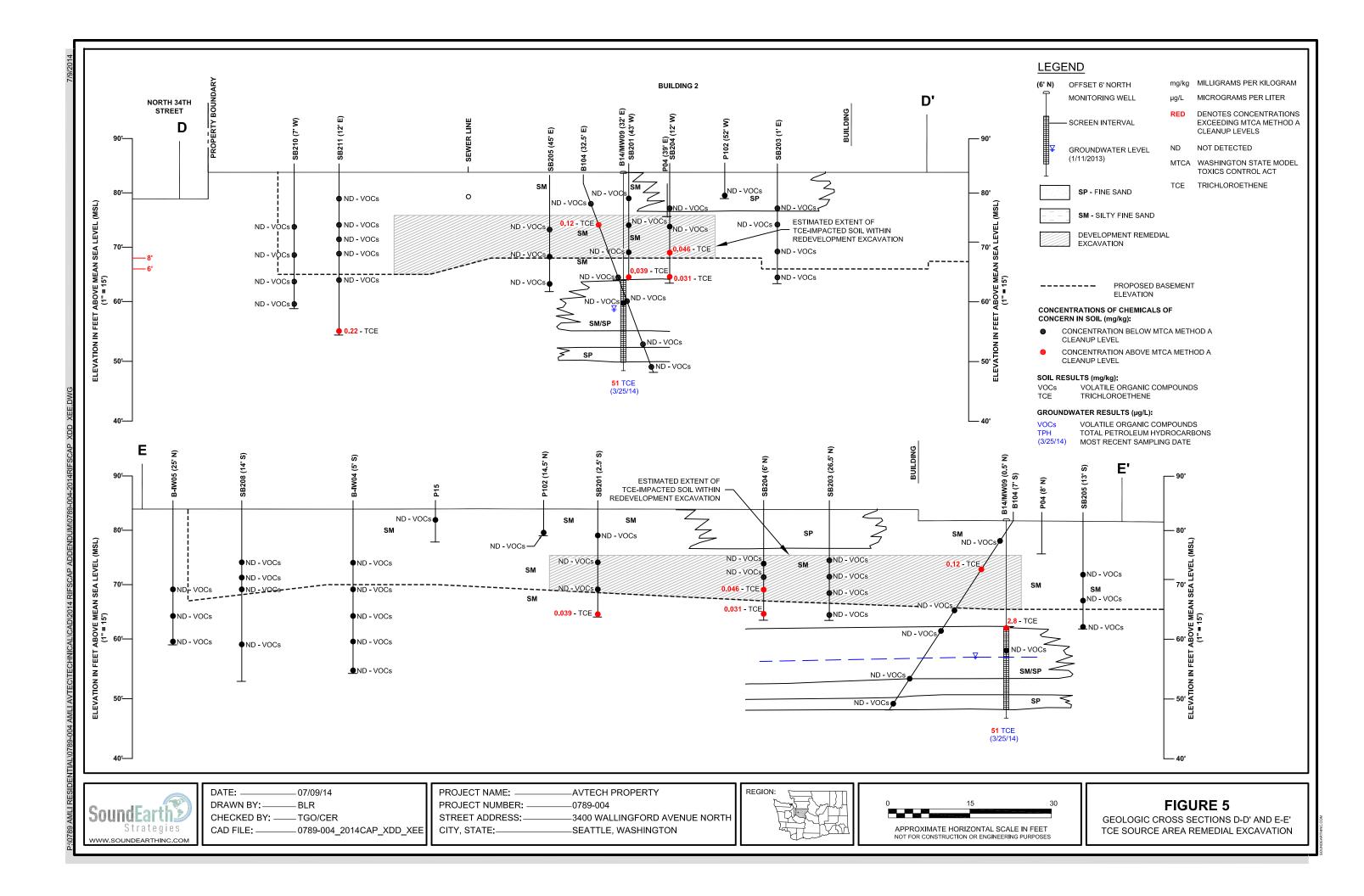
FIGURE 1

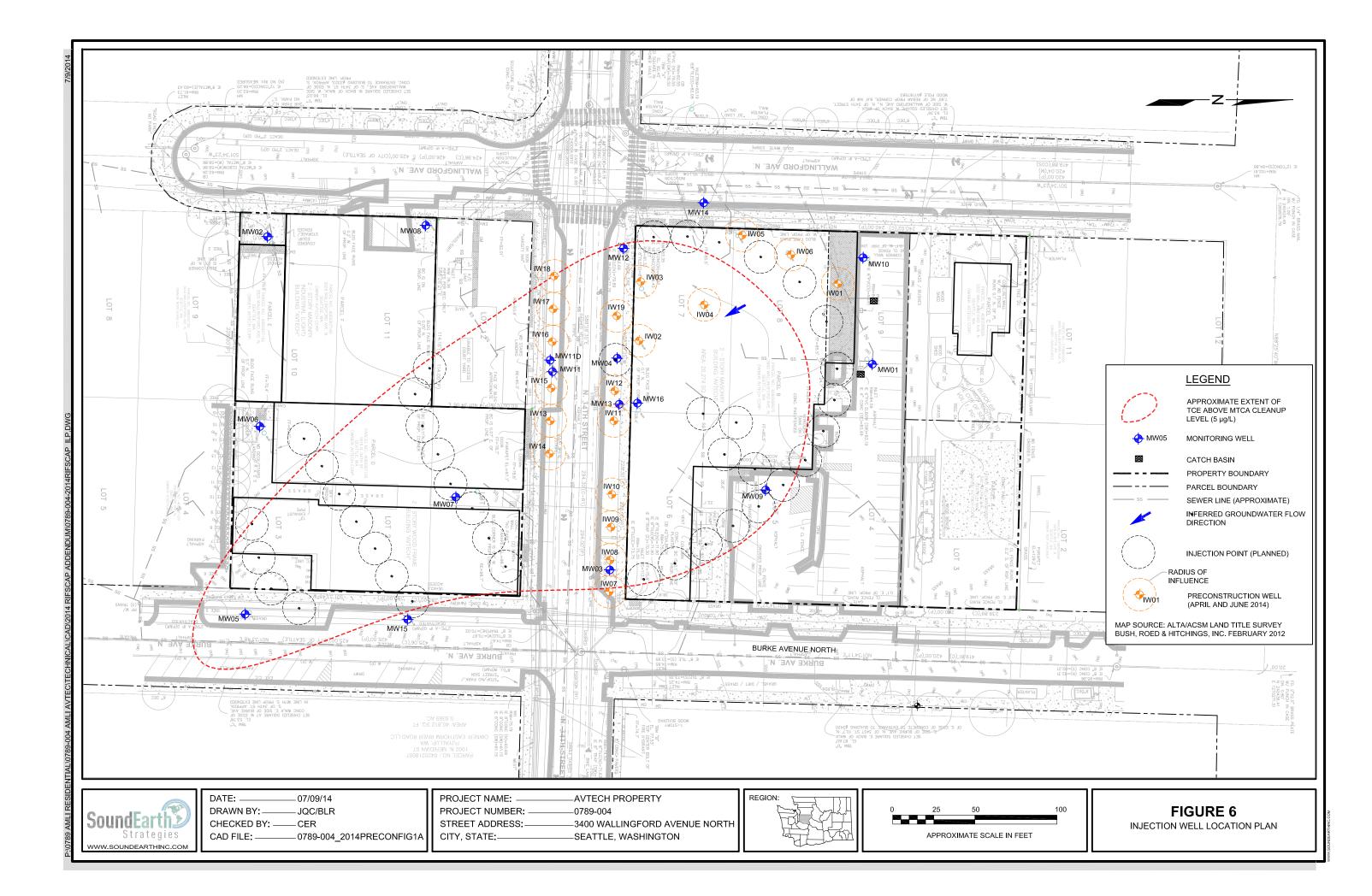
PROPERTY LOCATION MAP











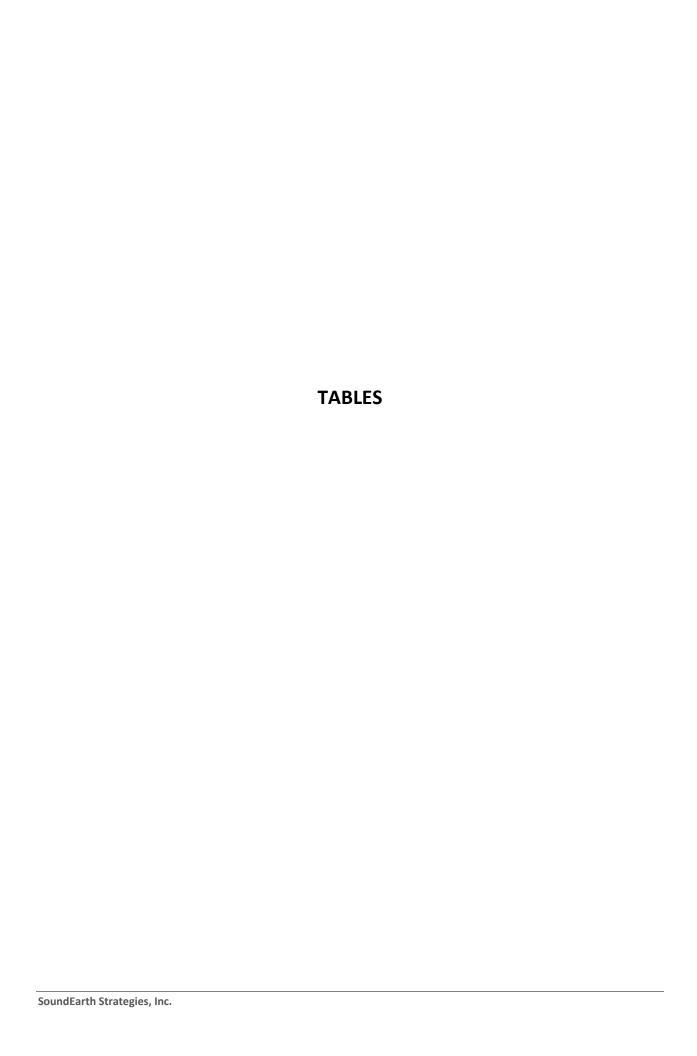




Table 1
Summary of Groundwater Data
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

Sample   Depth to   Sample   Oroundwater   Sample   Oroundwater   Depth to   Sample   Oroundwater   Depth to   Depth to												А	nalytical	Results (	ug/L)								
84.44    65.00/11/3    25.00   59.42	•		Groundwater <sup>(1)</sup>	Elevation <sup>(2)</sup>	<b>О</b> ВРН <sup>(3)</sup>	ORPH <sup>(3)</sup>	Benzene <sup>(4)</sup>	Toluene <sup>(4)</sup>	Ethylbenzene <sup>(4)</sup>	Total Xylenes <sup>(4)</sup>	Vinyl Chloride <sup>(4)</sup>					Dissolved Chromium <sup>(5)</sup>	Dissolved Arsenic <sup>(5)</sup>	Dissolved Selenium <sup>(5)</sup>	Dissolved Silver <sup>(S)</sup>	Dissolved Cadmium <sup>(5)</sup>	Dissolved Barium <sup>(5)</sup>	Dissolved Lead <sup>(5)</sup>	Dissolved Mercury <sup>(6)</sup>
01/11/13	MW01	01/17/12	27.59	56.85	<50	<250	<0.35	<1	<1	<3	<0.2 <sup>pr</sup>	<1	<1	<1	<1	1.58	1.43	<1	<1	<1	3.94	<1	<0.1
O4/25/13   24.75   59.69   -   -   -   -   -   -   -   -   -	84.44	05/01/12	25.02	59.42							<0.2	<1	<1	<1						-			
MW02   01/17/12   DRY		01/11/13	26.25	58.19																			
10/30/13   27.43   57.01		04/25/13	24.75	59.69																-			
MW02   01/17/12   DRY		07/10/13	25.55	58.89																			
MW02   O1/17/12   ORY		10/10/13	27.43	57.01																			
New Column   New			27.67	56.77							<0.2	<1	2.3	<1									
01/11/13   DRY	MW02																						
MW03	69.73	04/27/12	DRY					1				1			-			1		ł	1		
MW03   O/17/12   DRY																							
MW03																							
NW03   01/17/12   DRY															1								
75.48    04/27/12   31.18   44.30				+																			
05/08/12   31.06   44.42									1														
01/14/13   31.78   43.70   -	75.48								1						1								<0.1
04/24/13   30.96   44.52																							
MW04   01/17/12   36.70   42.77																							
MW04			30.30				ļ.			l							1		ļ.			ļ.	
79.47    04/27/12   36.09   43.38               <0.2   <1   170   <1											Ina	ccessible	!										-
01/11/13   36.44   43.03   -	MW04	01/17/12	36.70	42.77			< 0.35	<1	<1	<3	<0.2 <sup>pr</sup>	<1	110	<1	<1	18.6	<1	<1	<1	<1	4.33	<1	<0.1
04/24/13   35.93   43.54	79.47	04/27/12	36.09	43.38							<0.2	<1	170	<1						-			
MW04 (Field Dup)   01/17/12   36.70   42.77       <-   <-       <-   <		01/11/13	36.44	43.03							<0.2	<1	85	<1									
10/10/13   36.90   42.57																							
MW04 (Field Dup)         01/17/12         36.70         42.77           <0.35									1						1								
79.47									<del>                                     </del>						<del>                                     </del>								
MW05         01/17/12         24.90         30.71          -         <0.35									1						1								<0.1
55.61 05/01/12 23.40 32.21		, ,							<del>                                     </del>						<del>                                     </del>								
01/14/13       24.34       31.27 <td></td> <td>&lt;0.1</td>																							<0.1
04/24/13     22.86     32.75  -	55.61														1								
07/10/13     23.71     31.90  -									1						<b>-</b>								
10/10/13 25.57 30.04									1		1				1								
10/28/13									1		1				<b>-</b>								
03/25/14 25.77 29.84 <0.2 2.1 9.9 <1											1				<b>-</b>								
MTCA Method A Cleanup Level for Groundwater <sup>(7)</sup>   500   500   5   1,000   700   1,000   0.2   NE   5   5   160   50   5   NE   NE   5   NE   15	MTCA Method A Clea	, -,			500	500	5	1.000	700	1.000					160	50	5	NF	NF	5	NF	15	2



Table 1
Summary of Groundwater Data
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

											А	nalytical	Results (	ug/L)								
Sample ID and TOC Elevation	Sample Date	Depth to Groundwater <sup>(1)</sup> (feet)	Groundwater Elevation <sup>(2)</sup> (feet)	<b>о</b> крн <sup>(3)</sup>	ORPH <sup>(3)</sup>	Benzene <sup>(4)</sup>	Toluene <sup>(4)</sup>	Ethylbenzene <sup>(4)</sup>	Total Xylenes <sup>(4)</sup>	Vinyl Chloride <sup>(4)</sup>	cis-1,2-DCE <sup>(4)</sup>	TCE <sup>(4)</sup>	PCE <sup>(4)</sup>	Naphthalene <sup>(4)</sup>	Dissolved Chromium <sup>(5)</sup>	Dissolved Arsenic <sup>(5)</sup>	Dissolved Selenium <sup>(5)</sup>	Dissolved Silver <sup>(5)</sup>	Dissolved Cadmium <sup>(5)</sup>	Dissolved Barium <sup>(5)</sup>	Dissolved Lead <sup>(5)</sup>	Dissolved Mercury <sup>(6)</sup>
MW06	04/25/12	31.84	36.55							<0.2	<1	3.2	<1				-					
68.39	01/14/13	31.86	36.53							<0.2	<1	2.4	<1									
	04/26/13	30.85	37.54							<0.2	<1	4.5	<1									
	07/11/13	32.01	36.38	-						<0.2	<1	3.2	<1									
	10/11/13	33.61	34.78							<0.2	<1	<1	<1									
	04/17/14									<0.2	<1	3.9	<1									
MW07	04/25/12	37.43	39.35							<0.2	<1	3.3	<1									
76.78	01/11/13	37.59	39.19	-						<0.2	<1	3.5	<1		-		-					
	04/25/13	36.52	40.26	-						<0.2	<1	6.1	<1									
	07/11/13	36.97	39.81	-						<0.2	<1	11	<1					-				
	10/10/13	37.97	38.81	-						<0.2	<1	6.5	<1					-				
	03/25/14	38.32	38.46	-						<0.2	<1	6.4	<1									
MW08	04/25/12	37.86	38.75							<0.2	<1	<1	<1									
76.61	01/11/13	37.34	39.27																			
	04/25/13			•			•		•	Ina	ccessible											
	07/10/13									Ina	ccessible	1										
	10/10/13									Ina	ccessible											
MW09	05/01/12	23.19	57.98	-						<0.2	<1	2.0	<1									
81.17	01/14/13	24.00	57.17							<0.2	1.5	42	<1									
	04/24/13	22.87	58.30	-						<0.2	<1	24	<1					-				
	07/10/13	23.65	57.52							<0.2	<1	36	<1									
	10/10/13	25.52	55.65							<0.2	1.5	43	<1									
	03/25/14	25.72	55.45							<0.2	2.4	51	<1									
MW10	05/01/12	21.90	63.60							<0.2	<1	<1	<1									
85.50	01/11/13	22.56	62.94																			
	04/25/13	21.49	64.01	-							-											
	07/10/13	22.63	62.87																			
	10/10/13	24.75	60.75																			
	03/25/14	24.82	60.68							<0.2	<1	<1	<1									
MW11	04/30/12	44.56	34.24							<0.2	<1	14	<1									
78.80	05/08/12	44.52	34.28							<0.2	<1	29	<1									
	01/11/13	44.74	34.06	-						<0.2	<1	78	<1					-				
	04/25/13	43.56	35.24							<0.2	<1	39	<1									
	07/10/13	43.90	34.90							<0.2	<1	56	<1									
	10/10/13	44.59	34.21	-						<0.2	<1	35	<1					-				
	03/25/14	44.86	33.94							<0.2	<1	48	<1									
MW11D	04/30/14	43.74	NS							<0.2	<1	<1	<1									
MTCA Method A Clea	nup Level fo	r Groundwater <sup>(7)</sup>		500	500	5	1,000	700	1,000	0.2	NE	5	5	160	50	5	NE	NE	5	NE	15	2



Table 1
Summary of Groundwater Data
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

											А	nalytical	Results (	μg/L)								
Sample ID and TOC Elevation	Sample Date	Depth to Groundwater <sup>(1)</sup> (feet)	Groundwater Elevation <sup>(2)</sup> (feet)	<b>О</b> КРН <sup>(3)</sup>	ORPH <sup>(3)</sup>	Benzene <sup>(4)</sup>	Toluene <sup>(4)</sup>	Ethylbenzene <sup>(4)</sup>	Total Xylenes <sup>(4)</sup>	Vinyl Chloride <sup>(4)</sup>	cis-1,2-DCE <sup>(4)</sup>	TCE <sup>(4)</sup>	PCE <sup>(4)</sup>	Naphthalene <sup>(4)</sup>	Dissolved Chromium <sup>(5)</sup>	Dissolved Arsenic <sup>(5)</sup>	Dissolved Selenium <sup>(5)</sup>	Dissolved Silver <sup>(S)</sup>	Dissolved Cadmium <sup>(5)</sup>	Dissolved Barium <sup>(5)</sup>	Dissolved Lead <sup>(5)</sup>	Dissolved Mercury <sup>(6)</sup>
MW12	04/27/12	32.81	49.02	ł						<0.2	<1	14	<1									
81.83	01/14/13	33.30	48.53	ł			1	1		<0.2	<1	5.0	<1		1	-				-		
	04/25/13	32.76	49.07	1						<0.2	<1	5.7	<1									
	07/10/13	33.08	48.75	-						<0.2	<1	10	<1									
	10/10/13	32.95	48.88																			
MW13	04/27/12	34.97	43.97							<0.2	<1	1.0	<1									-
78.94	05/07/12	34.94	44.00	ł			1	1		<0.2	<1	2.0	<1		1	-				-		
	04/24/13	34.88	44.06							<0.2	<1	2.5	<1									
	07/10/13	35.15	43.79							<0.2	<1	37	<1									-
	10/10/13	35.73	43.21	ł			1	1					-	-	1	-				-		
MW14	04/30/12	29.99	54.61	-			-			<0.2	<1	<1	<1									
84.60	01/11/13	30.95	53.65																			
	04/25/13									Ina	ccessible											-
	07/10/13	30.56	54.04	-			-							-								
	10/10/13	32.00	52.60																			
MW15	04/30/12	27.37	38.72	-						<0.2	<1	<1	<1									
66.09	01/14/13	27.76	38.33							<0.2	<1	<1	<1									
	04/24/13	26.69	39.40	-			1			<0.2	<1	<1	<1		-							
	07/10/13				•	-			•	Ina	ccessible		•			•	•	•	-			•
	10/28/13	28.02	38.07							<0.2	<1	<1	<1									
	04/16/14	28.38	37.71							<0.2	<1	<1	<1									
MW16	04/16/14	40.18	NS	1			1			<0.2	<1	<1	<1		-					-		
MTCA Method A Clea	nup Level fo	r Groundwater <sup>(7)</sup>		500	500	5	1,000	700	1,000	0.2	NE	5	5	160	50	5	NE	NE	5	NE	15	2



# Table 1 Summary of Groundwater Data Avtech Property 3400 Wallingford Avenue North Seattle, Washington

											А	nalytical	Results (	ug/L)								
Sample ID and TOC Elevation	Sample Date	Depth to Groundwater <sup>(1)</sup> (feet)	Groundwater Elevation <sup>(2)</sup> (feet)	<b>о</b> врн <sup>(3)</sup>	ОКРН <sup>(3)</sup>	Benzene <sup>(4)</sup>	Toluene <sup>(4)</sup>	Ethylbenzene <sup>(4)</sup>	Total Xylenes <sup>(4)</sup>	Vinyl Chloride <sup>(4)</sup>	cis-1,2-DCE <sup>(4)</sup>	TCE <sup>(4)</sup>	PCE <sup>(4)</sup>	Naphthalene <sup>(4)</sup>	Dissolved Chromium <sup>(5)</sup>	Dissolved Arsenic <sup>(5)</sup>	Dissolved Selenium <sup>(5)</sup>	Dissolved Silver <sup>(5)</sup>	Dissolved Cadmium <sup>(5)</sup>	Dissolved Barium <sup>(5)</sup>	Dissolved Lead <sup>(5)</sup>	Dissolved Mercury <sup>(6)</sup>
IW01	04/16/14	24.90	NS	-				-		<0.2	<1	<1	<1							-		
IW02	04/16/14	36.91	NS		-					<0.2	<1	<1	<1				-	-				
IW03	04/16/14	33.20	NS		-					<0.2	<1	17	<1				-	-				
IW04	04/16/14	30.05	NS	-				-		<0.2	<1	44	<1							-		
IW05	04/16/14	30.29	NS	ł						<0.2	<1	<1	<1			-					-	
IW06	04/16/14	28.75	NS							<0.2	<1	<1	<1									
MTCA Method A Clea	nup Level fo	or Groundwater <sup>(7)</sup>	•	500	500	5	1,000	700	1,000	0.2	NE	5	5	160	50	5	NE	NE	5	NE	15	2

#### NOTES:

Red denotes concentrations exceeding the MTCA Method A Cleanup Level.

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

TOC elevations surveyed by Triad Associates on May 3, 2012.

#### Laboratory Note:

μg/L = micrograms per liter

1,2-DCE = 1,2-dichloroethene

DRPH = diesel-range petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

NE = no MTCA Method A cleanup level established for this analyte

NS = well casing not surveyed

ORPH = oil-range petroleum hydrocarbons

PCE = tetrachloroethene

TCE = trichloroethene

TOC = top of casing elevation

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<sup>&</sup>lt;sup>(1)</sup>Measured in feet below a fixed spot on the top of the well casing rim.

 $<sup>^{(2)}\</sup>mbox{Elevation}$  datum NAVD 88, Seattle BM#2609CC 58A at 60.344' and BM#2609CC 55A at 32.066'.

<sup>&</sup>lt;sup>(3)</sup>Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Dx.

<sup>&</sup>lt;sup>(4)</sup>Analyzed by EPA Method 8260C. All other 8260C analytes were not detected above the laboratory reporting limit.

<sup>&</sup>lt;sup>(5)</sup>Analyzed by EPA Method 6020 or 200.8.

<sup>(6)</sup> Analyzed by EPA Method 1631E.

<sup>&</sup>lt;sup>(7)</sup>MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 340 of Title 173 of the Washington Administrative Code, revised November 2007.

<sup>&</sup>lt;sup>pr</sup>Sample received with incorrect preservation. Results should be considered an estimate.

<sup>-- =</sup> not analyzed/not measured

<sup>&</sup>lt; = not detected at a concentration exceeding the laboratory reporting limit



	Approx.Surface			Sample	Approx.					Analyti	cal Results <sup>(1)</sup> (	mg/kg)				
Sample	Elevation		Sample	Depth	Elevation		1,1-	trans-1,2-	cis-1,2-	Carbon						
Location	(NAVD 88)	Sample ID	Date	(feet bgs)	(NAVD88)	Vinyl Chloride	Dichloroethene	Dichloroethene	Dichloroethene	tetrachloride	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Ethylbenzene	Total Xylenes
P01	86	P01-04	01/04/12	4	82	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P02	85	P02-1.5	01/04/12	1.5	83.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P04	81	P04-08	01/04/12	8	73						<0.02		<0.02		<0.02	<0.06
F 04	81	P04-15	01/04/12	15	66						<0.02	-	<0.02		<0.02	<0.06
P05	81	P05-08	01/04/12	8	73						<0.02	-	<0.02		<0.02	<0.06
P06	81	P06-08	01/04/12	8	73						<0.02	-	<0.02		<0.02	<0.06
P07	73	P07-02	01/05/12	2	71	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P09	77	P09-02	01/05/12	2	75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P10	69	P10-04	01/05/12	4	65	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P11	95	P11-04	01/05/12	4	91	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P13	96	P13-02	01/05/12	2	94	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P14	85	P14-06	04/26/12	6	79	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P15	85	P15-02	04/26/12	2	83	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B01	84	B01-13	01/10/12	13	71	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B03	80	B03-10	01/10/12	10	70	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B06	79	B06-20	01/11/12	20	59	<0.05 <sup>ht</sup>	<0.03	<0.05 <sup>ht</sup>	<0.05 <sup>ht</sup>	<0.025	<0.05 <sup>ht</sup>	<0.2 <sup>ht</sup>				
БОО	79	B06-35	01/11/12	35	44	<0.05 <sup>ht</sup>	<0.03	0.046	<0.05	<0.025	<0.05 <sup>ht</sup>	<0.2 <sup>ht</sup>				
B12	77	B12-35	04/23/12	35	42	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B14	81	B14-20	04/24/12	20	61	<0.05	<0.05	<0.05	0.47	<0.05	<0.03	2.8	<0.05	0.83	<0.05	<0.2
D14	81	B14-25	04/24/12	25	56	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B16	79	B16-30	04/25/12	30	49	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
	79	B18-30	04/26/12	30	49	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B18	79	B18-35	04/26/12	35	44	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	0.032	<0.05	<0.025	<0.05	<0.2
	79	B18-45	04/26/12	45	34	<0.05	< 0.05	<0.05	<0.05	< 0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B19	84	B19-35	04/27/12	35	49	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
	80	B101-07	12/21/12	7	73	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	80	B101-15	12/21/12	15	65	<0.05	< 0.05	<0.05	<0.05			<0.03		<0.025		
B101	80	B101-23	12/21/12	23	57	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	80	B101-28	12/21/12	28	52	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	80	B101-34	12/21/12	34	46	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B102-10	12/21/12	10	71	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B102-15	12/21/12	15	66	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
B102	81	B102-20	12/21/12	20	61	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
PIUZ	81	B102-25	12/21/12	25	56	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B102-30	12/21/12	30	51	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B102-35	12/21/12	35	46	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
MTCA Method	A Cleanup Level fo	r Soil <sup>(2)</sup>				NE	NE	NE	NE	NE	0.1	0.03	7	0.05	6	9

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	Approx.Surface			Sample	Approx.					Analytic	cal Results <sup>(1)</sup> (	mg/kg)				
Sample Location	Elevation (NAVD 88)	Sample ID	Sample Date	Depth (feet bgs)	Elevation (NAVD88)	Vinyl Chloride	1,1- Dichloroethene	trans-1,2- Dichloroethene	cis-1,2- Dichloroethene	Carbon tetrachloride	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Ethylbenzene	Total Xylenes
	84	B103-07	01/02/13	7	77	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	84	B103-11	01/02/13	11	73	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
B103	84	B103-16	01/02/13	16	68	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	84	B103-24	01/02/13	24	60	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	84	B103-35	01/02/13	35	49	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B104-04	01/02/13	4	77	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B104-09	01/02/13	9	72	<0.05	<0.05	<0.05	<0.05			0.12		<0.025		
B104	81	B104-17	01/02/13	17	64	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
6104	81	B104-22	01/02/13	22	59	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B104-30	01/02/13	30	51	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	B104-35	01/02/13	35	46	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
P101	85	P101-02	12/20/12	2	83	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
P102	85	P102-05	12/20/12	5	80	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
P103	85	P103-06	12/20/12	6	79	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
P104	85	P104-04	12/20/12	4	81	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
P105	85	P105-06	12/20/12	6	79	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
P106	73	P106-01	12/20/12	1	72	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
P107	73	P107-01	12/20/12	1	72	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	85	SB201-05	07/09/13	5	80	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
SB201	85	SB201-10	07/09/13	10	75	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
36201	85	SB201-15	07/09/13	15	70	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	85	SB201-20	07/09/13	20	65	<0.05	<0.05	<0.05	<0.05			0.039		<0.025		
SB202	85	SB202-05	07/09/13	5	80	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
35202	85	SB202-08	07/09/13	8	77	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	85	SB203-05	07/09/13	5	80	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
SB203	85	SB203-10	07/09/13	10	75	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
36203	85	SB203-15	07/09/13	15	70	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	85	SB203-20	07/09/13	20	65	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	85	SB204-05	07/09/13	5	80	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
SB204	85	SB204-10	07/09/13	10	75	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
35204	85	SB204-15	07/09/13	15	70	<0.05	<0.05	<0.05	<0.05			0.046		<0.025		
	85	SB204-20	07/09/13	20	65	<0.05	<0.05	<0.05	<0.05			0.031		<0.025		
	81	SB205-10	07/09/13	10	71	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
SB205	81	SB205-15	07/09/13	15	66	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	81	SB205-20	07/09/13	20	61	<0.05	<0.05	<0.05	<0.05			<0.03		<0.025		
	85	SB206-10	05/21/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
SB206	85	SB206-12.5	05/21/14	12.5	72.5	<0.05	<0.05	<0.05	<0.05			0.025		<0.025		
35200	85	SB206-15	05/21/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB206-25	05/21/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
MTCA Method	A Cleanup Level fo	r Soil <sup>(2)</sup>				NE	NE	NE	NE	NE	0.1	0.03	7	0.05	6	9

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	Approx.Surface			Sample	Annroy					Anabeti	cal Results <sup>(1)</sup> (	ma/ka)				
Sample	Elevation		Sample	Depth	Approx. Elevation		1,1-	trans-1,2-	cis-1,2-	Carbon	lai nesuits (	ilig/ kg)				
Location	(NAVD 88)	Sample ID	Date	(feet bgs)	(NAVD88)	Vinyl Chloride	Dichloroethene	Dichloroethene	Dichloroethene	tetrachloride	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Ethylbenzene	Total Xylenes
	85	SB207-05	05/21/14	5	80	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB207-10	05/21/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB207-12.5	05/21/14	12.5	72.5	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
SB207	85	SB207-20	05/21/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB207-25	05/21/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB207-30	05/21/14	30	55	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB208-10	05/21/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB208-12.5	05/21/14	12.5	72.5	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
SB208	85	SB208-15	05/21/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB208-20	05/21/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB209-12.5	05/21/14	12.5	72.5	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB209-15	05/21/14	15	70	<0.05	<0.05	<0.05	<0.05			0.029		<0.025		
SB209	85	SB209-25	05/21/14	25	60	<0.05	<0.05	<0.05	<0.05			0.090		<0.025		
	85	SB209-30	05/21/14	30	55	<0.05	< 0.05	<0.05	<0.05			0.025		<0.025		
	85	SB210-10	05/22/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
60240	85	SB210-15	05/22/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02	-	<0.025		
SB210	85	SB210-20	05/22/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB210-25	05/22/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB211-05	05/22/14	5	80	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB211-10	05/22/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
SB211	85	SB211-12.5	05/22/14	12.5	72.5	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
3B211	85	SB211-15	05/22/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB211-20	05/22/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB211-30	05/22/14	30	55	<0.05	<0.05	<0.05	<0.05			0.022		<0.025		
	85	SB212-10	05/22/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB212-12.5	05/22/14	12.5	72.5	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
SB212	85	SB212-15	05/22/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB212-20	05/22/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	SB212-25	05/22/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
MTCA Method	A Cleanup Level fo	r Soil <sup>(2)</sup>				NE	NE	NE	NE	NE	0.1	0.03	7	0.05	6	9

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	Approx.Surface			Sample	Approx.					Analytic	cal Results <sup>(1)</sup> (	mg/kg)				
Sample	Elevation		Sample	Depth	Elevation		1,1-	trans-1,2-	cis-1,2-	Carbon		<u> </u>				
Location	(NAVD 88)	Sample ID	Date	(feet bgs)	(NAVD88)	Vinyl Chloride	Dichloroethene	Dichloroethene	Dichloroethene	tetrachloride	Benzene	Trichloroethene	Toluene	Tetrachloroethene	Ethylbenzene	Total Xylenes
	85	B-MW16-10	04/02/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
MW16	85	B-MW16-15	04/02/14	15	70	<0.05	<0.05	<0.05	<0.05			0.034		<0.025		
1010010	85	B-MW16-25	04/02/14	25	60	<0.05	<0.05	<0.05	<0.05			0.066		<0.025		
	85	B-MW16-30	04/02/14	30	55	<0.05	<0.05	<0.05	<0.05			0.042		<0.025		
	85	B-IW01-05	04/03/14	5	80	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
IW01	85	B-IW01-10	04/03/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
10001	85	B-IW01-15	04/04/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW01-25	04/04/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02	-	<0.025		
	85	B-IW02-10	04/01/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02	-	<0.025		
IW02	85	B-IW02-15	04/01/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
10002	85	B-IW02-20	04/01/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW02-25	04/02/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW03-10	04/03/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
IW03	85	B-IW03-15	04/03/14	15	70	<0.05	<0.05	<0.05	<0.05			0.044		<0.025		
1005	85	B-IW03-25	04/03/14	25	60	<0.05	<0.05	<0.05	<0.05			0.063		<0.025		
	85	B-IW03-30	04/03/14	30	55	<0.05	<0.05	<0.05	<0.05			<0.02	-	<0.025		
	85	B-IW04-10	04/01/14	10	75	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW04-15	04/01/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
IW04	85	B-IW04-20	04/01/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW04-25	04/02/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW04-30	04/01/14	30	55	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW05-15	04/02/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02	-	<0.025		
IW05	85	B-IW05-20	04/02/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW05-25	04/02/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW06-05	04/02/14	5	80	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
IW06	85	B-IW06-15	04/02/14	15	70	<0.05	<0.05	<0.05	<0.05			<0.02	-	<0.025		
10000	85	B-IW06-20	04/02/14	20	65	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
	85	B-IW06-25	04/02/14	25	60	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
IW09	77	B-IW09-30	06/24/14	30	47	<0.05	<0.05	<0.05	<0.05			<0.02		<0.025		
MTCA Method	A Cleanup Level fo	r Soil <sup>(2)</sup>				NE	NE	NE	NE	NE	0.1	0.03	7	0.05	6	9

#### NOTES:

Red denotes concentrations exceeding MTCA cleanup level for soil.

**Bold** denotes trichloroethene detected below MTCA.

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

Sampling performed by SoundEarth Strategies, Inc.

#### Laboratory Notes:

-- = not analyzed

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

bgs = below ground surface

mg/kg = milligrams per kilogram

MTCA = Washington State Model Toxics Control Act

NAVD88 = North American Vertical Datum 1988

NE = no MTCA Method A cleanup level established for this chemical

VOC = volatile organic compound

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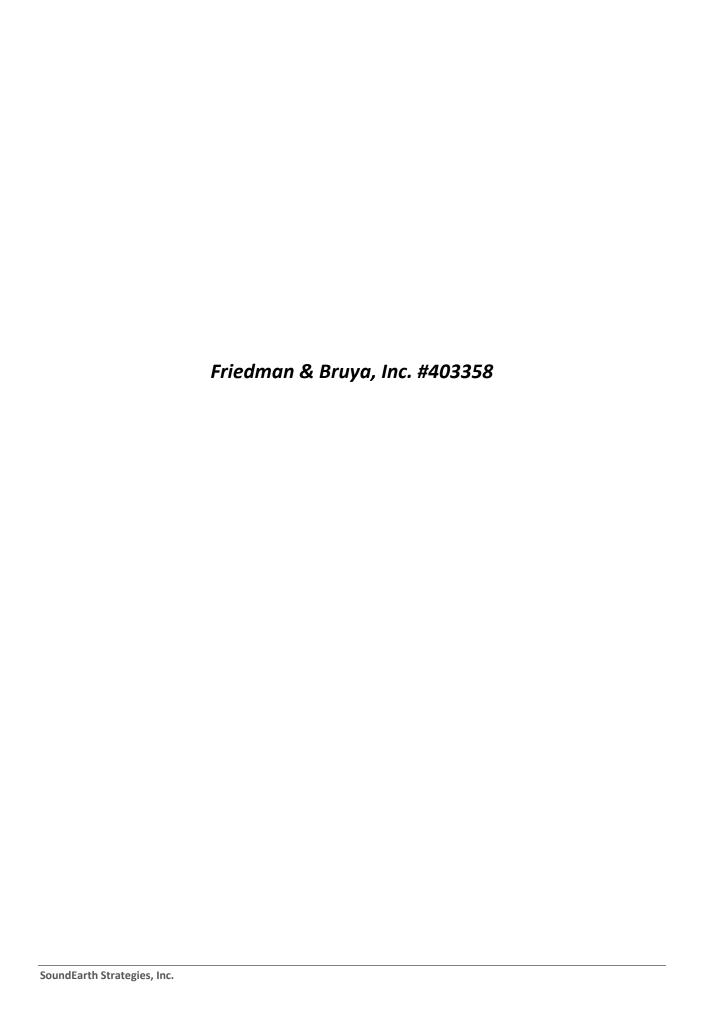
 $<sup>^{(1)}</sup>$ Analyzed by U.S. Environmental Protection Agency Method 8260B or 8260C.

<sup>(2)</sup> MTCA Cleanup Regulation, Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

<sup>&</sup>lt;sup>ht</sup>Analysis performed outside the method- or client-specified holding time requirement.

<sup>&</sup>lt;sup>lc</sup>The presence of the compound indicated is likely due to laboratory contamination.

# ATTACHMENT A LABORATORY ANALYTICAL REPORTS



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

March 28, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on March 25, 2014 from the SOU\_0789-004\_20140325, F&BI 403358 project. There are 10 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 SOU0328R.DOC

# ENVIRONMENTAL CHEMISTS

# **CASE NARRATIVE**

This case narrative encompasses samples received on March 25, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140325, F&BI 403358 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
403358 -01	MW05-20140325
403358 -02	MW11-20140325
403358 -03	MW10-20140325
403358 -04	MW01-20140325
403358 -05	MW09-20140325
403358 -06	MW07-20140325

All quality control requirements were acceptable.

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW05-20140325 Client: SoundEarth Strategies

Date Received: 03/25/14 Project: SOU\_0789-004\_20140325, F&BI 403358

Lab ID: Date Extracted: 03/26/14 403358-01 Date Analyzed: 03/26/14 Data File: 032609.D Matrix: Instrument: GCMS7 Water Units: ug/L (ppb) Operator: JS

<1

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	103	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	2.1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	9.9

Tetrachloroethene

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW11-20140325 Client: SoundEarth Strategies

Date Received: 03/25/14 Project: SOU\_0789-004\_20140325, F&BI 403358

Lab ID: Date Extracted: 03/26/14 403358-02 Date Analyzed: 03/26/14 Data File: 032611.D Matrix: Instrument: GCMS7 Water Units: ug/L (ppb) Operator: JS

<1

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	104	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	48

Tetrachlor oethene

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW10-20140325 Client: SoundEarth Strategies

Date Received: 03/25/14 Project: SOU\_0789-004\_20140325, F&BI 403358

Date Extracted: 03/26/14 Lab ID: 403358-03 Date Analyzed: 03/26/14 Data File: 032614.D Matrix: Instrument: Water GCMS7 Units: ug/L (ppb) Operator: JS

<1

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	101	50	150

#### Concentration Compounds: 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

# **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01-20140325	Client:	SoundEarth Strategies
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Date Received: 03/25/14 Project: SOU\_0789-004\_20140325, F&BI 403358

Lab ID: Date Extracted: 03/26/14 403358-04 Date Analyzed: 03/26/14 Data File: 032615.D Matrix: Instrument: Water GCMS7 Units: ug/L (ppb) Operator: JS

<1

<1

2.3

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	103	50	150

#### Concentration Compounds: 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

Trichloroethene

Tetrachloroethene

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW09-20140325 Client: SoundEarth Strategies

Date Received: 03/25/14 Project: SOU\_0789-004\_20140325, F&BI 403358

03/26/14 Lab ID: Date Extracted: 403358-05 Date Analyzed: 03/26/14 Data File: 032612.D Instrument: Matrix: Water GCMS7 Units: ug/L (ppb) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	103	50	150

#### Concentration Compounds: 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 2.4 1,2-Dichloroethane (EDC) <1 1,1,1-Trichloroethane <1 Trichloroethene 51 Tetrachloroethene <1

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW07-20140325 Client: SoundEarth Strategies

Date Received: 03/25/14 Project: SOU\_0789-004\_20140325, F&BI 403358

Lab ID: Date Extracted: 03/26/14 403358-06 Date Analyzed: 03/26/14 Data File: 032610.D Matrix: Water Instrument: GCMS7 Units: ug/L (ppb) Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	102	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	6.4
Tetrachloroethene	<1

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140325, F&BI 403358

03/26/14 Lab ID: Date Extracted: 04-0575 mb Date Analyzed: 03/26/14 Data File: 032608.D Instrument: Matrix: Water GCMS7 Units: ug/L (ppb) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	103	50	150

<1

<1

#### Concentration Compounds: 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

Trichlor oethene

Tetrachloroethene

#### ENVIRONMENTAL CHEMISTS

Date of Report: 03/28/14 Date Received: 03/25/14

Project: SOU\_0789-004\_20140325, F&BI 403358

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

Laboratory Code: 403358-06 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	< 0.2	99	50-150
Chloroethane	ug/L (ppb)	50	<1	101	50-150
1,1-Dichloroethene	ug/L (ppb)	50	<1	94	50-150
Methylene chloride	ug/L (ppb)	50	<5	107	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	50-150
1,1-Dichloroethane	ug/L (ppb)	50	<1	101	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	112	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	50-150
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	108	50-150
Trichloroethene	ug/L (ppb)	50	6.4	99	50-150
Tetrachloroethene	ug/L (ppb)	50	<1	103	50-150

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	92	97	70-130	5
Chloroethane	ug/L (ppb)	50	96	102	70-130	6
1,1-Dichloroethene	ug/L (ppb)	50	94	95	70-130	1
Methylene chloride	ug/L (ppb)	50	107	108	70-130	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	101	103	70-130	2
1,1-Dichloroethane	ug/L (ppb)	50	101	103	70-130	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	107	70-130	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	97	70-130	1
1,1,1-Trichloroethane	ug/L (ppb)	50	98	100	70-130	2
Trichloroethene	ug/L (ppb)	50	94	95	70-130	1
Tetrachloroethene	ug/L (ppb)	50	98	99	70-130	1

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed.} \ RPD\ results\ were\ still\ outside\ of\ control\ limits. \ The\ variability\ is\ attributed\ to\ sample\ inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- $ve-Estimated\ concentration\ calculated\ for\ an\ analyte\ response\ above\ the\ valid\ instrument\ calibration\ range.$
- 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.

403358	SAMPLE CHAPT OF CUSTODY	1E 03-25	- 14 //2
Send Report To Roberts	SAMPLERS (signature)		of
Company SoundEarth Strategies	PROJECT NAME/NO. 0789-004	PO #	TURNAROUND TIME  Standard (2 Weeks)  RUSH
Address 2811 Fairview Avenue East			Rush charges authorized by:
City, State, ZIP_Seattle, WA 98102	REMARKS	GEMS Y / N	SAMPLE DISPOSAL Dispose after 30 days
Phone #206-306-1900Fax #206-306-1907			Return samples Will call with instructions

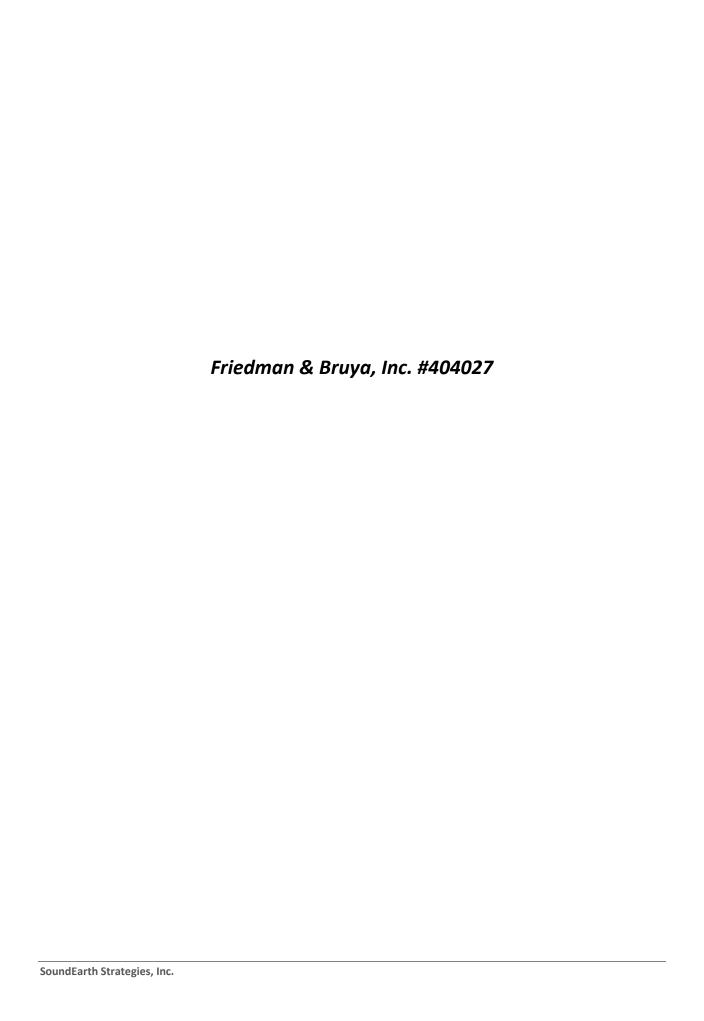
			ANALYSES REQUESTED												
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	CVOC's by 8260C	SVOC's by 8270	RCRA-8 Metals		Notes
MW05-20140325	MWOS		Q- x 10	3/25/14	0705	H20	Ч				V			 	
MW11-20140325	MWII		02 -		1115	102	4			······································	X				
4W10-20140325	MWIO		03		1235		4								
4WDI-ZO140325	Mwoi		04		1310						X				
-245 CH 107- POWH	MWOT		05		1352		4				X				
4w07-20140325	MW07		061		1600		4				X				
			1001		1,400		7				7				
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	7		· · · · · · · · · · · · · · · · · · ·
Relinquished by:	1 3	COMPANY	DATE	TIME
Received M. A.	47 fines	SES	3/25/14	1650
Relinquished by:	Gecyona	FOR	Zegry	1650
Received by:				



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 8, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 1, 2014 from the SOU\_0789-004\_20140401, F&BI 404027 project. There are 13 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 SOU0408R.DOC

#### ENVIRONMENTAL CHEMISTS

### **CASE NARRATIVE**

This case narrative encompasses samples received on April 1, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140401, F&BI 404027 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
404027 -01	B-IW04-05
404027 -02	B-IW04-10
404027 -03	B-IW04-15
404027 -04	B-IW04-20
404027 -05	B-IW04-25
404027 -06	B-IW04-30
404027 -07	B-IW02-05
404027 -08	B-IW02-10
404027 -09	B-IW02-15
404027 -10	B-IW02-20
404027 -11	B-IW02-25
404027 -12	B-IW02-30

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW04-10 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140401, F&BI 404027 04/01/14

Lab ID: Date Extracted: 04/03/14 404027-02 Date Analyzed: 04/03/14 Data File: 040313.D Matrix: Instrument: Soil GCMS4 Units: JS

mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	51	121
4-Bromofluorobenzene	99	32	146

< 0.025

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW04-15 Client: SoundEarth Strategies

Date Received: 04/01/14 Project: SOU\_0789-004\_20140401, F&BI 404027

Date Extracted: 04/03/14 Lab ID: 404027-03
Date Analyzed: 04/03/14 Data File: 040314.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	51	121
4-Bromofluorobenzene	98	32	146

	C
~ 1	Concentration
Compounds:	mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW04-20 Client: SoundEarth Strategies

SOU\_0789-004\_20140401, F&BI 404027 Date Received: 04/01/14 Project:

Upper

Lab ID: Date Extracted: 04/03/14 404027-04 Date Analyzed: 04/03/14 Data File: 040315.D Instrument: Matrix: Soil GCMS4 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower

Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	98	32	146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW04-25 Client: SoundEarth Strategies

Date Received: 04/01/14 Project: SOU\_0789-004\_20140401, F&BI 404027

Date Extracted: 04/03/14 Lab ID: 404027-05
Date Analyzed: 04/03/14 Data File: 040316.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	99	51	121
4-Bromofluorobenzene	99	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW04-30 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140401, F&BI 404027 04/01/14

Lab ID: Date Extracted: 04/03/14 404027-06 Date Analyzed: 04/03/14 Data File: 040317.D Matrix: Soil Instrument: GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	100	51	121
4-Bromofluorobenzene	98	32	146

	Concentration
Compounds:	mg/kg (ppm)
•	0 0 11
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW02-10 Client: SoundEarth Strategies

Date Received: 04/01/14 Project: SOU\_0789-004\_20140401, F&BI 404027

Date Extracted: 04/03/14 Lab ID: 404027-08
Date Analyzed: 04/03/14 Data File: 040318.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	98	51	121
4-Bromofluorobenzene	98	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW02-15 Client: SoundEarth Strategies

SOU\_0789-004\_20140401, F&BI 404027 Date Received: 04/01/14 Project:

Lab ID: Date Extracted: 04/03/14 404027-09 Date Analyzed: 04/03/14 Data File: 040319.D Instrument: Matrix: Soil GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	98	32	146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW02-20 Client: SoundEarth Strategies

Date Received: 04/01/14 Project: SOU\_0789-004\_20140401, F&BI 404027

Lab ID: Date Extracted: 04/03/14 404027-10 Date Analyzed: 04/03/14 Data File: 040320.D Matrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper % Recovery: Limit: Limit: **Surrogates:** 1.2-Dichloroethane-d4 99 62 142 Toluene-d8 98 51 121 4-Bromofluorobenzene 98 32 146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW02-25 Client: SoundEarth Strategies

Date Received: 04/01/14 Project: SOU\_0789-004\_20140401, F&BI 404027

Date Extracted: 04/03/14 Lab ID: 404027-11
Date Analyzed: 04/03/14 Data File: 040321.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	98	51	121
4-Bromofluorobenzene	98	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140401, F&BI 404027

04/02/14 Lab ID: Date Extracted: 04-0649 mb2 Date Analyzed: 04/03/14 Data File: 040310.D Matrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	51	121
4-Bromofluorobenzene	99	32	146

< 0.025

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethen e < 0.02 Tetrachloroethene

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/08/14 Date Received: 04/01/14

Project: SOU\_0789-004\_20140401, F&BI 404027

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

Laboratory Code: 404033-02 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	36	35	10-138	3
Chloroethane	mg/kg (ppm)	2.5	< 0.5	53	52	10-176	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	49	48	10-160	2
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	58	56	10-156	4
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	54	53	14-137	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	63	62	19-140	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	66	66	25-135	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	67	66	12-160	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	62	62	10-156	0
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	60	60	21-139	0
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	54	55	20-133	2

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Vinyl chloride	mg/kg (ppm)	2.5	69	22-139
Chloroethane	mg/kg (ppm)	2.5	78	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	79	47-128
Methylene chloride	mg/kg (ppm)	2.5	77	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	79	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	88	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	89	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	90	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	88	62-131
Trichloroethene	mg/kg (ppm)	2.5	84	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	85	72-114

#### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed.} \ RPD\ results\ were\ still\ outside\ of\ control\ limits. \ The\ variability\ is\ attributed\ to\ sample\ inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- $\operatorname{pr}$  The sample was received with incorrect preservation. The value reported should be considered an estimate.
- $ve-Estimated\ concentration\ calculated\ for\ an\ analyte\ response\ above\ the\ valid\ instrument\ calibration\ range.$
- 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.

( 404027 SAI	MPLE CHAY OF CUSTODY	ME aulou	/w (
Send Report to Rob Roberts	SAMPLERS (signature)	-22-2-	Page # of
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	TURNAROUND TIME Standard (2 Weeks) \ W
Address 2811 Fairview Avenue E. Suite 2000	Avtech Wallingford Property	0789-004	Rush charges authorized by:
City, State, ZIP Seattle, WA 98102	REMARKS Hold		SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907			Return samples

	<u> </u>	-						Will	call with instructions
				7	1	AN	ALYSES RE	QUESTED	
Metrix	Time Sampled	Matrix # of Jars	Chlo, we.feed Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx			Notes 2 VOC's Analysis as 4/3/4-644
Soil	0935	Scil 3	1	<b>†</b>					4/224-645 8
1	0750	13	X					1	1911
	0955	1.3	X	<b>†</b>				+	
1 /	1070	1/3	X					+	
	1035	3	X					+	
	1100	1 3	X					+	
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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:	Chris Cass	Sound Earth	04/01/14	
Received by:	thettenyston	FDE	4/1/14	1616
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Received by:				

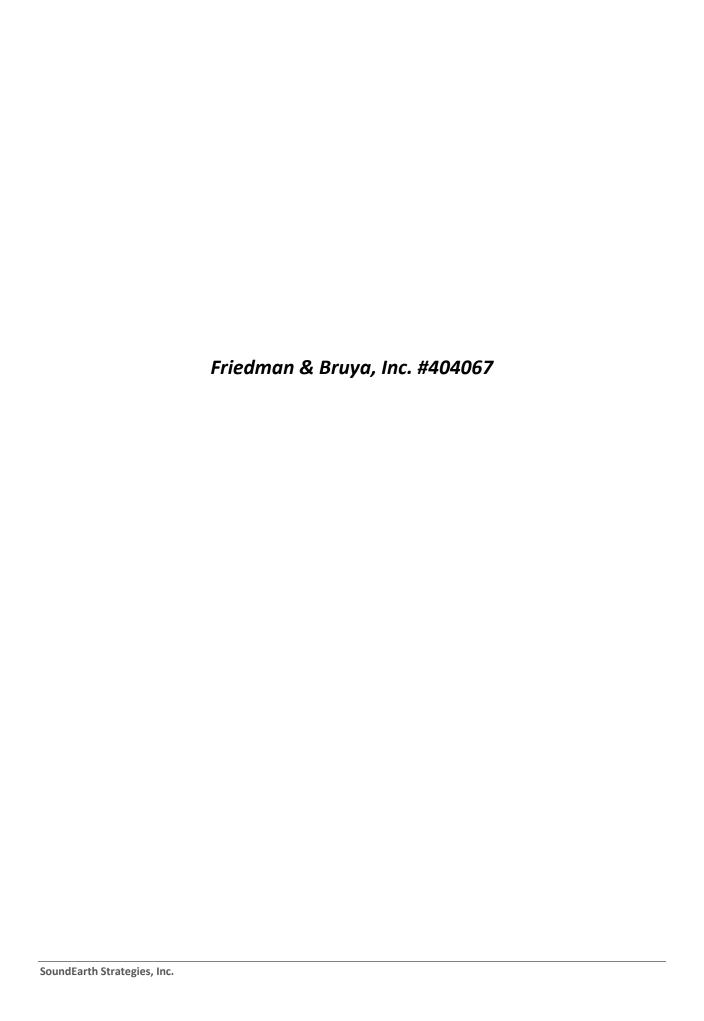
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Company Sou	undEarth St	rategies.	Inc.		PROJ	ECT NA	ME/NO	).			F	PO#		Stan		Weeks)
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

Forms\coc\coc.doc

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by Color Con	Chry Cass,	Sound Ecvily	0+/61/14	1615
Received by:	that light	FRIY	4/1/4	16/5
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Samples received



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 9, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 2, 2014 from the SOU\_0789-004\_20140402, F&BI 404067 project. There are 11 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 SOU0409R.DOC

#### ENVIRONMENTAL CHEMISTS

# CASE NARRATIVE

This case narrative encompasses samples received on April 2, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140402, F&BI 404067 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
404067 -01	B-IW05-10
404067 -02	B-IW05-15
404067 -03	B-IW05-20
404067 -04	B-IW05-25
404067 -05	B-IW05-31
404067 -06	B-IW06-05
404067 -07	B-IW06-15
404067 -08	B-IW06-20
404067 -09	B-IW06-25
404067 -10	B-IW06-30

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW05-15 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140402, F&BI 404067 04/02/14

Lab ID: Date Extracted: 04/04/14 404067-02 Date Analyzed: 04/04/14 Data File: 040421.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	102	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW05-20 Client: SoundEarth Strategies

Date Received: 04/02/14 Project: SOU\_0789-004\_20140402, F&BI 404067

Date Extracted: 04/04/14 Lab ID: 404067-03
Date Analyzed: 04/04/14 Data File: 040422.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	105	51	121
4-Bromofluorobenzene	102	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW05-25 Client: SoundEarth Strategies

Date Received: SOU\_0789-004\_20140402, F&BI 404067 04/02/14 Project:

Lab ID: 404067-04 Date Extracted: 04/04/14 Date Analyzed: 04/04/14 Data File: 040423.D Matrix: Instrument: Soil GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	106	51	121
4-Bromofluorobenzene	101	32	146

< 0.025

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02

Tetrachloroethene

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW06-05 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140402, F&BI 404067 04/02/14

Lab ID: Date Extracted: 04/04/14 404067-06 Date Analyzed: 04/04/14 Data File: 040424.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	106	51	121
4-Bromofluorobenzene	102	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW06-15 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140402, F&BI 404067 04/02/14

Lab ID: Date Extracted: 04/04/14 404067-07 Date Analyzed: 04/04/14 Data File: 040425.D Matrix: Soil Instrument: GCMS4

mg/kg (ppm) Dry Weight Units: Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	106	51	121
4-Bromofluorobenzene	102	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichlorœthene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW06-20 Client: SoundEarth Strategies

Date Received: SOU\_0789-004\_20140402, F&BI 404067 04/02/14 Project:

Lab ID: 404067-08 Date Extracted: 04/04/14 Date Analyzed: 04/04/14 Data File: 040426.D Instrument: Matrix: Soil GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	107	51	121
4-Bromofluorobenzene	102	32	146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW06-25 Client: SoundEarth Strategies

Date Received: 04/02/14 Project: SOU\_0789-004\_20140402, F&BI 404067

Date Extracted: 04/04/14 Lab ID: 404067-09
Date Analyzed: 04/04/14 Data File: 040427.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	107	51	121
4-Bromofluorobenzene	102	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: NA Project: SOU\_0789-004\_20140402, F&BI 404067

Date Extracted:04/04/14Lab ID:04-0678 mbDate Analyzed:04/04/14Data File:040408.DMatrix:SoilInstrument:GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

	Lower	∪pper
% Recovery:	Limit:	Limit:
99	62	142
97	51	121
98	32	146
	99 97	% Recovery: Limit: 99 62 97 51

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/09/14 Date Received: 04/02/14

Project: SOU\_0789-004\_20140402, F&BI 404067

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

Laboratory Code: 404077-08 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	39	40	10-138	3
Chloroethane	mg/kg (ppm)	2.5	< 0.5	56	53	10-176	6
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	56	58	10-160	4
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	61	62	10-156	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	60	61	14-137	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	69	70	19-140	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	70	72	25-135	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	72	74	12-160	3
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	70	72	10-156	3
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	69	71	21-139	3
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	68	69	20-133	1

Laboratory Code: Laboratory Control Sample

		Percent			
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Vinyl chloride	mg/kg (ppm)	2.5	61	22-139	
Chloroethane	mg/kg (ppm)	2.5	69	10-163	
1,1-Dichloroethene	mg/kg (ppm)	2.5	75	47-128	
Methylene chloride	mg/kg (ppm)	2.5	75	42-132	
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	75	67-127	
1,1-Dichloroethane	mg/kg (ppm)	2.5	84	68-115	
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	85	72-113	
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	87	56-135	
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	87	62-131	
Trichloroethene	mg/kg (ppm)	2.5	83	64-117	
Tetrachloroethene	mg/kg (ppm)	2.5	81	72-114	

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- $\operatorname{pr}$  The sample was received with incorrect preservation. The value reported should be considered an estimate.
- $ve-Estimated\ concentration\ calculated\ for\ an\ analyte\ response\ above\ the\ valid\ instrument\ calibration\ range.$
- 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.

ME 04-02-14 404067 SAMPLE CHAY OF CUSTODY SAMPLERS (signature) Send Report to Page #\_ Rob Roberts TURNAROUND TIME PROJECT NAME/NO PO# Company SoundEarth Strategies, Inc. Standard (2 Weeks) RUSH Avtech Wallingford Property Address 2811 Fairview Avenue E. Suite 2000 0789-004 Rush charges authorized by: REMARKS City, State, ZIP Seattle, WA 98102 SAMPLE DISPOSAL Dispose after 30 days Phone #\_ 206-306-1900 Fax # 206-306-1907 Return samples Will call with instructions ANALYSES REQUESTED (4 | or: nated NWTPH-Q/BTEX NWTPH-G Sample Sample Lab Date Sample ID Time # of Matrix Location Depth Sampled Sampled Jars B-IW05-10 B-IWC5 01204/02/14 10 0920 Sol 3 B-IN05.15 0740 02 B-IW05-20 20 0950 3 B-IW05.75 25 1005 3 B-IWU5-31 1025 B-IWOG CS B-TWOE 1330 3 B-IWO6 15 15 07 B-IW06-20 1415 .25 1440 1455 Friedman & Bruya, Inc. SIGNATURE PRINT NAME COMPANY DATE TIME 3012 16th Avenue West Relinguished by: Sound Bartly Seattle, WA 98119-2029 Received by:

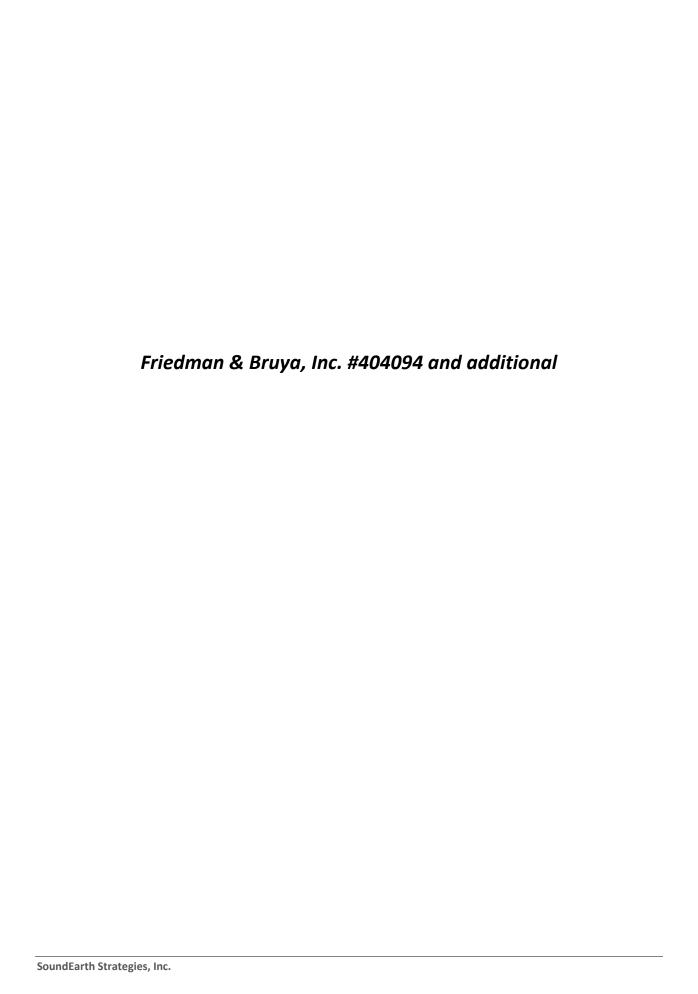
Fax (206) 283-5044

Ph. (206) 285-8282

Relinguished by:

Received by:

FORMS\COC\COC,DOC



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 10, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 3, 2014 from the SOU\_0789-004\_20140403, F&BI 404094 project. There are 10 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 SOU0410R.DOC

#### ENVIRONMENTAL CHEMISTS

## CASE NARRATIVE

This case narrative encompasses samples received on April 3, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140403, F&BI 404094 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
404094 -01	B-MW16-10
404094 -02	B-MW16-15
404094 -03	B-MW16-20
404094 -04	B-MW16-25
404094 -05	B-MW16-30
404094 -06	B-IW03-10
404094 -07	B-IW03-15
404094 -08	B-IW03-20
404094 -09	B-IW03-25
404094 -10	B-IW03-30
404094 -11	B-IW01-05
404094 -12	B-IW01-10

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-MW16-15 Client: SoundEarth Strategies

Date Received: 04/03/14 Project: SOU\_0789-004\_20140403, F&BI 404094

Date Extracted: 04/07/14 Lab ID: 404094-02
Date Analyzed: 04/08/14 Data File: 040808.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	97	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	0.034
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-MW16-25 Client: SoundEarth Strategies

Date Received: 04/03/14 Project: SOU\_0789-004\_20140403, F&BI 404094

Date Extracted: 04/07/14 Lab ID: 404094-04
Date Analyzed: 04/08/14 Data File: 040813.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	99	51	121
4-Bromofluorobenzene	98	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	0.066
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW03-15 Client: SoundEarth Strategies

Date Received: 04/03/14 Project: SOU\_0789-004\_20140403, F&BI 404094

04/07/14 Lab ID: Date Extracted: 404094-07 Date Analyzed: 04/08/14 Data File: 040814.D Instrument: Matrix: Soil GCMS4 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	95	51	121
4-Bromofluorobenzene	96	32	146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene 0.044 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW03-25 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140403, F&BI 404094 04/03/14

Lab ID: Date Extracted: 04/07/14 404094-09 Date Analyzed: 04/08/14 Data File: 040815.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	0.063
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW01-05 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140403, F&BI 404094 04/03/14

Lab ID: Date Extracted: 04/07/14 404094-11 Date Analyzed: 04/08/14 Data File: 040816.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	94	51	121
4-Bromoflu or obenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW01-10 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140403, F&BI 404094 04/03/14

Lab ID: Date Extracted: 04/07/14 404094-12 Date Analyzed: 04/08/14 Data File: 040817.D Matrix: Soil Instrument: GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	95	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140403, F&BI 404094

Date Extracted: 04/07/14 Lab ID: 04-0651 mb
Date Analyzed: 04/08/14 Data File: 040805.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	94	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/14 Date Received: 04/03/14

Project: SOU\_0789-004\_20140403, F&BI 404094

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

Laboratory Code: 404094-02 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	38	35	10-138	8
Chloroethane	mg/kg (ppm)	2.5	< 0.5	53	48	10-176	10
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	57	54	10-160	5
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	61	59	10-156	3
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	60	58	14-137	3
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	70	68	19-140	3
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	72	70	25-135	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	74	73	12-160	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	72	70	10-156	3
Trichloroethene	mg/kg (ppm)	2.5	0.031	69	69	21-139	0
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	72	71	20-133	1

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Vinyl chloride	mg/kg (ppm)	2.5	52	22-139
Chloroethane	mg/kg (ppm)	2.5	63	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	69	47-128
Methylene chloride	mg/kg (ppm)	2.5	71	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	72	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	81	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	82	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	82	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	82	62-131
Trichloroethene	mg/kg (ppm)	2.5	78	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	84	72-114

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed.} \ RPD\ results\ were\ still\ outside\ of\ control\ limits. \ The\ variability\ is\ attributed\ to\ sample\ inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- $ve-Estimated\ concentration\ calculated\ for\ an\ analyte\ response\ above\ the\ valid\ instrument\ calibration\ range.$
- 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.

· ( , <b>L</b>	104094	SAMPLE C
Send Report to	Rob Roberts	SAMPLE
Company	SoundEarth Strategies, Inc.	PROJECT
Address	2811 Fairview Avenue E. Suite 2000	Avte

City, State, ZIP <u>Seattle, WA 98102</u>

Phone # <u>206-306-1900</u> Fax # <u>206-306-1907</u>

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SAMPLERS (signature)	i. Com	Page #of
PROJECT NAME/NO.	PO#	TURNAROUND TIME Standard (2 Weeks) RUSH
Avtech Wallingford Property	0789-004	Rush charges authorized by:
REMARKS Hota		SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlower 144 Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx					Notes
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B-MW16-30		3 -	05	4	1935	1	?	×								
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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SIGNATURE			3	
Police and all all all all all all all all all al	PRINT NAME	COMPANY	DATE	TIME
( Som Com	Chris Cass	SoundEarth	04/03/12	
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Received by:				
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SAMPLE CHAY OF CUSTODY HE 04/03/14 4040 94 SAMPLERS (signature) Send Report to Rob Roberts TURNAROUND TIME PROJECT NAME/NO. Company\_ SoundEarth Strategies, Inc. PO# Standard (2 Weeks) RUSH Avtech Wallingford Property Address 2811 Fairview Avenue E. Suite 2000 0789-004 Rush charges authorized by: REMARKS City, State, ZIP\_ Seattle, WA 98102 SAMPLE DISPOSAL Dispose after 30 days Phone # 206-306-1900 Fax # 206-306-1907 Return samples Will call with instructions

					<u> </u>	Г	Т	Т	·		A1	MATVOY	S REQU	TELOMYN	
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH.Dx	NALIGI	Sean Co	JESTED	Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206)	<i>283-5044</i>	
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SIGNATURE	DDIAMENTALE		1	
Relinquished how	PRINT NAME	COMPANY	DATE	TIME
Received by:	Chr. J Cass	SoundEarly	04/03/14	1603
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Received by:				
		Samples received at	4 °c	

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 16, 2014

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

Dear Mr. Roberts:

Included are the additional results from the testing of material submitted on April 3, 2014 from the SOU\_0789-004\_20140403, F&BI 404094 project. There are 8 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures SOU0416R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 3, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140403, F&BI 404094 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
404094 -01	B-MW16-10
404094 -02	B-MW16-15
404094 -03	B-MW16-20
404094 -04	B-MW16-25
404094 -05	B-MW16-30
404094 -06	B-IW03-10
404094 -07	B-IW03-15
404094 -08	B-IW03-20
404094 -09	B-IW03-25
404094 -10	B-IW03-30
404094 -11	B-IW01-05
404094 -12	B-IW01-10

Samples B-MW16-15 and B-MW16-25, as well as B-IW03-15 and B-IW03-25, were composited and sent to Fremont for total organic carbon analysis. The report generated by Fremont will be forwarded upon receipt.

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-MW16-10 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140403, F&BI 404094 04/03/14

Lab ID: Date Extracted: 04/14/14 404094-01 Date Analyzed: 04/14/14 Data File: 041411.D Matrix: Soil Instrument: GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

## ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-MW16-30 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140403, F&BI 404094 04/03/14

Lab ID: Date Extracted: 04/14/14 404094-05 Date Analyzed: 04/14/14 Data File: 041412.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	0.042
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW03-10 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140403, F&BI 404094 04/03/14

Lab ID: Date Extracted: 404094-06 04/14/14 Date Analyzed: 04/14/14 Data File: 041413.D Matrix: Soil Instrument: GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	98	51	121
4-Bromofluorobenzene	97	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW03-30 Client: SoundEarth Strategies

SOU\_0789-004\_20140403, F&BI 404094 Date Received: 04/03/14 Project:

Lab ID: Date Extracted: 04/14/14 404094-10 Date Analyzed: 04/14/14 Data File: 041414.D Instrument: Matrix: Soil GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	97	32	146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

SOU\_0789-004\_20140403, F&BI 404094 Date Received: Not Applicable Project:

04/14/14 Lab ID: Date Extracted: 04-0734 mb Date Analyzed: 04/14/14 Data File: 041410.D Soil Instrument: Matrix: GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	96	32	146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/16/14 Date Received: 04/03/14

Project: SOU\_0789-004\_20140403, F&BI 404094

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

Laboratory Code: 404094-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	54	52	10-138	4
Chloroethane	mg/kg (ppm)	2.5	< 0.5	71	68	10-176	4
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	66	64	10-160	3
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	68	64	10-156	6
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	71	67	14-137	6
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	78	73	19-140	7
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	78	73	25-135	7
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	83	78	12-160	6
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	68	62	10-156	9
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	79	75	21-139	5
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	79	75	20-133	5

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Vinyl chloride	mg/kg (ppm)	2.5	70	22-139
Chloroethane	mg/kg (ppm)	2.5	80	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	80	47-128
Methylene chloride	mg/kg (ppm)	2.5	76	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	81	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	88	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	87	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	90	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	78	62-131
Trichloroethene	mg/kg (ppm)	2.5	87	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	87	72-114

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed.} \ RPD\ results\ were\ still\ outside\ of\ control\ limits. \ The\ variability\ is\ attributed\ to\ sample\ inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- ve Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

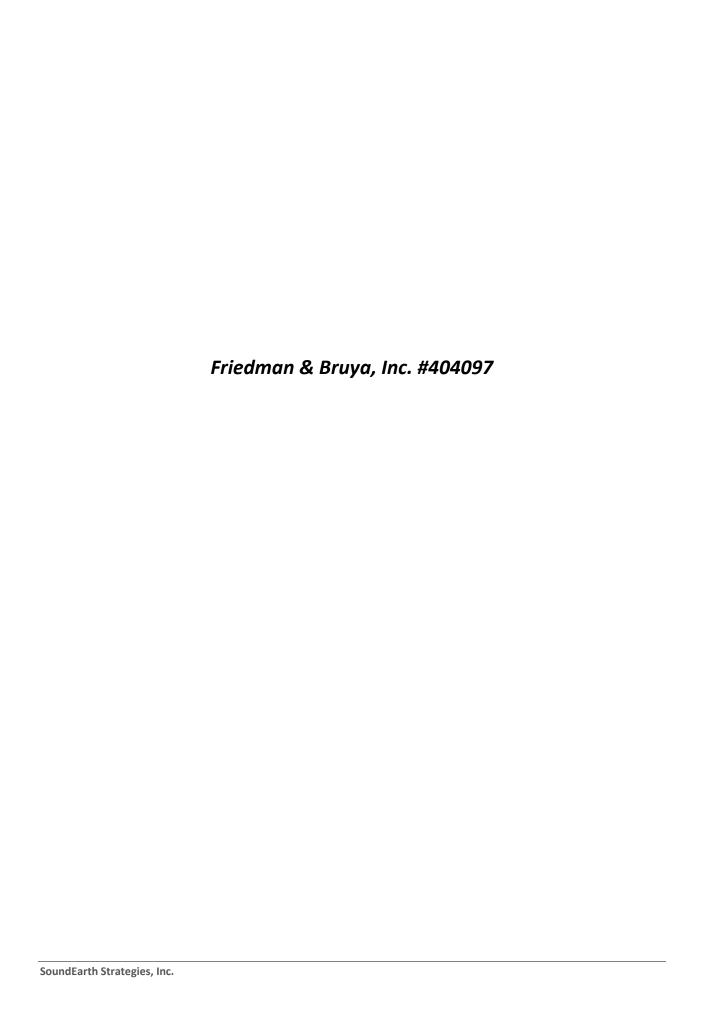
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3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044 FORMS\COC\COC.DOC

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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 9, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 4, 2014 from the SOU\_0789-004\_20140404, F&BI 404097 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures SOU0409R.DOC

#### ENVIRONMENTAL CHEMISTS

### **CASE NARRATIVE**

This case narrative encompasses samples received on April 4, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140404, F&BI 404097 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
404097 -01	B-IW01-15
404097 -02	B-IW01-20
404097 -03	B-IW01-25
404097 -04	B-IW01-30

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW01-15 Client: SoundEarth Strategies

Date Received: 04/04/14 Project: SOU\_0789-004\_20140404, F&BI 404097

Lab ID: Date Extracted: 04/04/14 404097-01 Date Analyzed: 04/04/14 Data File: 040428.D Matrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper % Recovery: Limit: Limit: Surrogates: 1.2-Dichloroethane-d4 99 62 142 Toluene-d8 106 51 121 4-Bromofluorobenzene 32 102 146

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

## ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B-IW01-25 Client: SoundEarth Strategies

Date Received: 04/04/14 Project: SOU\_0789-004\_20140404, F&BI 404097

Date Extracted: 04/04/14 Lab ID: 404097-03
Date Analyzed: 04/05/14 Data File: 040429.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	97	62	142
Toluene-d8	106	51	121
4-Bromofluorobenzene	102	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: NA Project: SOU\_0789-004\_20140404, F&BI 404097

Date Extracted: 04/04/14 Lab ID: 04-0678 mb
Date Analyzed: 04/04/14 Data File: 040408.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	98	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/09/14 Date Received: 04/04/14

Project: SOU\_0789-004\_20140404, F&BI 404097

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

Laboratory Code: 404077-08 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	39	40	10-138	3
Chloroethane	mg/kg (ppm)	2.5	< 0.5	56	53	10-176	6
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	56	58	10-160	4
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	61	62	10-156	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	60	61	14-137	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	69	70	19-140	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	70	72	25-135	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	72	74	12-160	3
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	70	72	10-156	3
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	69	71	21-139	3
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	68	69	20-133	1

Laboratory Code: Laboratory Control Sample

3	•		Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Vinyl chloride	mg/kg (ppm)	2.5	61	22-139
Chloroethane	mg/kg (ppm)	2.5	69	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	75	47-128
Methylene chloride	mg/kg (ppm)	2.5	75	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	75	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	84	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	85	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	87	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	87	62-131
Trichloroethene	mg/kg (ppm)	2.5	83	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	81	72-114

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

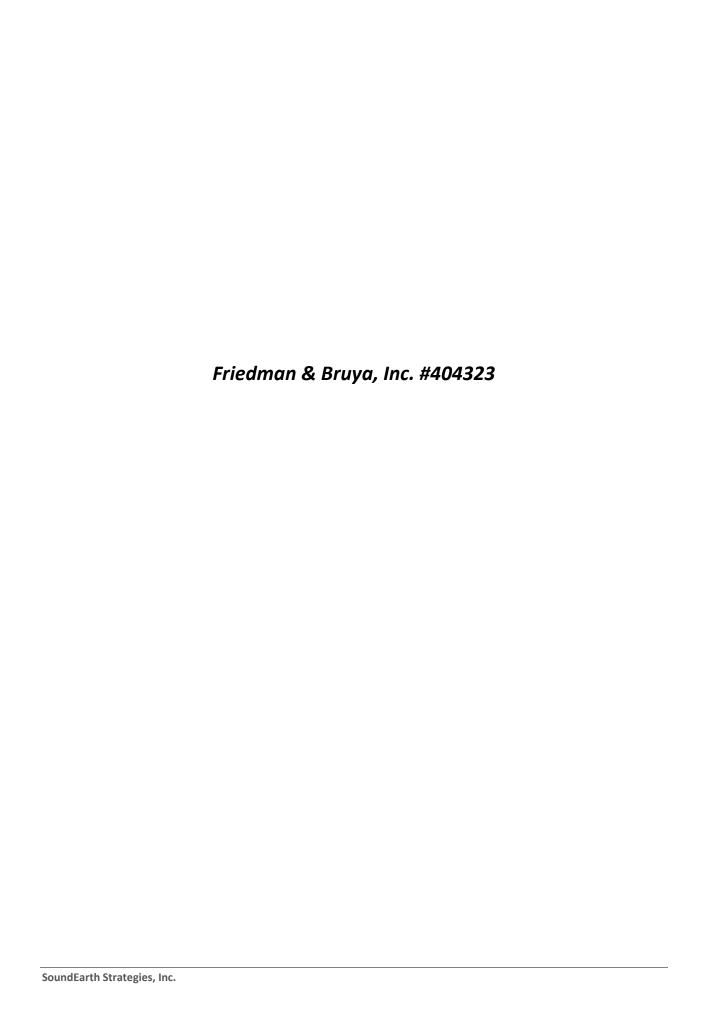
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- $\mbox{d} v$  Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- $ve-Estimated\ concentration\ calculated\ for\ an\ analyte\ response\ above\ the\ valid\ instrument\ calibration\ range.$
- 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.

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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dz				Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044

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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 23, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 17, 2014 from the SOU\_0789-004\_20140417, F&BI 404323 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures SOU0423R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 17, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140417, F&BI 404323 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
404323 -01	IW01-20140416
404323 -02	IW02-20140416
404323 -03	IW03-20140416
404323 -04	IW04-20140416
404323 -05	IW05-20140416
404323 -06	IW06-20140416
404323 -07	MW06-20140416
404323 -08	MW15-20140416
404323 -09	MW16-20140416
404323 -10	MW99-20140416

1,1,1-Trichloroethane in the 8260C laboratory control sample and laboratory control sample duplicate exceeded the acceptance criteria. The analyte was not detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	IW01-20140416	Client:	SoundEarth Strategies
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Date Received: Project: 04/17/14 SOU\_0789-004\_20140417, F&BI 404323

Lab ID: Date Extracted: 04/18/14 404323-01 Date Analyzed: 04/18/14 Data File: 041810.D Matrix: Instrument: Water GCMS4 Units: ug/L (ppb) Operator: JS

<1

<1

<1

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	103	60	133

#### Concentration Compounds: 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

Trichloroethene

Tetrachloroethene

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	IW02-20140416	Client:	SoundEarth Strategies
-------------------	---------------	---------	-----------------------

Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323

Date Extracted: 04/18/14 Lab ID: 404323-02

Date Analyzed: 04/18/14 Data File: 041811.D

Matrix: Water Instrument: GCMS4

Units: ug/L (ppb) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	103	60	133

# $\begin{array}{ccc} & & & & & & & \\ Concentration \\ ug/L \ (ppb) & & & & \\ Vinyl \ chloride & & & <0.2 \\ Chloroethane & & & <1 \\ 1,1-Dichloroethene & & <1 \\ \end{array}$

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

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	IW03-20140416	Client:	SoundEarth Strategies
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Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323
Date Extracted: 04/18/14 Lab ID: 404323-03

Date Extracted: 04/18/14 Lab ID: 404323-03
Date Analyzed: 04/18/14 Data File: 041812.D
Matrix: Water Instrument: GCMS4
Units: ug/L (ppb) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	102	60	133

# Concentration

Compounds:	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	17
Tetrachloroethene	<1

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: IW	V04-20140416	Client:	SoundEarth Strategies
----------------------	--------------	---------	-----------------------

Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323
Date Extracted: 04/18/14 Lab ID: 404323-04

Date Extracted: 04/18/14 Lab ID: 404323-04
Date Analyzed: 04/18/14 Data File: 041813.D
Matrix: Water Instrument: GCMS4
Units: ug/L (ppb) Operator: JS

44

<1

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	101	60	133

### Concentration Compounds: 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

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	IW05-20140416	Client:	SoundEarth Strategies
-------------------	---------------	---------	-----------------------

Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323

Lab ID: Date Extracted: 04/18/14 404323-05 Date Analyzed: 04/18/14 Data File: 041814.D Matrix: Instrument: Water GCMS4 Units: ug/L (ppb) Operator: JS

<1

<1

<1

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	103	60	133

### Concentration Compounds: 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

Trichloroethene

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: IW06-20140416 Client: SoundEarth Strategies

Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323

Lab ID: Date Extracted: 04/18/14 404323-06 Date Analyzed: 04/18/14 Data File: 041815.D Matrix: Water Instrument: GCMS4 Units: ug/L (ppb) Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	104	60	133

### Concentration Compounds: 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

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW06-20140416	Client:	SoundEarth Strategies
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Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323

Lab ID: Date Extracted: 04/18/14 404323-07 Date Analyzed: 04/18/14 Data File: 041816.D Matrix: Instrument: Water GCMS4 Units: ug/L (ppb) Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	104	60	133

3.9

<1

### Concentration Compounds: 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

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW15-20140416 Clien	t: SoundEarth Strategies
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Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323

Lab ID: Date Extracted: 04/18/14 404323-08 Date Analyzed: 04/18/14 Data File: 041817.D Matrix: Instrument: Water GCMS4 Units: ug/L (ppb) Operator: JS

<1

<1

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	104	60	133

### Concentration Compounds: 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

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW16-20140416	Client:	SoundEarth Strategies
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Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323

Lab ID: Date Extracted: 04/18/14 404323-09 Date Analyzed: 04/18/14 Data File: 041820.D Matrix: Instrument: Water GCMS4 Units: ug/L (ppb) Operator: JS

<1

<1

<1

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

### Concentration Compounds: 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

Trichloroethene

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99-20140416	Client:	SoundEarth Strategies
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Date Received: 04/17/14 Project: SOU\_0789-004\_20140417, F&BI 404323

Lab ID: Date Extracted: 04/18/14 404323-10 Date Analyzed: 04/18/14 Data File: 041821.D Matrix: Instrument: Water GCMS4 Units: ug/L (ppb) Operator: JS

<1

<1

<1

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	99	60	133

### Concentration Compounds: 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

Trichloroethene

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140417, F&BI 404323

04/18/14 Lab ID: 04-0740 mb Date Extracted: Date Analyzed: 04/18/14 Data File: 041807.D Instrument: Matrix: Water GCMS4 Units: ug/L (ppb) Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	102	60	133

<1

<1

### Concentration Compounds: 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

### ENVIRONMENTAL CHEMISTS

Date of Report: 04/23/14 Date Received: 04/17/14

Project: SOU\_0789-004\_20140417, F&BI 404323

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

Laboratory Code: 404323-01 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	< 0.2	94	36-166
Chloroethane	ug/L (ppb)	50	<1	117	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	92	60-136
Methylene chloride	ug/L (ppb)	50	<5	86	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	92	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	96	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	97	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	129	60-146
Trichloroethene	ug/L (ppb)	50	<1	96	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	92	10-226

Laboratory Code: Laboratory Control Sample

		Percent	Percent		
Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Units	Level	LCS	LCSD	Criteria	(Limit 20)
ug/L (ppb)	50	94	98	50-154	4
ug/L (ppb)	50	122	125	58-146	2
ug/L (ppb)	50	93	94	67-136	1
ug/L (ppb)	50	86	86	39-148	0
ug/L (ppb)	50	95	95	68-128	0
ug/L (ppb)	50	97	97	79-121	0
ug/L (ppb)	50	94	94	80-123	0
ug/L (ppb)	50	94	93	73-132	1
ug/L (ppb)	50	142 vo	145 vo	83-130	2
ug/L (ppb)	50	95	95	80-120	0
ug/L (ppb)	50	93	92	76-121	1
	Units  ug/L (ppb)  ug/L (ppb)	Units Level  ug/L (ppb) 50  ug/L (ppb) 50	Reporting Units         Spike Level         Recovery LCS           ug/L (ppb)         50         94           ug/L (ppb)         50         122           ug/L (ppb)         50         93           ug/L (ppb)         50         86           ug/L (ppb)         50         95           ug/L (ppb)         50         97           ug/L (ppb)         50         94           ug/L (ppb)         50         94           ug/L (ppb)         50         142 vo           ug/L (ppb)         50         95	Reporting Units         Spike Level         Recovery LCS         Recovery LCSD           ug/L (ppb)         50         94         98           ug/L (ppb)         50         122         125           ug/L (ppb)         50         93         94           ug/L (ppb)         50         86         86           ug/L (ppb)         50         95         95           ug/L (ppb)         50         94         94           ug/L (ppb)         50         94         93           ug/L (ppb)         50         142 vo         145 vo           ug/L (ppb)         50         95         95	Reporting Units         Spike Level         Recovery LCS         Recovery LCSD         Acceptance Criteria           ug/L (ppb)         50         94         98         50-154           ug/L (ppb)         50         122         125         58-146           ug/L (ppb)         50         93         94         67-136           ug/L (ppb)         50         86         86         39-148           ug/L (ppb)         50         95         95         68-128           ug/L (ppb)         50         97         97         79-121           ug/L (ppb)         50         94         94         80-123           ug/L (ppb)         50         94         93         73-132           ug/L (ppb)         50         142 vo         145 vo         83-130           ug/L (ppb)         50         95         95         80-120

### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed.} \ RPD\ results\ were\ still\ outside\ of\ control\ limits. \ The\ variability\ is\ attributed\ to\ sample\ inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- pr The sample was received with incorrect preservation. The value reported should be considered an estimate.
- $ve-Estimated\ concentration\ calculated\ for\ an\ analyte\ response\ above\ the\ valid\ instrument\ calibration\ range.$
- 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.

404323

SAMPLE CHAIN OF CUSTODY

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Send	Report to
Denu	Trepore ro

Rob Roberts

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP \_\_\_\_Seattle, WA 98102

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

PROJECT NAME/NO.

PO#

Avtech Wallingford Property

0789-004

REMARKS

Hold Sean Lawy JOT704/1

Page #\_\_\_\_\_\_ of \_\_\_\_\_
TURNAROUND TIME
Standard (2 Weeks)

Standard (2 Weeks)
RUSH

Rush charges authorized by:

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

											A]	NALYSE	ES REQU	JESTED		<u> </u>
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	C410/144/ed Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx					Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West

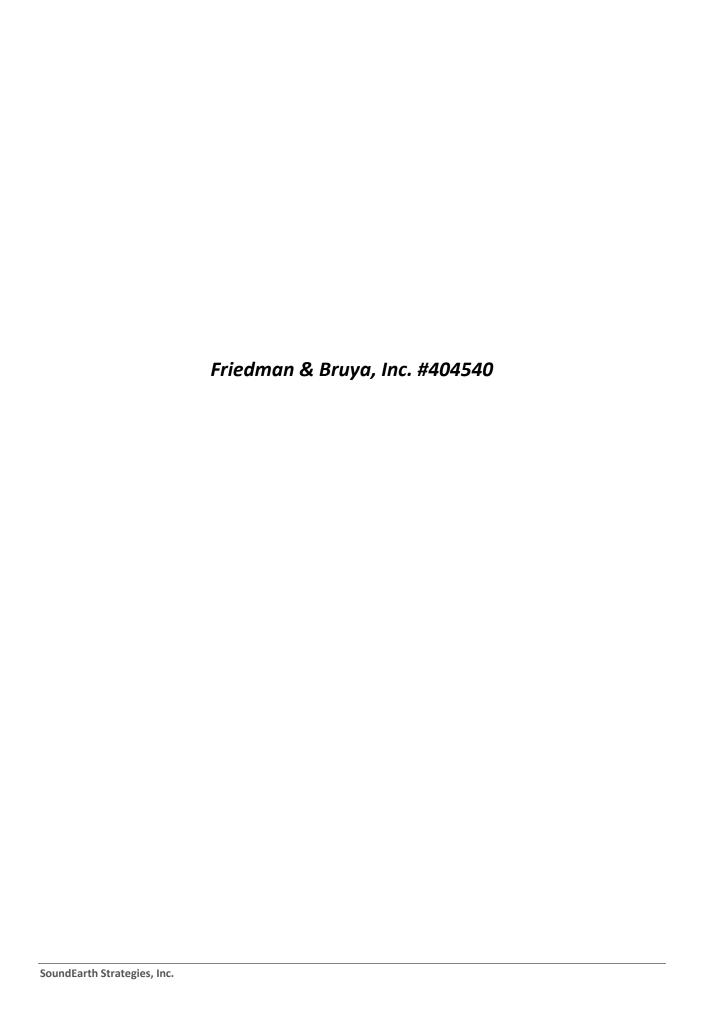
Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

May 6, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 30, 2014 from the SOU\_0789-004\_20140430, F&BI 404540 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures SOU0506R.DOC

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

## **CASE NARRATIVE**

This case narrative encompasses samples received on April 30, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140430, F&BI 404540 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u> 404540 -01 MW11D-20140430

All quality control requirements were acceptable.

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11D-20140430	Client:	SoundEarth Strategies
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Date Received: 04/30/14 Project: SOU\_0789-004\_20140430, F&BI 404540

Lab ID: Date Extracted: 05/01/14 404540-01 Date Analyzed: 05/01/14 Data File: 050108.D Matrix: Instrument: Water GCMS7 Units: ug/L (ppb) Operator: JS

<1

<1

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	94	108
Toluene-d8	105	91	107
4-Bromoflu or obenzene	104	91	110

### Concentration Compounds: 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

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
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Date Received: Not Applicable Project: SOU\_0789-004\_20140430, F&BI 404540

05/01/14 Lab ID: Date Extracted: 04-0844 mb Date Analyzed: 05/01/14 Data File: 050107.D Matrix: Instrument: Water GCMS7 Units: ug/L (ppb) Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	102	94	108
Toluene-d8	104	91	107
4-Bromofluorobenzene	105	91	110

# Concentration ug/L (ppb) Vinyl chloride <0.2 Chloroethane <1 1,1-Dichloroethene <1 Methylene chloride <5

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

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/06/14 Date Received: 04/30/14

Project: SOU\_0789-004\_20140430, F&BI 404540

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

Laboratory Code: 404540-01 (Matrix Spike)

				Percent	
	Reporting	Spike	Sample	Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Vinyl chloride	ug/L (ppb)	50	< 0.2	91	58-136
Chloroethane	ug/L (ppb)	50	<1	99	61-138
1,1-Dichloroethene	ug/L (ppb)	50	<1	85	75-118
Methylene chloride	ug/L (ppb)	50	<5	93	73-118
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	92	82-111
1,1-Dichloroethane	ug/L (ppb)	50	<1	91	85-110
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	92	84-112
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	92	81-114
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	88	83-115
Trichloroethene	ug/L (ppb)	50	<1	85	84-105
Tetrachloroethene	ug/L (ppb)	50	<1	88	72-121

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	ug/L (ppb)	50	95	109	72-124	14
Chloroethane	ug/L (ppb)	50	97	109	69-133	12
1,1-Dichloroethene	ug/L (ppb)	50	90	100	78-119	11
Methylene chloride	ug/L (ppb)	50	96	98	71-119	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	100	82-116	3
1,1-Dichloroethane	ug/L (ppb)	50	94	95	81-116	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	96	96	82-116	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	93	92	81-113	1
1,1,1-Trichloroethane	ug/L (ppb)	50	91	93	84-117	2
Trichloroethene	ug/L (ppb)	50	87	88	82-110	1
Tetrachloroethene	ug/L (ppb)	50	90	92	78-117	2

### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- A1 More than one compound of similar molecule structure was identified with equal probability.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte indicated may be due to carryover from previous sample injections.
- d The sample was diluted. Detection limits may be raised due to dilution.
- ds The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.
- dv Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.
- fb Analyte present in the blank and the sample.
- fc The compound is a common laboratory and field contaminant.
- $hr\ \hbox{- The sample and duplicate were reextracted and reanalyzed.} \ RPD\ results\ were\ still\ outside\ of\ control\ limits. \ The\ variability\ is\ attributed\ to\ sample\ inhomogeneity.}$
- ht Analysis performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The result is below normal reporting limits. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.
- jr The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the compound indicated is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received in a container not approved by the method. The value reported should be considered an estimate.
- $\operatorname{pr}$  The sample was received with incorrect preservation. The value reported should be considered an estimate.
- $ve-Estimated\ concentration\ calculated\ for\ an\ analyte\ response\ above\ the\ valid\ instrument\ calibration\ range.$
- 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.

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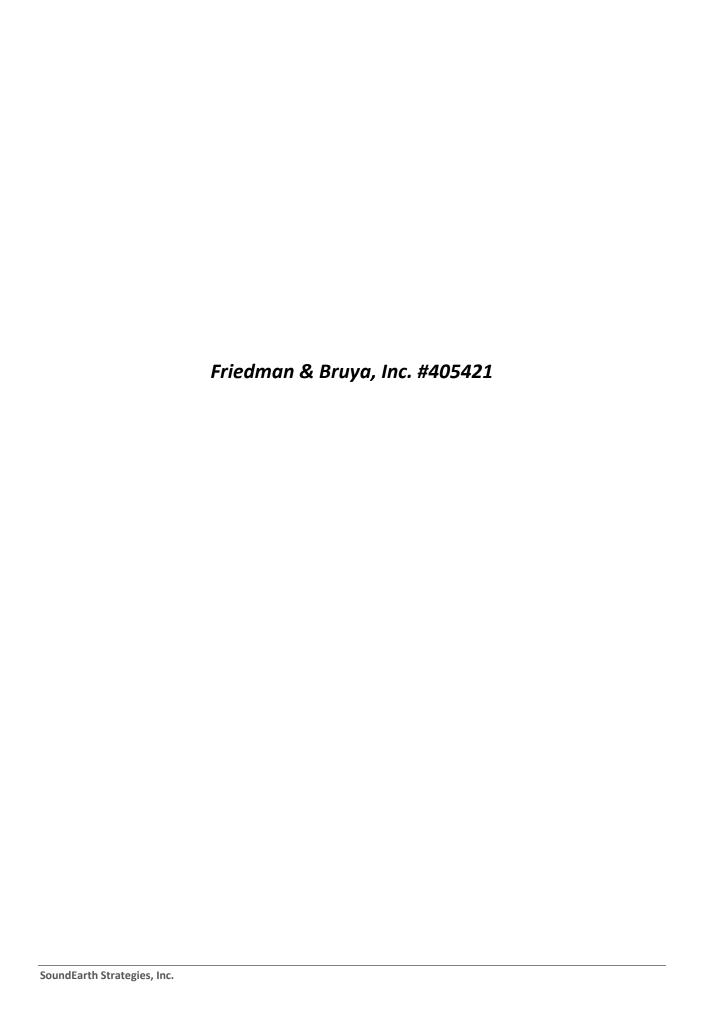
Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

June 4, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on May 21, 2014 from the SOU\_0789-004\_20140521, F&BI 405421 project. There are 19 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 SOU0604R.DOC

### ENVIRONMENTAL CHEMISTS

## **CASE NARRATIVE**

This case narrative encompasses samples received on May 21, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140521, F&BI 405421 project. Samples were logged in under the laboratory ID's listed below.

T 1 . TD	
<u>Laboratory ID</u>	SoundEarth Strategies
405421-01	SB206-10
405421-02	SB206-12.5
405421-03	SB206-15
405421-04	SB206-25
405421-05	SB206-30
405421-06	SB207-05
405421-07	SB207-10
405421-08	SB207-12.5
405421-09	SB207-15
405421-10	SB207-20
405421-11	SB207-25
405421-12	SB207-30
405421-13	SB208-05
405421-14	SB208-10
405421-15	SB208-12.5
405421-16	SB208-15

All quality control requirements were acceptable.

# ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB206-10 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140521, F&BI 405421 05/21/14

Lab ID: Date Extracted: 05/23/14 405421-01 Date Analyzed: 05/23/14 Data File: 052314.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB206-12.5 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140521, F&BI 405421 05/21/14

Lab ID: Date Extracted: 05/23/14 405421-02 Date Analyzed: 05/23/14 Data File: 052315.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	96	62	142
Toluene-d8	98	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	0.025
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB206-15 Client: SoundEarth Strategies

Date Received: 05/21/14 Project: SOU\_0789-004\_20140521, F&BI 405421

Date Extracted: 05/23/14 Lab ID: 405421-03
Date Analyzed: 05/23/14 Data File: 052316.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB206-25 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140521, F&BI 405421 05/21/14

Lab ID: Date Extracted: 05/23/14 405421-04 Date Analyzed: 05/23/14 Data File: 052317.D Matrix: Soil Instrument: GCMS4

mg/kg (ppm) Dry Weight Units: Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

# ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB207-05 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140521, F&BI 405421 05/21/14

Lab ID: Date Extracted: 05/23/14 405421-06 Date Analyzed: 05/23/14 Data File: 052318.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

# ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB207-10 Client: SoundEarth Strategies

Date Received: 05/21/14 Project: SOU\_0789-004\_20140521, F&BI 405421

Date Extracted: 05/23/14 Lab ID: 405421-07
Date Analyzed: 05/23/14 Data File: 052319.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB207-12.5 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140521, F&BI 405421 05/21/14

Lab ID: Date Extracted: 05/23/14 405421-08 Date Analyzed: 05/23/14 Data File: 052320.DMatrix: Soil Instrument: GCMS4 JS

Units: mg/kg (ppm) Dry Weight Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB207-20 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140521, F&BI 405421 05/21/14

Lab ID: Date Extracted: 05/23/14 405421-10 Date Analyzed: 05/23/14 Data File: 052321.D Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	96	51	121
4-Bromofluorobenzene	94	32	146

	Concentration
Compounds:	mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB207-25 Client: SoundEarth Strategies

Date Received: 05/21/14 Project: SOU\_0789-004\_20140521, F&BI 405421

Date Extracted: 05/23/14 Lab ID: 405421-11
Date Analyzed: 05/23/14 Data File: 052322.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB207-30 Client: SoundEarth Strategies

Date Received: 05/21/14 Project: SOU\_0789-004\_20140521, F&BI 405421

Lab ID: Date Extracted: 06/02/14 405421-12 Date Analyzed: 06/02/14 Data File: 060213.D Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	90	111
Toluene-d8	99	64	137
4-Bromofluorobenzene	102	81	119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

# ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB208-10 Client: SoundEarth Strategies

Date Received: 05/21/14 Project: SOU\_0789-004\_20140521, F&BI 405421

Date Extracted: 05/23/14 Lab ID: 405421-14
Date Analyzed: 05/23/14 Data File: 052323.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB208-12.5 Client: SoundEarth Strategies

Date Received: 05/21/14 Project: SOU\_0789-004\_20140521, F&BI 405421

Date Extracted: 05/23/14 Lab ID: 405421-15
Date Analyzed: 05/23/14 Data File: 052324.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	100	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene <0.05	
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB208-15 Client: SoundEarth Strategies

Date Received: 05/21/14 Project: SOU\_0789-004\_20140521, F&BI 405421

Date Extracted: 05/23/14 Lab ID: 405421-16
Date Analyzed: 05/23/14 Data File: 052325.D
Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	100	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140521, F&BI 405421

05/23/14 Lab ID: Date Extracted: 04-1046 mb Date Analyzed: 05/23/14 Data File: 052308.DMatrix: Soil Instrument: GCMS4

mg/kg (ppm) Dry Weight Units: Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	95	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140521, F&BI 405421

Date Extracted: 06/02/14 Lab ID: 04-1102 mb
Date Analyzed: 06/02/14 Data File: 060207.D
Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	90	111
Toluene-d8	97	64	137
4-Bromofluorobenzene	98	81	119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/14 Date Received: 05/21/14

Project: SOU\_0789-004\_20140521, F&BI 405421

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

Laboratory Code: 405439-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	35	39	10-138	11
Chloroethane	mg/kg (ppm)	2.5	< 0.5	51	59	10-176	15
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	51	58	10-160	13
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	68	73	10-156	7
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	52	57	14-137	9
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	63	68	19-140	8
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	64	70	25-135	9
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	70	74	12-160	6
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	60	66	10-156	10
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	57	61	21-139	7
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	65	72	20-133	10

Laboratory Code: Laboratory Control Sample

	Percent						
	Reporting	Spike	Recovery	Acceptance			
Analyte	Units	Level	LCS	Criteria			
Vinyl chloride	mg/kg (ppm)	2.5	71	22-139			
Chloroethane	mg/kg (ppm)	2.5	82	10-163			
1,1-Dichloroethene	mg/kg (ppm)	2.5	85	47-128			
Methylene chloride	mg/kg (ppm)	2.5	95	42-132			
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	79	67-127			
1,1-Dichloroethane	mg/kg (ppm)	2.5	91	68-115			
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	89	72-113			
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	94	56-135			
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	89	62-131			
Trichloroethene	mg/kg (ppm)	2.5	80	64-117			
Tetrachloroethene	mg/kg (ppm)	2.5	94	72-114			

### ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/14 Date Received: 05/21/14

Project: SOU\_0789-004\_20140521, F&BI 405421

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

Laboratory Code: 405573-05 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	41	38	10-91	8
Chloroethane	mg/kg (ppm)	2.5	< 0.5	64	63	10-101	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	54	52	11-103	4
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	65	66	14-128	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	62	61	13-112	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	69	68	23-115	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	68	69	25-120	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	73	74	22-124	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	65	66	27-112	2
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	71	73	30-112	3
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	71	72	27-110	1

Laboratory Code: Laboratory Control Sample

	Percent					
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Vinyl chloride	mg/kg (ppm)	2.5	59	42-107		
Chloroethane	mg/kg (ppm)	2.5	83	47-115		
1,1-Dichloroethene	mg/kg (ppm)	2.5	71	65-110		
Methylene chloride	mg/kg (ppm)	2.5	78	62-119		
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	78	71-113		
1,1-Dichloroethane	mg/kg (ppm)	2.5	85	76-109		
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	81	77-110		
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	87	80-109		
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	81	72-116		
Trichloroethene	mg/kg (ppm)	2.5	83	72-107		
Tetrachloroethene	mg/kg (ppm)	2.5	83	77-110		

#### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- $\operatorname{ca}$  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.
- $\boldsymbol{J}$  The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- ${
  m jl}$  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.
- $\operatorname{pc}$  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.

405421 SA	MPLE CHAY OF CUSTODY	4E 05-21-	14 VS2
Send Report to Rob Roberts	SAMPLERS (signature)	Wa-	Page #of
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	TURNAROUND TIME Standard (2 Weeks)
Address 2811 Fairview Avenue E. Suite 2000	Avtech Wallingford Property	0789-004	RUSHRush charges authorized by:
City, State, ZIP Seattle, WA 98102	REMARKS Hold		SAMPLE DISPOSAL
Phone # 206-306-1900 Fax # 206-306-1907			Dispose after 30 days Return samples Will call with instructions

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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorinated Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx				Notes	
SB206-10	58206	10	0.410	05/21/14	10/0	Soil	4	1	<u> </u>			ļ				
28206-12-2		12 6	02 T	1	1015	1	4	V				<b>-</b>			 Fralysis ad	He 2 1 - 0
58206-15	7		03	1	1035	1	4	1	-						3/22 864 84	2-13
8 <del>0206-20</del>		-		C 05	12115											
SB206-25	8826	<b>2</b> 5	C.A.	05/21/14	1055	5=:1	4									
58206.30	1	20	057		1120		4									
SB207-05	58207			5/21/14	1210	Y	4	>								
SB207-10	1	100	07		1225		4	2								
58207-125			081	-   -	1240		4	X								
SB207-15	N		09	L	1250	1	4	/								

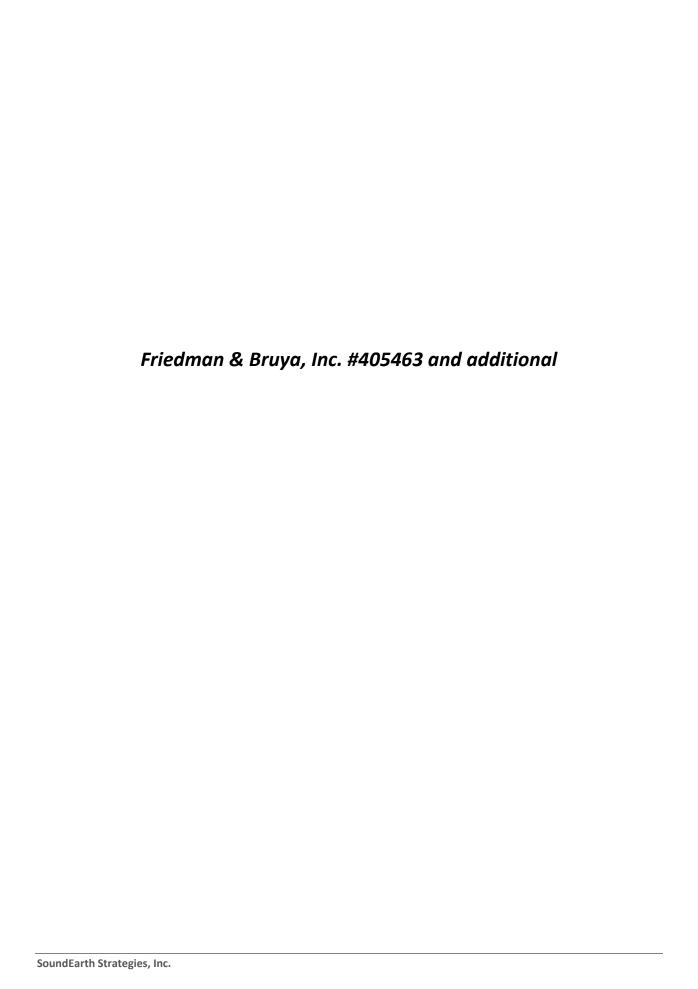
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044 FORMS\COC\COC.DOC

SIGNATURE	DDINGNAMO		1	
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Received by:			ļ.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
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Address 281	1 Fairview A	venue E	. Suite	2000	· L	Avtech \	Walling	ford Pr	operty		078	9-004		charges aut	horized by:	
City, State, ZIP				6-1907	REMA	ARKS	<del>16</del>	H)					Dier Retu	SAMPLE D pose after 30 urn samples call with in	) daya	
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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorin etck Bolvente (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH.Dx				Notes	
5B207-20	SB207		G.AOI	05/21/14	1300	Seil	4	X							**	
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xitle, WA 98119-2025	1	a dy:	ac.	2/6	-	7	6,-		551		1	Sough		OS/2//	# 1535	1

Ph. (206) 285-8282 Fax (206) 283-5044 FORMS\COC\COC.DOC

		Sample	e received	#: 5°°C
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The implementation by .			1-4-1	1222
Relinquished by	Mart you	FREE	5/2/11	1525
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_ confor	(4) COST,	Sounder 4	OSINIA	1535
Relinquished by	FIGNT NAME	COMPANY	DATE	TIME
SIGNATURE	PRINT NAME	T		



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

May 29, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on May 23, 2014 from the SOU\_0789-004\_20140523, F&BI 405463 project. There are 23 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 SOU0529R.DOC

### ENVIRONMENTAL CHEMISTS

# CASE NARRATIVE

This case narrative encompasses samples received on May 23, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140523, F&BI 405463 project. Samples were logged in under the laboratory ID's listed below.

_	
<u>Laboratory ID</u>	SoundEarth Strategies
405463 -01	SB208-20
405463 -02	SB208-25
405463 -03	SB209-05
405463 -04	SB209-10
405463 -05	SB209-12.5
405463 -06	SB209-15
405463 -07	SB209-20
405463 -08	SB209-25
405463 -09	SB209-30
405463 -10	SB210-10
405463 -11	SB210-12.5
405463 -12	SB210-15
405463 -13	SB210-20
405463 -14	SB210-25
405463 -15	SB211-05
405463 -16	SB211-10
405463 -17	SB211-12.5
405463 -18	SB211-15
405463 -19	SB211-20
405463 -20	SB211-25
405463 -21	SB211-30
405463 -22	SB212-10
405463 -23	SB212-12.5
405463 -24	SB212-15
405463 -25	SB212-20
405463 -26	SB212-25
405463 -27	SB212-30

All quality control requirements were acceptable.

### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB208-20 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-01

Date Analyzed: 05/23/14 Data File: 052327.D Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	90	111
Toluene-d8	96	64	137
4-Bromofluorobenzene	99	81	119

4-Di ollioliuoi obelizelle	99	01
Compounds:	Concentration mg/kg (ppm)	
Vinyl chloride	< 0.05	
Chloroethane	< 0.5	
1,1-Dichloroethene	< 0.05	
Methylene chloride	< 0.5	
trans-1,2-Dichloroethene	< 0.05	
1,1-Dichloroethane	< 0.05	
cis-1,2-Dichloroethene	< 0.05	
1,2-Dichloroethane (EDC)	< 0.05	
1,1,1-Trichloroethane	< 0.05	
Trichloroethene	< 0.02	
Tetrachloroethene	< 0.025	

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB209-12.5 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-05

Date Analyzed: 05/23/14 Data File: 052328.D Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	∪pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	90	111
Toluene-d8	96	64	137
4-Bromofluorobenzene	100	81	119

< 0.025

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02

Tetrachloroethene

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB209-15 Client: SoundEarth Strategies SOU\_0789-004\_20140523 Date Received: Project: 05/23/14 Lab ID: Date Extracted: 05/23/14 405463-06 Date Analyzed: 05/23/14 Data File: 052329.D

Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	90	111
Toluene-d8	95	64	137
4-Bromofluorobenzene	98	81	119

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	0.029
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB209-25 Client: SoundEarth Strategies Date Received: Project: 05/23/14 SOU\_0789-004\_20140523 05/23/14 Lab ID: 405463-08 Date Extracted: Date Analyzed: 05/23/14 Data File: 052330.D

Matrix: Soil Instrument: GCMS9
Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	90	111
Toluene-d8	95	64	137
4-Bromofluorobenzene	98	81	119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene 0.090 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB210-10 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-10
Date Applying to 05/23/14 Details of 05/23/14 Detai

Date Analyzed: 05/23/14 Data File: 052331.D Matrix: Soil Instrument: GCMS9 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper % Recovery: Limit: Limit: Surrogates: 1.2-Dichloroethane-d4 98 90 111 Toluene-d8 97 64 137 4-Bromofluorobenzene 100 81 119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB210-15 Client: SoundEarth Strategies Date Received: Project: SOU\_0789-004\_20140523 05/23/14 Lab ID: Date Extracted: 05/23/14 405463-12 Date Analyzed: 05/23/14 Data File: 052332.D

Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	90	111
Toluene-d8	96	64	137
4-Bromofluorobenzene	98	81	119

< 0.025

	Concentration
Compounda	
Compounds:	mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02

Tetrachloroethene

#### **ENVIRONMENTAL CHEMISTS**

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### Analysis For Volatile Compounds By EPA Method 8260C

 Client Sample ID:
 SB210-20
 Client:
 SoundEarth Strategies

 Date Received:
 05/23/14
 Project:
 SOU\_0789-004\_20140523

 Date Extracted:
 05/23/14
 Lab ID:
 405463-13

 Date Analyzed:
 05/23/14
 Data File:
 052333 D

Date Analyzed: 05/23/14 Data File: 052333.D Matrix: Soil Instrument: GCMS9 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper Surrogates: % Recovery: Limit: Limit: 1,2-Dichloroethane-d4 101 90 111 Toluene-d8 97 64 137

4-Bromofluorobenzene 99 81 Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB210-25 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-14

Date Analyzed: 05/23/14 Data File: 052334.D Matrix: Soil Instrument: GCMS9 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper Surrogates: % Recovery: Limit: Limit: 1,2-Dichloroethane-d4 99 90 111
Toluene-d8 98 64 137
4-Bromofluorobenzene 100 81 119

4-Bromofluorobenzene 100 81 Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB211-05 Client: SoundEarth Strategies Date Received: 05/23/14 Project: SOU\_0789-004\_20140523 05/23/14 Lab ID: Date Extracted: 405463-15

Date Analyzed: 05/23/14 Data File: 052335.D Instrument: Matrix: Soil GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	90	111
Toluene-d8	96	64	137
4-Bromofluorobenzene	98	81	119

< 0.025

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB211-10 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-16

Date Extracted: 05/23/14 Lab ID: 403463-16
Date Analyzed: 05/23/14 Data File: 052336.D
Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	90	111
Toluene-d8	96	64	137
4-Bromofluorobenzene	100	81	119

< 0.02

< 0.025

	Concentration
Compounds:	mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05

Trichloroethene

Tetrachloroethene

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB211-12.5 Client: SoundEarth Strategies Date Received: 05/23/14 Project: SOU\_0789-004\_20140523 05/23/14 Lab ID: 405463-17 Date Extracted:

Date Analyzed: 05/23/14 Data File: 052337.D Instrument: Matrix: Soil GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	90	111
Toluene-d8	97	64	137
4-Bromofluorobenzene	100	81	119

< 0.025

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB211-15 Client: SoundEarth Strategies Date Received: 05/23/14 Project: SOU\_0789-004\_20140523 05/23/14 Lab ID: Date Extracted: 405463-18 Date Analyzed: 05/23/14 Data File: 052338.D

Matrix: Soil Instrument: GCMS9
Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper Surrogates: % Recovery: Limit: Limit: 1,2-Dichloroethane-d4 100 90 111 Toluene-d8 95 64 137

4-Bromofluorobenzene 81 97 119 Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB211-30 Client: SoundEarth Strategies

Date Received: 05/23/14 Project: SOU\_0789-004\_20140523

Date Extracted: 05/23/14 Lab ID: 405463-21

Date Application of (92/14) Project: SOU\_0789-004\_20140523

Date Analyzed: 05/23/14 Data File: 052339.D Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	90	111
Toluene-d8	97	64	137
4-Bromofluorobenzene	99	81	119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene 0.022Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB212-10 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-22

Date Analyzed: 05/24/14 Data File: 052340.D Matrix: Soil Instrument: GCMS9 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper % Recovery: Limit: Limit: Surrogates: 1.2-Dichloroethane-d4 100 90 111 Toluene-d8 97 64 137 4-Bromofluorobenzene 100 81 119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB212-12.5 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-23

Date Extracted. 05/25/14 Lab ID. 403403-23

Date Analyzed: 05/24/14 Data File: 052341.D

Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper % Recovery: Limit: Limit: Surrogates: 1.2-Dichloroethane-d4 99 90 111 Toluene-d8 96 64 137 4-Bromofluorobenzene 99 81 119

< 0.02

< 0.025

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05

Trichloroethene

Tetrachloroethene

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB212-15 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-24

Date Analyzed: 05/24/14 Data File: 052342.D Matrix: Soil Instrument: GCMS9 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper Surrogates: % Recovery: Limit: Limit: 1,2-Dichloroethane-d4 100 90 111 Toluene-d8 95 64 137 4-Bromofluorobenzene 97 81 119

4-Bromofluorobenzene 81 97 Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB212-20 Client: SoundEarth Strategies
Date Received: 05/23/14 Project: SOU\_0789-004\_20140523
Date Extracted: 05/23/14 Lab ID: 405463-25

Date Analyzed: 05/24/14 Data File: 052343.D Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	90	111
Toluene-d8	97	64	137
4-Bromofluorobenzene	100	81	119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB212-25 Client: SoundEarth Strategies

Date Received: 05/23/14 Project: SOU\_0789-004\_20140523

Date Extracted: 05/23/14 Lab ID: 405463-26

Date Applying to 05/24/14 Description: 05/23/14 Description: 0

Date Analyzed: 05/24/14 Data File: 052344.D Matrix: Soil Instrument: GCMS9 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper % Recovery: Limit: Limit: Surrogates: 1.2-Dichloroethane-d4 101 90 111 Toluene-d8 95 64 137 4-Bromofluorobenzene 98 81 119

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

119

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies
Date Received: Not Applicable Project: SOU\_0789-004\_20140523

05/23/14 Lab ID: Date Extracted: 04-1048 mb Date Analyzed: 05/23/14 Data File: 052326.D Matrix: Soil Instrument: GCMS9 Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper Surrogates: % Recovery: Limit: Limit: 1,2-Dichloroethane-d4 99 90 111 Toluene-d8 95 64 137

4-Bromofluorobenzene 99 81 Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1.1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1,2-Dichloroethane (EDC) < 0.05 1.1.1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

### ENVIRONMENTAL CHEMISTS

Date of Report: 05/29/14 Date Received: 05/23/14

Project: SOU\_0789-004\_20140523, F&BI 405463

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

Laboratory Code: 405463-22 (Matrix Spike)

			Sample	Percent	
	Reporting	Spike	Result	Recovery	Acceptance
Analyte	Units	Level	(Wet wt)	MS	Criteria
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	32	10-91
Chloroethane	mg/kg (ppm)	2.5	< 0.5	50	10-101
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	46	11-103
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	62	14-128
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	55	13-112
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	65	23-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	65	25-120
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	73	22-124
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	65	27-112
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	69	30-112
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	68	27-110

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/29/14 Date Received: 05/23/14

Project: SOU\_0789-004\_20140523, F&BI 405463

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

Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	61	59	42-107	3
Chloroethane	mg/kg (ppm)	2.5	66	75	47-115	13
1,1-Dichloroethene	mg/kg (ppm)	2.5	73	72	65-110	1
Methylene chloride	mg/kg (ppm)	2.5	82	83	62-119	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	77	77	71-113	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	87	88	76-109	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	85	85	77-110	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	92	92	80-109	0
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	87	87	72-116	0
Trichloroethene	mg/kg (ppm)	2.5	87	89	72-107	2
Tetrachloroethene	mg/kg (ppm)	2.5	87	88	77-110	1

#### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- $\operatorname{ca}$  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.
- ${
  m jl}$  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.
- $\operatorname{pc}$  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.

206-306-1900

SAMPLE CHAY OF CUSTODY

ME 05/23/14

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Send Report to	Rob Roberts
Company	SoundEarth Strategies, Inc.
Address	2811 Fairview Avenue E, Suite 2000
City, State, ZIP_	Seattle, WA 98102

\_Fax #\_

206-306-1907

SAMPLERS (signature)	ans
PROJECT NAME/NO.	PO#
Avtech Wallingford Property	0789-004
REMARKS (1)	

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

								Ţ			Al	VALYSE	ES REQU	JESTED			_
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorinated Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx					Notes (Hold AL2	<b>«</b> \$
56708-20	56208	20	C/A:I	05/21/14	1540	Scil	4	X									-
SB208-25	L	25	62	*	1545	Soil	4										-
SB209-05	SBROG		03		1640		4										$\dashv$
SB209-10		10	04		1655		4										$\dashv$
SB209-125		12.5	05		1710	1	4	$\searrow$		1							_
58209-15	1	15	oc		1725		Lj	X									$\dashv$
SB209-20		20	57	1	1740		4										$\dashv$
56209-25		25	00		1755		4	X									$\dashv$
SB209-30	*	30	ogV	T	1800	W	4	-			ļ		Sampl	DS FUC	elved a	<u>5</u> °C	$\dashv$
			6	5/21/	14												1

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Phone #

Fax (206) 283-5044

Received by:

Received by:

Received by:

Received by:

Received by:

Received by:

FORMS\COC\COC.DOC

SAMPLE CHAY OF CUSTODY ME 05/23/14 405463 SAMPLERS (signature) Send Report to Rob Roberts Page# TURNAROUND TIME PROJECT NAME/NO. Company SoundEarth Strategies, Inc. PO# Standard (2 Weeks) RUSH Avtech Wallingford Property Address 2811 Fairview Avenue E, Suite 2000 0789-004 Rush charges authorized by: REMARKS City, State, ZIP Seattle, WA 98102 SAMPLE DISPOSAL Dispose after 30 days Phone #\_ 206-306-1900 \_Fax# 206-306-1907 Return samples Will call with instructions

												A	ANALYSES REQUESTED					
	Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorinated Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx					Notes	
		SBZIO	10	10A.E	05/22/14	084c	Soil	4	X			<u> </u>					11614 ) (4	ne
	SB210-12.5	J	12.5			0845		4	- \	-							-	
	58210-15		15	12		0905		4	X									_
	SB210-20		000	13		0920		4									<u> </u>	_
	56210-25	V	0	14	1	093c	1	4	7									
	3B211-05	28311	~.~~	15		1135		4	7.									_
	SB211-10	5624		16		1145		4										_
	5B211-125	ĺ		n		1155		4										_
L	SB211-15			8		1210		4					S	amples	receive	d at	5 °C	_
	5B211-20	1	70	49	7	1205	1	4										

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044 FORMS\COC\COC.DOC

SIGNATURE	DDINIDALANCE		1	
Relinquished by:	PRINT NAME	COMPANY	DATE	TIME
Received by:  Relinquished by:	Nhan Phan	Soundterth FEBT	5/23/14	1025
Received by:				

SAMPLE CHAY OF CUSTODY

ME 05/23/14

Send Report to Rob Roberts

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature) (asi
PROJECT NAME/NO. PO#

Avtech Wallingford Property 0789-004

REMARKS

Page # \_\_\_\_\_\_ of \_\_\_\_\_

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

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

								ANALYSES REQUESTED									
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorinated Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx					Hel	Notes
56211-25	513711	25	26 AS	5120114	1735	Soil	4										
5B211-30	<u>V</u>	100 m	21	1	1,745		4	X								,	
58212-10	38,212		23	1	<b>13</b> 55	1	4	X									
51312-12.5	ļ	120	23	1	1405		4	X									
50212-15	<b>*</b>	16			1415		1+	X									· · · · · · · · · · · · · · · · · · ·
56212-20		20	24 85		1425		4	X									
56212-25			26		1445		4	X									
56212-30	d	· > ^	27/	¥_	1455		4				<u> </u>						
•.		66					<b>-</b>					S	ample	s recei	ved at	5	.c
		05	1201	17													<del></del>

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:	Chris Cass	SoundEarth	5/23/14	1025
Received by:  Relinquished by:	Nhan Phan	FEBI	5/20/19	1025
Received by:				
neceived by.				

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

June 5, 2014

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

Dear Mr. Roberts:

Included are the additional results from the testing of material submitted on May 23, 2014 from the SOU\_0789-004\_20140523, F&BI 405463 project. There are 8 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures SOU0605R.DOC

#### ENVIRONMENTAL CHEMISTS

## CASE NARRATIVE

This case narrative encompasses samples received on May 23, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140523, F&BI 405463 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
405463 -01	SB208-20
405463 -02	SB208-25
405463 -03	SB209-05
405463 -04	SB209-10
405463 -05	SB209-12.5
405463 -06	SB209-15
405463 -07	SB209-20
405463 -08	SB209-25
405463 -09	SB209-30
405463 -10	SB210-10
405463 -11	SB210-12.5
405463 -12	SB210-15
405463 -13	SB210-20
405463 -14	SB210-25
405463 -15	SB211-05
405463 -16	SB211-10
405463 -17	SB211-12.5
405463 -18	SB211-15
405463 -19	SB211-20
405463 -20	SB211-25
405463 -21	SB211-30
405463 -22	SB212-10
405463 -23	SB212-12.5
405463 -24	SB212-15
405463 -25	SB212-20
405463 -26	SB212-25
405463 -27	SB212-30

All quality control requirements were acceptable.

## ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB209-30 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140523, F&BI 405463 05/23/14

Lab ID: Date Extracted: 05/30/14 405463-09 Date Analyzed: 05/30/14 Data File: 053033.D Matrix: Soil Instrument: GCMS4

mg/kg (ppm) Dry Weight Units: Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	91	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	0.025
Tetrachloroethene	< 0.025

## ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: SB211-20 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140523, F&BI 405463 05/23/14

Lab ID: Date Extracted: 06/02/14 405463-19 Date Analyzed: 06/02/14 Data File: 060214.DMatrix: Soil Instrument: GCMS9

mg/kg (ppm) Dry Weight Units: Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	90	111
Toluene-d8	99	64	137
4-Bromofluorobenzene	103	81	119

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichlorœthane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140523, F&BI 405463

05/30/14 Lab ID: Date Extracted: 04-1067 mb Date Analyzed: 05/30/14 Data File: 053006.DMatrix: Soil Instrument: GCMS4 JS

mg/kg (ppm) Dry Weight Units: Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	99	51	121
4-Bromofluorobenzene	93	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140523, F&BI 405463

06/02/14 Lab ID: Date Extracted: 04-1102 mb Date Analyzed: 06/02/14 Data File: 060207.D Matrix: Soil Instrument: GCMS9

Units: mg/kg (ppm) Dry Weight Operator: JS

	Lower	∪pper
% Recovery:	Limit:	Limit:
101	90	111
97	64	137
98	81	119
	101 97	% Recovery: Limit: 101 90 97 64

Concentration Compounds: mg/kg (ppm) Vinyl chloride < 0.05 Chloroethane < 0.5 1,1-Dichloroethene < 0.05 Methylene chloride < 0.5 trans-1,2-Dichloroethene < 0.05 1.1-Dichloroethane < 0.05 cis-1,2-Dichloroethene < 0.05 1.2-Dichloroethane (EDC) < 0.05 1,1,1-Trichloroethane < 0.05 Trichloroethene < 0.02 Tetrachloroethene < 0.025

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/05/14 Date Received: 05/23/14

Project: SOU\_0789-004\_20140523, F&BI 405463

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

Laboratory Code: 405572-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	56	57	10-138	2
Chloroethane	mg/kg (ppm)	2.5	< 0.5	76	77	10-176	1
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	75	74	10-160	1
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	86	86	10-156	0
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	71	71	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	78	78	19-140	0
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	79	80	25-135	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	84	86	12-160	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	77	77	10-156	0
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	76	77	21-139	1
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	84	83	20-133	1

Laboratory Code: Laboratory Control Sample

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Vinyl chloride	mg/kg (ppm)	2.5	72	22-139		
Chloroethane	mg/kg (ppm)	2.5	83	10-163		
1,1-Dichloroethene	mg/kg (ppm)	2.5	88	47-128		
Methylene chloride	mg/kg (ppm)	2.5	97	42-132		
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	80	67-127		
1,1-Dichloroethane	mg/kg (ppm)	2.5	88	68-115		
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	89	72-113		
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	95	56-135		
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	86	62-131		
Trichloroethene	mg/kg (ppm)	2.5	86	64-117		
Tetrachloroethene	mg/kg (ppm)	2.5	95	72-114		

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/05/14 Date Received: 05/23/14

Project: SOU\_0789-004\_20140523, F&BI 405463

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

Laboratory Code: 405573-05 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	41	38	10-91	8
Chloroethane	mg/kg (ppm)	2.5	< 0.5	64	63	10-101	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	54	52	11-103	4
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	65	66	14-128	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	62	61	13-112	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	69	68	23-115	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	68	69	25-120	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	73	74	22-124	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	65	66	27-112	2
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	71	73	30-112	3
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	71	72	27-110	1

Laboratory Code: Laboratory Control Sample

	Percent					
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Vinyl chloride	mg/kg (ppm)	2.5	59	42-107		
Chloroethane	mg/kg (ppm)	2.5	83	47-115		
1,1-Dichloroethene	mg/kg (ppm)	2.5	71	65-110		
Methylene chloride	mg/kg (ppm)	2.5	78	62-119		
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	78	71-113		
1,1-Dichloroethane	mg/kg (ppm)	2.5	85	76-109		
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	81	77-110		
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	87	80-109		
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	81	72-116		
Trichloroethene	mg/kg (ppm)	2.5	83	72-107		
Tetrachloroethene	mg/kg (ppm)	2.5	83	77-110		

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- $\operatorname{pc}$  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.

Company Sou		Avenue E A 98102	, Suite	2000 6-1907	PROJ	ECT NA Avtech V	MEN	Ο.	operty		Es I	CO#	Sta RU Rush Dis	ndard (2 SH charges SAMPL	of ROUND TIME Weeke) authorized by: E DISPOSAL er 30 days ples
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Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorio ated Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx				Notes (ib. J. A. X
SB208-20	56208	20	- 1 1 7	C5/21/14	1540	Scal	4		<u>.                                    </u>	<del>                                     </del>			<del></del> -		The second second
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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SIGNATURE	DDINE MANE	<u> </u>	·	
Relinguished by:	PRINT NAME	COMPANY	DATE	TIME
Received by:	(11.0.5 (255	SandEury	5/23/14	1/125
Relinquished by:	Nhan Phan	FEBT 0	1/23/19	1025
Received by:				

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( 405463	SAMPLE CHAY OF CUSTODY	ME 05/23	/14
Send Report to Rob Roberts	SAMPLERS (signature)	AL.	Page # 2 of 3
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	TURNAROUND TIME Standard (2 Weeks)
Address 2811 Fairview Avenue E, Suite 2000	Avtech Wallingford Property	0789-004	RUSH
City, State, ZIP Seattle, WA 98102	REMARKS (HELD)		SAMPLE DISPOSAL
Phone # 206-306-1900 Fax # 206-306-1907			Dispose after 30 days Return samples Will call with instructions
			L THE LEASE COLORS

		T	1		T	1	·						of call with instructions
									T	1	_ ANA	LYSES REQUEST	ED
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorin ated Solvents (8260C)	NWTPH-G	NWTPH.G/BTEX	NWTPH.Dx		Notes
SB 210-10	SBQIO	10	10A-D	05/22/14	084c	50,1	4	\\					(Motor Cof his
SB210-12.5	1	12.5			0845	11	4	_<_>					
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38011 05	3B24	(25)	15		1135		4	<u> </u>		·			
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58011-125		,,,			1155		L				+-		
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58211-20	N-	20	9	J	1225	1 1	4						
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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	101100 5/29	V14 142 12	1	
SIGNATURE Relinquished by	PRIN'T NAME	COMPANY	DATE	TIME
Received by:	176.5 (455	Sound E-win	5/23/14	1025
Relinguished by:	Man Phan	TEBI	3/23/14	1201
Received by:				

SAMPLE CHAY OF CUSTODY

ME 05/23/14
Page # 3

Send Report to	Rob Rober	ts					
Company	SoundEar	th Strategi	es, Inc.				
Address 2811 Fairview Avenue E, Suite 2000							
City, State, ZIPSeattle, WA 98102							
Phone # 206-3	306-1900	Fax#	206-306-1907				

SAMPLERS (signature)	The state of the s
PROJECT NAME/NO.	PO#
Avtech Wallingford Property	0789-004
REMARKS (H.//)	

Page #\_\_\_\_\_ of \_\_\_\_

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

SAMPLE DISPOSAL

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

											11	JALYSES R	EQUESTE	D_		
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorinated Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx				N Held	lotes
	SBZII	25	26 A S	5/20/14	1735	50,71	4			ļ						
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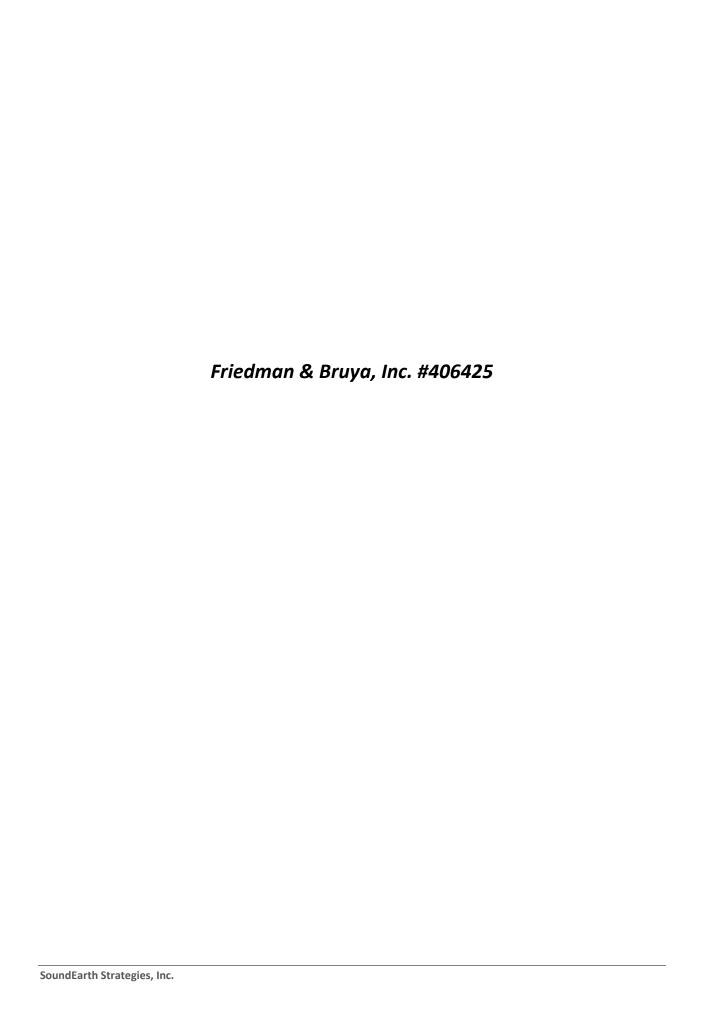
Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044
FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Chris Cass	SoundCarla	5/22/14	1025
Received by Relinguished by	Nhan Phan	FEBT	5/20/14	1025
Received by:				



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

July 1, 2014

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

Dear Mr. Roberts:

Included is the amended report from the testing of material submitted on June 24, 2014 from the SOU\_0789-004\_20140624, F&BI 406425 project. The VOC list has been amended from BTEX and naphthalene to cVOCs as requested on the chain of custody.

We apologize for the inconvenience and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures SOU0627R.DOC

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Kurt Johnson, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

June 27, 2014

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on June 24, 2014 from the SOU\_0789-004\_20140624, F&BI 406425 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures SOU0627R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on June 24, 2014 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU\_0789-004\_20140624, F&BI 406425 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
406425-01	IW09-30
406425-02	IW09-35
406425-03	IW09-40
406425-04	IW09-45

All quality control requirements were acceptable.

## ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: IW09-30 Client: SoundEarth Strategies

Date Received: Project: SOU\_0789-004\_20140624, F&BI 406425 06/24/14

Lab ID: Date Extracted: 06/24/14 406425-01 Date Analyzed: 06/24/14 Data File: 062427.D Matrix: Soil Instrument: GCMS4

mg/kg (ppm) Dry Weight Units: Operator: SP

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	98	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU\_0789-004\_20140624, F&BI 406425

06/24/14 Lab ID: Date Extracted: 04-1276 mb Date Analyzed: 06/24/14 Data File: 062409.DMatrix: Soil Instrument: GCMS4 SP

mg/kg (ppm) Dry Weight Units: Operator:

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	101	51	121
4-Bromofluorobenzene	97	32	146

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	< 0.05
Chloroethane	< 0.5
1,1-Dichloroethene	< 0.05
Methylene chloride	< 0.5
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
cis-1,2-Dichloroethene	< 0.05
1,2-Dichloroethane (EDC)	< 0.05
1,1,1-Trichloroethane	< 0.05
Trichloroethene	< 0.02
Tetrachloroethene	< 0.025

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/27/14 Date Received: 06/24/14

Project: SOU\_0789-004\_20140624, F&BI 406425

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

Laboratory Code: 406245-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	44	41	10-138	7
Chloroethane	mg/kg (ppm)	2.5	< 0.5	63	63	10-176	0
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	67	64	10-160	5
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	75	71	10-156	5
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	77	74	14-137	4
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	84	80	19-140	5
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	85	82	25-135	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	84	80	12-160	5
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	83	80	10-156	4
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	80	76	21-139	5
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	69	67	20-133	3

Laboratory Code: Laboratory Control Sample

<i>J</i>	<i>J</i>			
			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Vinyl chloride	mg/kg (ppm)	2.5	74	22-139
Chloroethane	mg/kg (ppm)	2.5	80	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	93	47-128
Methylene chloride	mg/kg (ppm)	2.5	89	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	97	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	101	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	100	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	100	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	106	62-131
Trichloroethene	mg/kg (ppm)	2.5	98	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	97	72-114

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- ${
  m jl}$  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.
- $\operatorname{pc}$  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.

(	400463
•	

Send Report to	Rob Roberts
Company	SoundEarth Strategies, Inc.
Address	2811 Fairvious Assense E. C. it. 2022

2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, WA 98102

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

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SAMPLERS (signature)		Page # of
PROJECT NAME/NO.	PO#	TURNAROUND TIME Standard (2 Weeks)
Avtech Wallingford Property	0789-004	RUSHRush charges authorized by:
REMARKS (1)		SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

			Γ			T	T	Will can with instruction							il distructions
			İ						ANALYSES REQUESTED						
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	Chlorio attal Solvents (8260C)	NWTPH-G	NWTPH-G/BTEX	NWTPH-Dx				Notes
1409-30	two	Bo	OI A	(-8 30)	0830	Soil	1.7	X							7/2
11009 35		35	02	61.74/14	0845		4						-		X-per RR
In09-40		1	03		CX50		4								6/24/4 ME
IW09-45	<u> </u>	45	04/	_ 4	1900	N	4								MY
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			90		· · · · · · · · · · · · · · · · · · ·							Sample	s receiv	ed at	/5 °C

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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SIGNATURE	DDINMANA			
Relinquished by:	PRINT NAME	COMPANY	DATE	TIME
Received by:	China Cara	SocialCara	6-24-14	
Relinquished by:	Man phan	FEB.T	6/24/14	1000
Received by:				

# ATTACHMENT B BORING LOGS



Project: AMLI Avtech Project Number: 0789-004 Logged by: CGC **Date Started:** 04/03/14

Surface Conditions: Concrete 124 feet North of southwest corner of building. 32 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/03/14

Well Location N/S:

Well Location E/W:

BORING LOG

**B-IW01** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

27 feet bgs

Water Depth After Completion --

feet bgs

						0 1/00		•	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Samp ID	ole USCS Class	Graphic	Lithologic Description	Well Construction Detail
0	ng Cc	16 24 28 50/4"	100 100	0.3  0.3	B-IW01-10		iameter:	Damp, dense, silty very fine to medium SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (20-65-15). Fill.  Damp, very dense, silty very fine to fine SAND with subrounded gravel. Light brown. No hydrocarbon or solvent odor (20-65-15).	
		uipmer		Limited Access H		Well Screene			
Samp				Dames & Moore		Screen Slot S		0.010 inches	
		ype/We	ight:	140	lbs	Filter Pack Us	sed:	Sand	
		rg Dept		40	feet bgs	Surface Seal:	:	Concrete	
		Depth:			<b>I</b>	Annular Seal	:	Bentonite/Bentonite-Grout Mix	
State	Well	ID No.:		BHZ 967		Monument Ty	уре:	Flush grade Page: 1	of 3



40

BHZ 967

**Total Well Depth:** 

State Well ID No.:

Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 04/03/14

Date Started: 04/03/14
Surface Conditions: Concrete

Well Location N/S: 124 feet North of southwest corner of building.
Well Location E/W: 32 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 04/03/14

BORING LOG **B-IW01** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

V W

Water Depth At Time of Drilling

7 feet bgs

2 of 3

Page:

Water Depth
After Completion --

feet bgs

									<u></u> _	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Des	scription	Well Construction Detail
15 —	X	50/3"	100	0.1	B-IW01-15	SM	80000 80000 80000 80000 80000 80000 80000 80000	Wet, very dense, silty gravel No hydrocarbon or solvent o	lly fine SAND. Brown. odor (15-70-15).	
20		50/5"	100	0.3	B-IW01-20	GM-SM		Damp to moist, very dense, with silt. Brown. No hydroca (10-50-40).	gravelly fine SAND arbon or solvent odor	
25 — -		47 40/6"	100	0.0	B-IW01-25	SM SM	00000 000000 00000 000000 00000 000000 00000 000000	Damp, very dense, gravelly silt. Brown. No hydrocarbon 55-40). Damp, very dense, silty grav Brown. No hydrocarbon or s	or solvent odor (5-velly fine SAND.	
Drilling Equipment:Limited Access HSASampler Type:Dames & MooreHammer Type/Weight:140IbsIbsTotal Boring Depth:40						ell/Auger D ell Screene creen Slot S Iter Pack Usurface Seals	d Interval: Size: sed: :	2" / 7.25" O.D. inches 25 -40 ft bgs feet bgs 0.010 inches Sand Concrete	Notes/Comments:	

Annular Seal:

Monument Type:

feet bgs

Bentonite/Bentonite-Grout Mix

Flush grade



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 04/03/14

Surface Conditions: Concrete
Well Location N/S: 124 feet North of southwest corner of building.

32 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 04/03/14

Well Location E/W:

BORING | E

B-IW01

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

7 feet bgs

Water Depth
After Completion --

feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Des	scription		Well Construction Detail
30 —		24 44 43	100	0.0	B-IW01-30	GM-SP		Wet to saturated, very dense gravelly SAND with silt. Brow or solvent odor (10-60-30).	, fine to medium vn. No hydrocar	n bon	
35 —											
40 —								End of boring at 40.0 ft bgs. installed to 40 feet bgs.	Injection well IW	/01	
Drillin Samp Hamn Total	Drilling Equipment: Sampler Type: Hammer Type/Weight:		nt: L E eight: 1 th: 4	0	SA We Sc Ibs Filt feet bgs Su	ell/Auger D ell Screene reen Slot S ter Pack U rface Seal	d Interval: Size: sed: :	0.010 inches Sand Concrete	Notes/Commen	nts:	
1		Depth: ID No.:		0 BHZ 967	-	nular Seal nument Ty		Bentonite/Bentonite-Grout Mix Flush grade	Page:	3 (	of 3



Project: AMLI Avtech Project Number: 0789-004 Logged by: CGC Date Started: 04/01/14

Surface Conditions: Concrete Well Location N/S: 4 feet North of southwest corner of building.

70 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/01/14

Well Location E/W:

BORING | LOG

**B-IW02** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

37.4 feet bgs

Water Depth \_ After Completion --

feet bgs

		Da	te Completed	<b>d:</b> 04/0	1/14	- <u>·</u> Aπer Compi	etion feet bgs
Depth (feet bgs) Interval Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
5 10 10 10 15 - 10 9 7	55	0.5	B-IW02-05	Fill (GM)		Damp, medium dense, sandy subrounded GRAVEL with silt. Brown. No hydrocarbon solvent odor (15-35-60). Fill.  Damp, medium dense, sandy subrounded GRAVEL with silt. Brown. No hydrocarbon solvent odor (10-40-50).	
Drilling Equipme Sampler Type: Hammer Type/W Total Boring Dep Total Well Depth	Drilling Co./Driller: Boretec, Inc./Bob Limited Access HSA Dames & Moore Hammer Type/Weight: 140 lbs Total Boring Depth: 45 feet bgs Total Well Depth: 45 feet bgs State Well ID No.: BHZ 997			ell/Auger D ell Screene creen Slot S lter Pack U: urface Seal: nnular Seal	d Interval: Size: sed: :	2" / 7.25" O.D. inches 30 - 45 ft bgs feet bgs 0.010 inches Sand Concrete Bentonite/Bentonite-Grout Mix Flush grade  Notes/Comme	ents:



BHZ 997

State Well ID No.:

Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 04/01/14

Surface Conditions: Concrete
Well Location N/S: 4 feet North of southwest corner of building.

70 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 04/01/14

Well Location E/W:

BORING | E

B-IW02

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

37.4 feet bgs

Water Depth
After Completion --

feet bgs

2 of 4

Page:

						- 0.70	.,		
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description Well Construct Deta	ction
15 —		21 50/5"	30	0.3	B-IW02-15	SM	20000000000000000000000000000000000000	Damp, very dense, silty fine SAND with gravel. Brown. No hydrocarbon or solvent odor (30-60-10).	
20 —		50/6"	5	0.2	B-IW02-20	GM		Damp, very dense, sandy GRAVEL with silt. Brown. No hydrocarbon or solvent odor (10-30-60).	
25 — -		50/5"	20	0.3	B-IW02-25	SM	000000 000000 000000 000000 000000	Damp, very dense, silty fine SAND with gravel. Brown. No hydrocarbon or solvent odor (20-55-25).	
Drillir Samp Hamr Total	Drilling Co./Driller: Drilling Equipment: Sampler Type: Hammer Type/Weight: Total Boring Depth: Total Well Depth:		nt: eight: th:	Limited Access HSA  Dames & Moore  140  Ibs  45  feet bgs		Well/Auger Diameter: Well Screened Interval: Screen Slot Size: Filter Pack Used: Surface Seal: Annular Seal:		2" / 7.25" O.D. inches 30 - 45 ft bgs feet bgs 0.010 inches Sand Concrete Bentonite/Bentonite-Grout Mix	

Flush grade

Monument Type:



Project: AMLI Avtech **Project Number:** 0789-004 Logged by: CGC Date Started: 04/01/14

Surface Conditions: Concrete

Well Location N/S: 4 feet North of southwest corner of building. Well Location E/W: 70 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/01/14 BORING | LOG

**B-IW02** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

37.4 feet bgs

Water Depth After Completion --

feet bgs

				Da	te Completea:	04/0	1/14	Alter completion	leet bys
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
30 —		50/3"	10	0.6	B-IW02-30	SM	00000000000000000000000000000000000000	Moist, very dense, silty fine SAND with gravel. Brown. No hydrocarbon or solvent odor (30-60- 10).	
35 —									
40 —									
						I/Auger D I Screene	d Interval:	2" / 7.25" O.D. inches 30 - 45 ft bgs feet bgs	

Sampler Type: Hammer Type/Weight:

Dames & Moore 140 lbs **Total Boring Depth:** 45 feet bgs **Total Well Depth:** 45 feet bgs BHZ 997 State Well ID No.:

Screen Slot Size: Filter Pack Used:

Surface Seal:

0.010 inches

Sand Concrete

**Annular Seal:** Bentonite/Bentonite-Grout Mix Flush grade Monument Type:

Page:

3 of 4



Project: AMLI Avtech **Project Number:** 0789-004 CGC Logged by: **Date Started:** 04/01/14 Surface Conditions: Concrete

Well Location N/S: 4 feet North of southwest corner of building. 70 feet East of southwest corner of building. Well Location E/W:

Reviewed by: CCC **Date Completed:** 04/01/14 BORING | LOG

**B-IW02** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

37.4 feet bgs

Water Depth After Completion

feet bgs

Depth (feet bas)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
45 -	_							End of boring at 45.0 ft bgs. Injection well IW02 installed to 45 feet bgs.	

**Drilling Co./Driller: Drilling Equipment:** Sampler Type: Hammer Type/Weight:

Dames & Moore 140 lbs 45 **Total Boring Depth:** feet bgs 45 feet bgs

Boretec, Inc./Bob

Limited Access HSA

**Total Well Depth:** BHZ 997 State Well ID No.:

Well/Auger Diameter: Well Screened Interval:

Screen Slot Size: Filter Pack Used: 2" / 7.25" O.D. 30 - 45 ft bgs 0.010 Sand

inches feet bgs

inches

Surface Seal: Concrete **Annular Seal:** Bentonite/Bentonite-Grout Mix

Monument Type: Flush grade Notes/Comments:

4 of 4 Page:



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 04/03/14

Surface Conditions: Concrete
Well Location N/S: 4 feet North of southwest corner of building.

Well Location N/S: 4 feet North of southwest corner of building.

Well Location E/W: 39 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 04/03/14

BORING LOG

**B-IW03** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

t n 34

34.4 feet bgs

Water Depth
After Completion --

feet bgs

L				Da	te Complete	<b>u.</b> 04/03		/ittor comp		, leet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description		Well Construction Detail
5		10 12 16	100	0.6	B-IW03-10	GM-SM		2-inch thick concrete floor slab overlying thick concrete floor slab.  Damp, medium dense, gravelly SAND with silt. Brown. No hydrocarbon or solvent od 70-25).  Damp, very dense, silty fine SAND with subrounded gravel. Becomes siltier at ~16	n trace or (5-	
Drillin	a Co	./Drille	r: R	oretec, Inc./Carl	os w	/ell/Auger Di	iameter:	bgs. Brown. No hydrocarbon or solvent or 2" / 7.25" O.D. inches Notes/Comm		
	_	uipmen uipmen		mited Access H		/ell/Auger Di /ell Screene			ciilə.	
Samp			-	ames & Moore		creen Slot S		0.010 inches		
1 -		ype/We			-	ilter Pack Us	-	Sand		
		ng Dept		-		urface Seal:		Concrete		l
1		Depth:			9	nnular Seal:		Bentonite/Bentonite-Grout Mix		
		ID No.:		HZ 966		Ionument Ty	pe:	Flush grade Page:	1	of 3
								i age.		31 0



Project: AMLI Avtech **Project Number:** 0789-004 Logged by: CGC Date Started: 04/03/14

Surface Conditions: Concrete

Well Location N/S: 4 feet North of southwest corner of building. Well Location E/W: 39 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/03/14 BORING | LOG

**B-IW03** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

34.4 feet bgs

**Water Depth** After Completion --

feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
20 —		50/4"	100	0.4	B-IW03-20	SM	COOK   COOK	Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (20-70-10).  Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (20-60-20).	
30 —		50/3"	100	0.2	B-IW03-30	SM	20000 20000	Damp, very dense, silty very fine to fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (20-65-15).	
Drillin Samp Hamn Total	Drilling Co./Driller:Boretec, Inc./CarlosDrilling Equipment:Limited Access HSASampler Type:Dames & MooreHammer Type/Weight:140lbsTotal Boring Depth:45feet bgsTotal Well Depth:45feet bgs		SA W S Ibs F feet bgs S	Vell/Auger D Vell Screene Screen Slot S Silter Pack Us Surface Seals	d Interval: Size: sed:	2" / 7.25" O.D. inches 30 - 45 ft bgs feet bgs 0.010 inches Sand Concrete Bentonite/Bentonite-Grout Mix			
1		ID No.:	ВІ	HZ 966	-	Ionument Ty	/pe:	Flush grade Page: 2	of 3



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 04/03/14

Surface Conditions: Concrete

Well Location N/S: 4 feet North of southwest corner of building.

Well Location E/W: 39 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 04/03/14

BORING LOG

**B-IW03** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

34.4 feet bgs

Water Depth
After Completion

feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
35 —									
40 —									
- 45 —								End of boring at 45.0 ft bgs. Injection well IW03 installed to 45 feet bgs.	

Drilling Co./Driller:Boretec, Inc./CarlosDrilling Equipment:Limited Access HSASampler Type:Dames & MooreHammer Type/Weight:140IbsTotal Boring Depth:45feet bgsTotal Well Depth:45feet bgs

State Well ID No.:

BHZ 966

Well/Auger Diameter: Well Screened Interval: Screen Slot Size: Filter Pack Used: 2" / 7.25" O.D. 30 - 45 ft bgs 0.010 inches feet bgs Notes/Comments:

inches

Filter Pack Used: Sand
Surface Seal: Concrete
Annular Seal: Bentonite.

Annular Seal: Bentonite/Bentonite-Grout Mix
Monument Type: Flush grade

Page: | 3 of 3



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 04/01/14

Date Started: 04/01/14
Surface Conditions: Concrete

Well Location N/S: 43 feet North of southwest corner of building.
Well Location E/W: 47 feet East of southwest corner of building.

Reviewed by: CCC
Date Completed: 04/01/14

BORING LOG

**B-IW04** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

**∑** 7

Water Depth AtTime of Drilling

31.0 feet bgs

Water Depth

After Completion --

tion -- feet bgs

$\vdash$									
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
-						Concrete		5-inch thick concrete floor slab.	
5		10 10 8	70	0.2	B-IW04-05	Fill (GM)		Damp, medium dense, sandy subrounded GRAVEL with silt. Brown. No hydrocarbon or solvent odor (10-30-60). Fill.	
		13 19 17	70	0.0	B-IW04-10	SM	00000000000000000000000000000000000000	Damp, dense, silty fine to coarse SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (25-55-20).	
15 — -		19 30 46	100	0.1	B-IW04-15	GM-SM SM		Damp, very dense, gravelly SAND with silt overlying silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (10-50-40)/(30-60-10).	
Drillir	ng Co	./Drille	r: B	oretec, Inc./Bob	We	ell/Auger D	iameter:	2" / 7.25" O.D. inches Notes/Comments:	
Drillin	g Eq	uipmer	nt: Li	mited Access H	SA We	ell Screene	d Interval:	_	
Samp				ames & Moore		reen Slot S		0.010 inches	
		ype/We	-			ter Pack U		Sand	
1		ng Dept				rface Seal:		Concrete	
1		Depth:		3 HZ 996	9	nular Seal		Bentonite/Bentonite-Grout Mix	
State	weii	ID No.:	в	∏ <u>८ ५५</u> ०	MC	onument Ty	ype:	Flush grade Page: 1	l of 3



**Total Well Depth:** 

State Well ID No.:

43

BHZ 996

feet bgs

**Annular Seal:** 

Monument Type:

Bentonite/Bentonite-Grout Mix

Flush grade

Project: AMLI Avtech **Project Number:** 0789-004 Logged by: CGC Date Started: 04/01/14

Surface Conditions: Concrete

Well Location N/S: 43 feet North of southwest corner of building. Well Location E/W: 47 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/01/14 BORING LOG

**B-IW04** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

31.0 feet bgs

Water Depth After Completion --

feet bgs

2 of 3

Page:

	Date Complet		te Completea:	04/0	1/14	Alter Completion -	- leet bys		
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
20 -		50/5"	15	0.2	B-IW04-20	SM	00000 00000 00000 00000 00000 00000	Damp, very dense, silty fine SAND with gravel. Brown. No hydrocarbon or solvent odor (30-60- 10).	
25 - - -		23 50/5"	100	0.0	B-IW04-25	SM	0.000.00000000000000000000000000000000	Damp, very dense, silty fine to medium SAND with subrounded gravel. Becomes siltier with finer sand at ~25.4 feet bgs Brown. No hydrocarbon or solvent odor (20-60-20)/(40-50-10).	
30 -		50/2"	100	0.5	B-IW04-30	SM	00000 00000 00000 00000 00000 00000	Damp, very dense, silty fine to medium SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (30-60-10).	
Drilling Co./Driller: Boretec, Inc./Bob Well/Auger Drilling Equipment: Limited Access HSA Well Screen Sampler Type: Dames & Moore Screen Slo Hammer Type/Weight: 140 lbs Filter Pack Total Boring Depth: 45 feet bgs Surface Se								2" / 7.25" O.D. inches 28 - 43 ft bgs feet bgs 0.010 inches Sand Concrete	



Project: AMLI Avtech **Project Number:** 0789-004 CGC Logged by: **Date Started:** 04/01/14

Surface Conditions: Concrete Well Location N/S: 43 feet North of southwest corner of building. 47 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/01/14

Well Location E/W:

BORING | LOG

**B-IW04** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

31.0 feet bgs

Water Depth After Completion

feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
35 —									
45 —								End of boring at 45.0 ft bgs. Injection well IW04 installed to 43 feet bgs.	

**Drilling Co./Driller:** Boretec, Inc./Bob **Drilling Equipment:** Limited Access HSA Sampler Type: Dames & Moore Hammer Type/Weight: 140 lbs 45 **Total Boring Depth: Total Well Depth:** 

State Well ID No.:

BHZ 996

feet bgs 43 feet bgs Well/Auger Diameter: Well Screened Interval: Screen Slot Size: Filter Pack Used:

2" / 7.25" O.D. 28 - 43 ft bgs 0.010 Sand

inches

inches

feet bgs

Notes/Comments:

Surface Seal: Concrete **Annular Seal:** Bentonite/Bentonite-Grout Mix

Monument Type: Flush grade

Page:

3 of 3



Project: AMLI Avtech **Project Number:** 0789-004 Logged by: CGC Date Started: 04/02/14

Surface Conditions: Concrete 65 feet North of southwest corner of building. Well Location N/S:

Well Location E/W: 4 feet East of southwest corner of building. Reviewed by: CCC

**Date Completed:** 04/02/14 BORING | LOG

**B-IW05** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

31 feet bgs

**Water Depth** After Completion --

feet bgs

1				ра	te Complete	<b>a:</b> 04/02	2/14	Alter Cor	iipietioii	reet bys
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description		Well Construction Detail
5		23 27 28 28 40 42	100	0.3	B-IW05-10	SM	CONTROL CONT	Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocal solvent odor (30-50-20).  Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocal solvent odor (30-55-15).	bon or	
1	-	./Drille uipmer		Boretec, Inc./Carl imited Access H		/ell/Auger D /ell Screene		2" / 7.25" O.D. inches	ments:	
Samp		-	-	ames & Moore		creen Slot S		0.010 inches		
Hamn	ner T	ype/We	-	-		ilter Pack U		Sand		
1		ng Dept			9	urface Seal:		Concrete		
1		Depth:			9	nnular Seal		Bentonite/Bentonite-Grout Mix		
State	Well	ID No.:	E	BHZ 998	M	Ionument Ty	/pe:	Flush grade Page:	1	of 3



Surface Conditions: Concrete Well Location N/S: 65 feet North of southwest corner of building. Well Location E/W: 4 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/02/14 BORING LOG

**B-IW05** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

31 feet bgs

2 of 3

Page:

**Water Depth** After Completion --

feet bgs

					<b>-</b>				
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
20 —		50/3"	100	0.3	B-IW05-20	SM	00000 00000 00000 00000 00000 00000 0000	Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (30-60-10).	
25 — - -		50/6"	100	0.2	B-IW05-25	SM	00000 00000 00000 00000 00000	Damp, very dense, silty fine to medium SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (30-55-15).	
30		23 40 42	100	0.2	B-IW05-30	SM-SP		Damp, very dense, ~3-inches of silty fine SAND with subrounded gravel overlying fine to medium SAND with subrounded gravel and silt. Brown. No hydrocarbon or solvent odor (30-60-10)/(15-70-15). Becomes wet to saturated at 31 feet bgs.	
Drillin Samp Hamn Total Total	ng Eq oler T ner T Borii Well	D./Drille puipmer type: type/We ng Dept Depth:	nt: Li D eight: 14 th: 41	I	SA We Scilbs Filt feet bgs Suite	II/Auger D II Screene reen Slot S er Pack U rface Seal	d Interval: Size: sed: :	2" / 7.25" O.D. inches 25 - 40 ft bgs feet bgs 0.010 inches Sand Concrete Bentonite/Bentonite-Grout Mix	

**Monument Type:** 

Flush grade

BHZ 998

State Well ID No.:



Surface Conditions: Concrete

Well Location N/S: 65 feet North of southwest corner of building. 4 feet East of southwest corner of building. Well Location E/W:

Reviewed by: CCC Date Completed: 04/02/14 BORING | LOG

**B-IW05** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

31 feet bgs

Water Depth After Completion --

feet bgs

Depth (feet bots)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
35 -	_							End of boring at 41.0 ft bgs. Injection well IW05 installed to 40.0 feet bgs.	

**Drilling Co./Driller: Drilling Equipment:** Sampler Type: Hammer Type/Weight:

Dames & Moore 140 41 **Total Boring Depth:** 40 **Total Well Depth:** BHZ 998 State Well ID No.:

Boretec, Inc./Carlos

Limited Access HSA

lbs

feet bgs

feet bgs

Well/Auger Diameter: Well Screened Interval:

Screen Slot Size: Filter Pack Used: Surface Seal:

2" / 7.25" O.D. 25 - 40 ft bgs 0.010

inches

inches

feet bgs

Sand Concrete

**Annular Seal:** Bentonite/Bentonite-Grout Mix Monument Type: Flush grade

Notes/Comments:

3 of 3 Page:



Surface Conditions: Concrete

Well Location N/S: 95 feet North of southwest corner of building. Well Location E/W: 15 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/02/14 BORING | LOG

**B-IW06** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

29.7 feet bgs

**Water Depth** After Completion --

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
5		10 10 10 10	100	0.5	B-IW05-05	SM SP	0.000.000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Damp, medium dense, ~6 inches of silty fine to medium SAND with subrounded gravel overlying ~6 inches of silty very fine SAND, overlying ~6 inches of fine to medium SAND with trace silt and gravel. Brown. No hydrocarbon or solvent odor (25-55-20)/(30-70-0)/(5-90-5).	888 888
15 —		50/4"	100	0.6	B-IW05-15 B-IW05-20	SM	0000 0000 0000 0000 0000 0000 0000 0000 0000	Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (30-55-15).  Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocarbon or	
Drillin Samp Hami Total Total	ng Eq oler T ner T Borir Well	o./Drille juipmer type: type/We ng Dept Depth: ID No.:	nt: L D eight: 14 th: 46	0	SA We Sc Sc Sc Fill feet bgs Ar Sc Sc Sc Sc Sc Sc Sc Sc Sc Sc Sc Sc Sc	ell/Auger D ell Screene reen Slot S ter Pack U urface Seal unular Seal onument Ty	d Interval: Size: sed: :	2" / 7.25" O.D. inches 23 -38 ft bgs feet bgs 0.010 inches Sand Concrete Bentonite/Bentonite-Grout Mix	1 of 2



Surface Conditions: Concrete

Well Location N/S: 95 feet North of southwest corner of building. 15 feet East of southwest corner of building. Well Location E/W:

Reviewed by: CCC **Date Completed:** 04/02/14 BORING | LOG

**B-IW06** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

29.7 feet bgs

Water Depth After Completion

feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
25 —	$\times$	50/6"	100	0.3	B-IW05-25	SM-SP	<i>//////</i>	Damp, very dense, fine to medium SAND with silt and subrounded gravel. Brown. No hydrocarbon or solvent odor (10-75-15).	
30 —	X	29 50/5"	100	0.2	B-IW05-30	SP SM		Wet, very dense, ~6 inches of fine to medium SAND with silt and subrounded gravel overlying silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (5-85-10)/(35-50-15).	
35 — - -									
40 —								End of boring at 40.0 ft bgs. Injection well IW06 installed to 38 feet bgs.	

**Drilling Co./Driller:** Boretec, Inc./Carlos **Drilling Equipment:** Limited Access HSA Sampler Type: Dames & Moore Hammer Type/Weight: 140 lbs 40 **Total Boring Depth:** feet bgs

38 **Total Well Depth:** feet bgs BHZ 999 State Well ID No.:

Well/Auger Diameter: Well Screened Interval: Screen Slot Size: Filter Pack Used:

23 -38 ft bgs 0.010 Sand Surface Seal:

Concrete **Annular Seal:** Bentonite/Bentonite-Grout Mix Monument Type:

2" / 7.25" O.D.

Flush grade

inches

inches

feet bgs

Notes/Comments:

2 of 2 Page:



Surface Conditions: Concrete Well Location N/S: 4 feet North of southwest corner of building. Well Location E/W: 118 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/03/14 BORING | LOG

**B-MW16** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

40.7 feet bgs

**Water Depth** \_ After Completion --

L						0.700			
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
5						Concrete		5-inch thick concrete floor slab.	
10 —	X	25 23 18	100	0.4	B-MW16-10	SM	00000000000000000000000000000000000000	Damp, dense, ~6 inches of fine to medium SAND with silt and subrounded gravel overlying silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (15-70-15)/(20-65-15).	
15 —	$\times$	50/6"	100	0.5	B-MW16-15	SM		Damp, very dense, silty very fine SAND with trace gravel. Brown. No hydrocarbon or solvent odor (25-70-5).	
20 —	X	50/6"	100	0.3	B-MW16-20	SM-SP	<i>Y.Y.Y.</i>	Damp, very dense, fine SAND with some silt and gravel. Brown. No hydrocarbon or solvent odor (10-80-10).	
Drillin Samp Hamn Total Total	ig Eq ler T ner T Borii Well	o./Drille uipmer ype: ype/We ng Dept Depth: ID No.:	nt: Li Di sight: 14 th: 45	5	SA We Sc Sc Ibs Fill feet bgs Su feet bgs An	ell/Auger D ell Screene creen Slot S ter Pack U urface Seal: nullar Seal: nullar Seal:	d Interval: Size: sed:	0.010 inches Sand Concrete Bentonite	1 of 2



Surface Conditions: Concrete Well Location N/S: 4 feet North of southwest corner of building.

118 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 04/03/14

Well Location E/W:

BORING | LOG

**B-MW16** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

40.7 feet bgs

**Water Depth** \_ After Completion --

### PID (ppmv) Sample ID Class © Lithologic Description							- 01/0	5/ 1 1		•	
Drilling Co-Driller: Bortec, Inc./Carlos Drilling Equipment: Sompler Type: Drilling Equipment: Drilling Equipment: Sompler Type: Drilling Equipment: Drilling Equipmen	Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)			Graphic	Lithologic De	escription	Construction
Drilling Co/Driller: Boretec, Inc./Carlos Limited Access HSA Sampler Type: Hammer Type/Weight: 140 lbs Total Boring Depth: 45 feet bgs Total Boring Depth: 45 feet bgs Total Well Depth: 45 feet bgs Total Well Depth: 45 feet bgs Total Well Depth: 45 feet bgs Annular Seal: Bentonile subrounded gravel. Gards subtrounded gravel. Gards subtrounded gravel. Gards subtrounded gravel. Gards, No hydrocarbon or solvent odor (30-50-20).    Damp, very dense, silly fine SAND with subtrounded gravel. Gards, No hydrocarbon or solvent odor (30-50-20).   Damp, very dense, silly fine SAND with subtrounded gravel. Gards, No hydrocarbon or solvent odor (30-50-20).   Damp, very dense, silly fine SAND with subtrounded gravel. Gards, No hydrocarbon or solvent odor (30-50-20).   Damp, very dense, silly fine SAND with subtrounded gravel. The SAND with subtrounded gravel.	25 — -		50/2"	100	1.1	B-MW16-25	SM		gravel. Brown. No hydroca	ND with silt and trace rbon or solvent odor	Ш
### And Property of the Co./Driller: Drilling Equipment: Limited Access HSA Dames & Moore Dames & Moore Screen Slot Size: Screen Slot Size: Screen Slot Size: Screen Slot Size: Screen Slot Size: Screen Slot Size: Annular Seal: Bentonite Sentonite	30 —		50/2"	100	0.5	B-MW16-30	SM		subrounded gravel. Gray. N	e SAND with lo hydrocarbon or	
End of boring at 45.0 ft bgs. Monitoring well  MW16 installed to 45 feet bgs.  Drilling Co./Driller: Boretec, Inc./Carlos Drilling Equipment: Limited Access HSA Sampler Type: Dames & Moore Hammer Type/Weight: 140   Ibs Total Boring Depth: 45   feet bgs Total Well Depth: 45   feet bgs Annular Seal: Bentonite	35 — - -										
Drilling Co./Driller: Boretec, Inc./Carlos Drilling Equipment: Limited Access HSA Sampler Type: Dames & Moore Hammer Type/Weight: 140 Ibs Total Boring Depth: 45 feet bgs Total Well Depth: 45 feet bgs Annular Seal: Bentonite  End of boring at 45.0 ft bgs. Monitoring well MW16 installed to 45 feet bgs.  Well/Auger Diameter: 2" / 7.25" O.D. inches whotes/Comments:  Well Screened Interval: 30 - 45 ft bgs feet bgs feet bgs Screen Slot Size: 0.010 inches	- 40 — - -										
Drilling Co./Driller:Boretec, Inc./CarlosWell/Auger Diameter:2" / 7.25" O.D.inchesDrilling Equipment:Limited Access HSAWell Screened Interval:30 - 45 ft bgsfeet bgsSampler Type:Dames & MooreScreen Slot Size:0.010inchesHammer Type/Weight:140lbsFilter Pack Used:SandTotal Boring Depth:45feet bgsSurface Seal:ConcreteTotal Well Depth:45feet bgsAnnular Seal:Bentonite	45 —								End of boring at 45.0 ft bgs	. Monitoring well	
	Drillir Samp Hamr Total	Drilling Equipment:Limited Access HSASampler Type:Dames & MooreHammer Type/Weight:140IbsTotal Boring Depth:45feet bgs					ell Screene reen Slot S ter Pack U rface Seal	d Interval: Size: sed:	2" / 7.25" O.D. inches 30 - 45 ft bgs feet bgs 0.010 inches Sand Concrete		1
		- · · · · · · · · · · · · · · · · · · ·				٠ ١				Page:	2 of 2



Surface Conditions: Concrete Well Location N/S: 29 feet South of northwest corner of building. Well Location E/W: 68 feet East of northwest corner of building.

Reviewed by: CCC Date Completed: 05/21/14 BORING | LOG

**SB206** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

27.5 feet bgs

**Water Depth** After Completion --

				Da	te Completeu	. 03/2	1/14	/ittel completion	leet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						Concrete		3.75-inch thick concrete floor slab.	
5—						Concrete		3.73-men tinek concrete noor stab.	
10 —		27 43 50/4"	35	0.0	SB206-10	SM	20000000000000000000000000000000000000	Damp, very dense, silty fine SAND with subrounded gravel. Brown. No hydrocarbon or solvent odor (30-60-10).	
_	X	50/6"	100	0.0	SB206-12.5	SP-SM		Damp, very dense, fine SAND with silt. Tan. No hydrocarbon or solvent odor (10-90-0).	
15 —	X	49 50/3"	100	0.0	SB206-15	SP		Damp, very dense, fine SAND with trace silt and some subrounded gravel. Tan. No hydrocarbon or solvent odor (5-85-10).	1
1	_	./Drille		oretec, Inc./Carl		ell/Auger D		7.25" O.D. inches Notes/Comments:	
		uipmer	-	mited Access H		ell Screene reen Slot S		9   No Hydrocarbon or solv	
Samp Hamn		ype: ype/We		ames & Moore 40		reen Slot S ter Pack U:	-	inches in recovered soil sample	es.
Total	Borir	ng Dept	<b>h:</b> 31	-		rface Seal:			
		Depth:			٠ ١	nular Seal:		-	
State	well	ID No.:			Mo	nument Ty	/pe:	Page:	1 of 2
								· · · · · · · · · · · · · · · · · · ·	



Date Started: 05/21/14
Surface Conditions: Concrete

Well Location N/S: 29 feet South of northwest corner of building.

Well Location E/W: 68 feet East of northwest corner of building.

Reviewed by: CCC
Date Completed: 05/21/14

BORING LOG

**SB206** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

27.5 feet bgs

Water Depth
After Completion --

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
20 —		50/1"	0	-1				No recovery	
25 — -	×	50/3"	100	0.0	SB206-25	SM		Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (25-55-20).	
30 — -		21 36 43	100	0.0	SB206-30	GM-SM		Saturated, very dense, gravelly fine to medium SAND with trace silt. Tan. No hydrocarbon or solvent odor (5-65-30).  End of boring at 31.5 ft bgs. Boring abandoned with hydrated bentonite chips and surface patched with concrete.	

Drilling Co./Driller:	· · · · · · · · · · · · · · · · · · ·		Well/Auger Diameter:	7.25" O.D.	inches	Notes/Comme	ents:
Drilling Equipment:			Well Screened Interval:		feet bgs	No hydrocarbon o	or solvent odors observed
Sampler Type:			Screen Slot Size:		inches	in recovered soil	
Hammer Type/Weight:	140	lbs	Filter Pack Used:				
Total Boring Depth:	31.5	feet bgs	Surface Seal:				
Total Well Depth:		feet bgs	Annular Seal:				
State Well ID No.:			Monument Type:			Page:	2 of 2



Surface Conditions: Concrete Well Location N/S: 45 feet South of northwest corner of building.

51 feet East of northwest corner of building.

Reviewed by: CCC Date Completed: 05/21/14

Well Location E/W:

BORING | **SB207** LOG

Site Address: 3400 Wallingford Avenue North Seattle, WA

Water Depth At Time of Drilling

29.1 feet bgs

**Water Depth** After Completion --

				Da	te Completed	1: 05/2	1/14	Alter Completion It	eet bys
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description Con	Well nstruction Detail
0						Concrete		5-inch thick concrete floor slab.	
- - 5—		11 12 14	60	0.0	SB207-05	GP		Damp, medium dense, sandy GRAVEL with trace silt. Tan. No hydrocarbon or solvent odor (5-40-55).	
10 —		20 30 33	30	0.0	SB207-10	SM	00000000000000000000000000000000000000	Rock stuck in sampler. Damp, very dense, silty fine SAND with gravel. Tan. No hydrocarbon or solvent odor (15-65-20).	
-		22 36 39	95	0.0	SB207-12.5	SM		Damp, very dense, silty fine SAND with gravel. Tan. No hydrocarbon or solvent odor (15-60-25).	
15 — -	X	50/6"	100	0.0	SB207-15	SM	00000 00000 00000 00000 00000 00000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-60-25).	
D=:11:-	20.00	/D#:!!-	<u> </u>	Paratas Ins /C==1	20 14/	oll/Auges D	iomoto::	7.25" O.D. inches Notes/Comments:	
	_	o./Drille uipmer		Boretec, Inc./Carl imited Access H		ell/Auger D ell Screene		foot has	obconvod
Samp				ames & Moore	-	reen Slot S		inches No hydrocarbon or solvent odors in recovered soil samples.	onserved
		ype/We	-	-		ter Pack Us			
		ng Dept			0	ırface Seal:			
		Depth: ID No.:		-	9	nular Seal: onument Ty			_
Ciale	***	טויו טו			IVIC	Januari ent 1	, pc.	Page: 1 of	2



Date Started: 05/21/14

Surface Conditions: Concrete

Well Location N/S: 45 feet South of northwest corner of building.

51 feet East of northwest corner of building.

Reviewed by: CCC
Date Completed: 05/21/14

Well Location E/W:

BORING | SB207 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

29.1 feet bgs

Water Depth
After Completion

feet bgs

Depth (feet hos)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
20 -		45 50/3"	100	0.0	SB207-20	SM	0000000 0000000 0000000 0000000 0000000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-60-25).	
25		50/5"	100	0.0	SB207-25	SM	00000000000000000000000000000000000000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (20-60-20).	
30		7 35 50/6"	100	0.0	SB207-30	GM-SP		Saturated, very dense, gravelly fine to coarse SAND with silt. Tan. No hydrocarbon or solvent odor (5-65-30).  End of boring at 31.0 ft bgs. Boring abandoned with hydrated bentonite chips and surface patched with concrete.	-

**Drilling Co./Driller:** Boretec, Inc./Carlos **Drilling Equipment:** Limited Access HSA Sampler Type: Dames & Moore Hammer Type/Weight: 140 lbs 31.0 **Total Boring Depth:** feet bgs **Total Well Depth:** feet bgs State Well ID No.: --

Well/Auger Diameter: 7.25" O.D.
Well Screened Interval: Screen Slot Size: -Filter Pack Used: --

Screen Slot Size: -Filter Pack Used: -Surface Seal: -Annular Seal: -Monument Type: --

Notes/Comments:

inches

inches

feet bgs

No hydrocarbon or solvent odors observed in recovered soil samples.

Page: 2 of 2



Surface Conditions: Concrete
Well Location N/S: 28 feet North of southwest corner of building.

Well Location N/S: 28 feet North of southwest corner of building.

Well Location E/W: 35 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 05/21/14

BORING | SB208 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth
After Completion --

				Da	te Completeu	. 05/2	1/14	/ titol completion	icci bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0						Concrete		5-inch thick concrete floor slab.	
5—		5 9 11	65	0.0	SB208-05	Fill (SM)		~3" of moist, medium dense, silty SAND with gravel and organic debris. Brown-dark brown. No hydrocarbon or solvent odor (30-50-20). Fill. Damp, medium dense, sandy GRAVEL with silt. Tan. No hydrocarbon or solvent odor (10-30-50).	
10 —	X	12 14 16	15	0.0	SB208-10	SP		Damp, dense, fine SAND with trace silt and gravel. Tan. No hydrocarbon or solvent odor (5-90-5).	
_	X	50/3"	100	0.0	SB208-12.5	SM-GM		Damp, very dense, gravelly SAND with silt. Tan. No hydrocarbon or solvent odor (10-40-50).	
Drillin Samp Hamn Total Total	ng Eq ler T ner T Borin Well	o./Drille uipmer ype: ype/We ng Dept Depth: ID No.:	nt: Li Di sight: 14 th: 25	5.4	SA We Scilbs Filt feet bgs Anifeet bgs Anifeet bgs	III/Auger D III Screene reen Slot S rer Pack U: rface Seal: nular Seal: nument Ty	d Interval: Size: sed: :	inches in recovered soil samples.	odors observed



Surface Conditions: Concrete Well Location N/S: 28 feet North of southwest corner of building.

35 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 05/21/14

Well Location E/W:

BORING LOG

**SB208** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

Water Depth After Completion --

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description Well Construction Detail	
15 —	X	50/6"	100	0.0	SB208-15	SM	60000 60000 60000 60000 60000 60000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-65-20).	
20 —		50/6"	100	0.0	SB208-20	SM	800000 800000 800000 800000 800000 800000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (20-65-15).	
25 —	$\times$	50/5"	100	0.0	SB208-25	SM		Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (25-55-20).  End of boring at 25.4 ft bgs. Boring abandoned	
-								with hydrated bentonite chips and surface patched with concrete.	
	_	./Drille		oretec, Inc./Carl		ell/Auger D		7.25" O.D. inches Notes/Comments:	
	•						d Interval:	i No flydrocarbott of solvent odors observed	
1 .							Size:	inches in recovered soil samples.	
		ype/we ìg Dept	-	-		Iter Pack Usurface Seals		_	
1									
1		ID No.:			9	onument Ty		Page:   <b>2 of 2</b>	



Surface Conditions: Concrete

Well Location N/S: 32 feet North of southwest corner of building. Well Location E/W: 104 feet East of southwest corner of building.

Reviewed by: CCC Date Completed: 05/21/14 BORING | LOG

**SB209** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth
After Completion --

				Da	te Complete	ed: 05/21	1/14	After Completion feet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic Description  Well Construction Detail
-						Concrete		2.5-inch thick concrete floor slab. 2-inch void. 2-inch thick concrete floor slab. 1-inch thick gravel layer. 3-inch thick concrete slab.
5		18 24 20	70	0.0	SB209-05	GP		Damp, dense, sandy GRAVEL with silt. Tan. No hydrocarbon or solvent odor (10-40-60).
10 —	X	50/3"	80	0.0	SB209-10	SP-GP		Damp, very dense, gravelly SAND with trace silt. Tan. No hydrocarbon or solvent odor (5-50-45).
-	X	30 41 50/3"	50	0.0	SB209-12.5	SP SM		
15 —	X	50/3"	100	0.0	SB209-15	SM	2000 2000 2000 2000 2000 2000 2000 200	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-65-20).
1	_	./Drille		Boretec, Inc./Carl	<b>I</b>	Vell/Auger Di		7.25" O.D. inches Notes/Comments:
	-	uipmer	-	imited Access H		Vell Screene		ũ
Samp				Dames & Moore	-	Screen Slot S	-	inches
1		ype/We	-	-		ilter Pack Us		-
1		ng Dept			٠ ا	Surface Seal:		-
1		Depth:			9	Annular Seal:		-
State	well	ID No.:		- 		Monument Ty	pe:	Page: 1 of 2
	_							



Surface Conditions: Concrete

Well Location N/S: 32 feet North of southwest corner of building. Well Location E/W: 104 feet East of southwest corner of building.

Reviewed by: CCC Date Completed: 05/21/14 BORING | LOG

**SB209** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

**Water Depth** After Completion --

					te Completeu	. 05/2	I/ I <del>T</del>	/ 11101	<u> </u>	icci bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	1	Well Construction Detail
20 —		50/5"	100	0.0	SB209-20	SM	00000 00000 00000 00000 00000 00000	Damp, very dense, silty fine SAND wi subrounded gravel. Tan. No hydrocal solvent odor (15-65-20).	ith rbon or	
25 —		50/1"	100	0.0	SB209-25	SM	200000000	Damp, very dense, silty fine SAND wi subrounded gravel. Tan to light gray, hydrocarbon or solvent odor (20-60-2	. No	
30 —		50/5"	100	0.0	SB209-30	SM	0000 0000 0000 0000 0000 0000	Damp, very dense, silty fine SAND wisubrounded gravel. Tan. No hydrocal solvent odor (15-65-20).  End of boring at 30.4 ft bgs. Boring a with hydrated bentonite chips and supatched with concrete.	rbon or bandoned	
Drillir Samp Hamn Total Total	ng Eq oler T ner T Borir Well	o./Driller uipmer ype: ype/We ng Dept Depth: ID No.:	nt: Lii Da sight: 14 :h: 30	.4	SA We Sc Ibs Filt feet bgs An	ell/Auger Di ell Screene reen Slot S er Pack Us rface Seal: nular Seal: nument Ty	d Interval: size: sed:		comments:	of 2



Surface Conditions: Plywood-Concrete

6.5 feet North of southwest corner of building. Well Location N/S: Well Location E/W: 141 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 05/22/14 BORING | **SB210** LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

**Water Depth** After Completion --

				Da	ite Complete	1: 05/2	2/14	Aitel Completion leet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Well  Construction  Detail
- - 5—						Concrete		0.5-inch thick plywood. 3.5-inch thick void. 1-inch thick hardwood floor. 6-inch thick concrete floor slab.
- 10 —		41 33 50/6"	60	0.0	SB210-10	GP SM	20000000 200000000 200000000 2000000000	Damp, very dense, sandy GRAVEL with silt. Tan. No hydrocarbon or solvent odor (10-40-60).  Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (20-60-20).
_		32 32 50/4"	60	0.0	SB210-12.5	SM		Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-65-20).
Drillir Samp Hamn Total Total	ig Eq ler T ner T Borir Well	o./Driller uipmer ype: ype/We ng Dept Depth: ID No.:	nt: eight: th:	Boretec, Inc./Mar Limited Access H Dames & Moore 140 25.2	HSA W So Ibs Fi feet bgs So feet bgs Ar	ell/Auger D ell Screene creen Slot S Iter Pack U urface Seal nnular Seal onument Ty	d Interval: Size: sed: :	inches in recovered soil samples.
"""					""		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Page: 1 of 2



Surface Conditions: Plywood-Concrete

6.5 feet North of southwest corner of building. Well Location N/S: Well Location E/W: 141 feet East of southwest corner of building.

Reviewed by: CCC **Date Completed:** 05/22/14 BORING | LOG

**SB210** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

**Water Depth** After Completion --

				Da	te Completed	1: 05/22	2/14	Aiter Completion leet bys
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Well Construction Detail
15 —	X	33 50/3"	100	0.0	SB210-15	SM	90000000000000000000000000000000000000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-65-20).
20 —		36 50/2"	100	0.0	SB210-20	SM	60000000 60000000 60000000 60000000 6000000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-65-20).
25 —	<b>&gt;</b>	50/3"	90	0.0	SB210-25	SM-SP	<i>7:7:7:7:</i>	Damp, very dense, fine SAND with silt and subrounded gravel. Tan. No hydrocarbon or solvent odor (10-70-20).
-								End of boring at 25.2 ft bgs. Boring abandoned with hydrated bentonite chips and surface patched with concrete.
Drillir Samp Hamr Total	Drilling Equipment:     Limited Access HSA     We       Sampler Type:     Dames & Moore     Sc							7.25" O.D. inches feet bgs inches inches inches inches inches inches inches inches inches in recovered soil samples.
		Depth: ID No.:			9	nular Seal: onument Ty		Page: <b>2 of 2</b>



Surface Conditions: Concrete
Well Location N/S: 26.5 feet North of southwest corner of building.

Well Location E/W: 158 feet East of southwest corner of building.

Reviewed by: CCC

Date Completed: 05/22/14

BORING | SB211 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth
After Completion --

								· · · · · · · · · · · · · · · · · · ·
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Well  Construction  Detail
0						Concrete		6-inch thick concrete floor slab.
5—		32 50/6"		0.0	SB211-05	GP	200000000	Damp, very dense, silty very fine SAND with subrounded gravel. Tan and light brown. No hydrocarbon or solvent odor (10-70-20).
10 —		16 24 30	85	0.0	SB211-10	SM		Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (20-55-25).
_	X	50/6"	100	0.0	SB211-12.5	SM	00000 00000 00000 00000 00000 00000	Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (20-55-25).
15 —		50/6"	100	0.0	SB211-15	SM		Damp, very dense, silty fine SAND with gravel. Tan. No hydrocarbon or solvent odor (15-65-20).
Drillin	na Co	./Drille	<u> </u> r: R	l oretec, Inc./Mac	len w	Vell/Auger D	iameter:	7.25" O.D. inches Notes/Comments:
		uipmer		mited Access H	<b>I</b>	Vell Screene		Net 3/20 mones
Samp				ames & Moore	-	creen Slot S		inches in recovered soil samples.
		ype/We ng Dept	-		I .	ilter Pack Us urface Seal:		_
1		Depth:				nnular Seal:		
1		ID No.:			9	Ionument Ty		Page: <b>1 of 2</b>
								· ~9~.



Surface Conditions: Concrete
Well Location N/S: 26.5 feet North of southwest corner of building.

158 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 05/22/14

Well Location E/W:

BORING | SB211 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

oth At rilling -- feet bgs

Water Depth

After Completion --

						00/21		·
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Construction Detail
20 —		50/4"	100	0.0	SB211-20	SM		Damp, very dense, silty fine SAND with gravel. Tan. No hydrocarbon or solvent odor (20-55-25).
25 — -		50/4"	100	0.0	SB211-25	SM	<u> </u>	Damp, very dense, silty fine SAND with gravel. Tan. No hydrocarbon or solvent odor (20-55-25).
30 —		43 50/3"	100	0.0	SB211-30	SM SP		Damp, very dense, silty fine SAND with gravel. Tan. No hydrocarbon or solvent odor (20-55-25). Damp, very dense, fine SAND with trace silt and some subrounded gravel. Tan. No hydrocarbon or solvent odor (5-80-15).
-					Ī			End of boring at 30.7 ft bgs. Boring abandoned with hydrated bentonite chips and surface patched with concrete.
Drillir Samp Hamn	ng Eq oler T ner T	o./Drille  uipmer  ype:  ype/We  ng Dept	nt: Li D sight: 14		SA W S Ibs Fi	/ell/Auger D /ell Screene creen Slot S ilter Pack Us urface Seal:	d Interval: Size: sed:	7.25" O.D. inches feet bgs inches inc
Total	Well	Depth: ID No.:			feet bgs A	nnular Seal onument Ty	:	Page: <b>2 of 2</b>
								'



Surface Conditions: Concrete
Well Location N/S: 3.5 feet North of southwest corner of building.

178 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 05/22/14

Well Location E/W:

BORING | SB212 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth
After Completion --

				Da	te Completed	1. 05/2	2/14	71101 001111111111111111111111111111111
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Well Construction Detail
0						Concrete		6-inch thick concrete floor slab.
-								
-								
-								
-								
5								
_								
-								
-								
-								
10 —	\ /	18	60	0.0		SM	33333333	Down dones silty fine SAND with subrounded
	$ \bigvee $	23 24			SB212-10	SIVI		Damp, dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (25-
-	$  \wedge  $				OBZIZ IO			55-20).
	/ \							
-								
		31	100	0.0	000		 बुबुबुबुबुबुबुबुबुबु	
-	X	50/3"	100	0.0	SB212-12.5	SM		Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or
							1.1.1.1.1.1.1.1.1.1.1	solvent odor (25-55-20).
-								
15 —								
'	$\times$	50/5"	100	0.0	SB212-15	SM		Damp, very dense, silty fine SAND with
L								subrounded gravel. Tan. No hydrocarbon or solvent odor (25-50-25).
Drillin	ng Co	./Drille	r: B	oretec, Inc./Mac	len <b>W</b> e	ell/Auger D	iameter:	7.25" O.D. inches Notes/Comments:
		uipmer		imited Access H		ell Screene		
Samp				ames & Moore		reen Slot S Iter Pack U	-	inches
		ype/We ng Dept	-	-		iter Pack U: irface Seal:		-
1		Depth:			٠ ا	nular Seal		_
		ID No.:				onument Ty	/pe:	Page: 1 of 2
								<u> </u>



Surface Conditions: Concrete
Well Location N/S: 3.5 feet North of southwest corner of building.

Well Location N/S: 3.5 feet North of southwest corner of building.

Well Location E/W: 178 feet East of southwest corner of building.

**Reviewed by:** CCC **Date Completed:** 05/22/14

BORING | SB212 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth
After Completion --

					· •			
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Well  Construction  Detail
20 —		50/4"	100	0.0	SB212-20	SM		Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (20-55-25).
- 25 — -		50/3"	100	0.0	SB212-25	SM		Damp, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (20-55-25).
30 —		50/4"	100	0.0	SB212-30	SM		Damp to moist, very dense, silty fine SAND with subrounded gravel. Tan. No hydrocarbon or solvent odor (15-65-20).  End of boring at 30.3 ft bgs. Boring abandoned with hydrated bentonite chips and surface patched with concrete.
Drillir Samp Hamr Total Total	ng Eq oler T ner T Borir Well	D./Drille puipmer ype: ype/We ng Dept Depth: ID No.:	nt: Li Da sight: 14 :h: 30	.3	SA W Sc Ibs Fi feet bgs Sc feet bgs Ar	ell/Auger D ell Screene creen Slot S iter Pack U irface Seal inular Seal	d Interval: Size: sed: :	7.25" O.D. inches Notes/Comments:



Surface Conditions: Gravel 12.5 feet North of northwest corner of Varsity Inn building. 86 feet East of northwest corner of Varsity Inn building.

Reviewed by: CCC **Date Completed:** 04/29/14

Well Location E/W:

## BORING | LOG

**MW11D** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

42.5/7@eet bgs

Water Depth After Completion --

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0				0.1				Cuttings: Moist, gravelly fine to medium SAND with silt. No hydrocarbon or solvent odor (10-60-30).  Cuttings: Moist, gravelly fine to medium SAND with silt and cobbles. No hydrocarbon or solvent odor (10-60-30).	
		./Drille uipmer		Cascade/James Limited Access H		ell/Auger D ell Screene		2" / 7.25"-10.25"I.D.inches 60 - 75 ft bgs feet bgs	
Samp		-		Limited Access F Dames & Moore	II.	ell Screene reen Slot S		0.010 inches	
		ype: ype/We			I	ter Pack U		#2/12 Sand	
						rer Pack U		#2/12 Sand Concrete	
	<b>0</b> 1				II.				
				13	- 1			Bentonite	
State	State Well ID No.:				M•	onument Ty	/pe:	Flush grade Page: 1	of 5
L	tate well ib ito							3 1	



Surface Conditions: Gravel

12.5 feet North of northwest corner of Varsity Inn building. Well Location N/S: Well Location E/W: 86 feet East of northwest corner of Varsity Inn building.

Reviewed by: CCC **Date Completed:** 04/29/14 BORING | LOG

**MW11D** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

42.5/7@eet bgs

Water Depth After Completion --

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
20 —				0.2				Cuttings: Moist, fine SAND with silt and gravel. Gray. No hydrocarbon or solvent odor (10-80-10).	
25 —								Cuttings: Moist, gravelly fine SAND with silt. Gray. No hydrocarbon or solvent odor (15-65-20).	
30 —									
35 —				0.2				Cuttings: Moist, silty gravelly fine SAND. Graybrown. No hydrocarbon or solvent odor (15-70-15).	
Drillir Samp Hamn Total Total	Drilling Equipment: Limited			6	ISA W Silbs Fi feet bgs Si feet bgs Ai	ell/Auger D fell Screene creen Slot S Iter Pack U urface Seal nnular Seal onument Ty	d Interval: Size: sed: :	0.010 inches #2/12 Sand Concrete Bentonite	265
Ciare					101	onument 1	, po.	Flush grade Page: 2	2 of 5



Surface Conditions: Gravel
Well Location N/S: 12.5 feet North of northwest corner of Varsity Inn building.

86 feet East of northwest corner of Varsity Inn building.

**Reviewed by:** CCC **Date Completed:** 04/29/14

Well Location E/W:

BORING LOG

MW11D

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

42.5/7@eet bgs

Water Depth
After Completion --

					te Completeu	. 04/2			/ator completion	loct bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	scription	Well Construction Detail
40 —	$\searrow$							Cuttings: sandy GRAVEL w brown. No hydrocarbon or s Cuttings: Moist to wet silty 20).	solvent odor.	
- 45 — -										
- 50 —				0.2				Cuttings: Moist to wet, fine SAND. Gray. No hydrocarbo 35-0).	sandy SILT to silty on or solvent odor (65-	
_								Bentonite seal placed at 52 of conductor casing.	to 55 feet bgs at end	
Drillin Samp Hamn Total Total	Drilling Co./Driller: Drilling Equipment: Sampler Type: Hammer Type/Weight: Total Boring Depth: Total Well Depth: State Well ID No.:  Cascade/James Limited Access HSA Dames & Moore  140 lbs 76 feet bgs feet bgs					Ill/Auger D Ill Screene reen Slot S ter Pack Us rface Seal: nular Seal: nument Ty	d Interval: Size: sed:	2" / 7.25"-10.25"I.D.inches 60 - 75 ft bgs feet bgs 0.010 inches #2/12 Sand Concrete Bentonite Flush grade	Notes/Comments:	of 5



Surface Conditions: Gravel

Well Location N/S: 12.5 feet North of northwest corner of Varsity Inn building.

Well Location E/W: 86 feet East of northwest corner of Varsity Inn building.

**Reviewed by:** CCC **Date Completed:** 04/29/14

BORING LOG

MW11D

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

42.5/7@eet bgs

Water Depth
After Completion --

n -- feet bgs

					ite Completeu	. 04/23	3/ 1 <del>-4</del>			1001 290
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	escription	Well Construction Detail
55 —  -  -  60 —  -  65 —		8								
- - 70 —								Wet conditions observed in	soil cuttings.	
Drillir Samp Hamn Total Total	ng Eq pler Ty ner T Borir Well	o./Drille uipmer ype: ype/We ng Dept Depth: ID No.:	nt: :ight: :h:	76	SA We Sc Ibs Filt feet bgs An An	ell/Auger D ell Screene reen Slot S ter Pack U: rface Seal: nular Seal: nument Ty	d Interval: Size: sed: :	2" / 7.25"-10.25"I.D.inches 60 - 75 ft bgs feet bgs 0.010 inches #2/12 Sand Concrete Bentonite Flush grade	Notes/Comments:	4 of 5



Project: AMLI Avtech **Project Number:** 0789-004 CGC Logged by: **Date Started:** 04/28/14 Surface Conditions: Gravel

Well Location N/S: 12.5 feet North of northwest corner of Varsity Inn building. Well Location E/W: 86 feet East of northwest corner of Varsity Inn building.

Reviewed by: CCC **Date Completed:** 04/29/14 BORING | LOG

**MW11D** 

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

42.5/7@eet bgs

Water Depth After Completion --

feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
75 –			25	0.2		GP		Wet, dense, fine to medium sandy GRAVEL to gravelly sand with subrounded gravel. Gray. No hydrocarbon or solvent odor (15-40-45).  End of boring at 76 ft bgs. Monitoring well MW11D installed to 75 feet bgs.	

**Drilling Co./Driller:** Cascade/James **Drilling Equipment:** Limited Access HSA Sampler Type: Dames & Moore Hammer Type/Weight: 140 76 **Total Boring Depth: Total Well Depth:** 

State Well ID No.:

lbs feet bgs 75 feet bgs Well/Auger Diameter: Well Screened Interval: Screen Slot Size:

2" / 7.25"-10.25"I.D.inches 60 - 75 ft bgs feet bgs 0.010 inches

Filter Pack Used: #2/12 Sand Surface Seal: Concrete **Annular Seal:** Bentonite Flush grade Monument Type:

Notes/Comments:

5 of 5 Page:



Surface Conditions: Gravel
Well Location N/S: 11.5 feet South of southeast corner of northern Avtech building.

5.5 feet West of southeast corner of northern Avtech building.

Reviewed by: CCC
Date Completed: 06/23/14

Well Location E/W:

BORING | IW07 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

35 feet bgs

Water Depth
After Completion 33

Drilling Co./Driller:   Cascade/James   Drilling Equipment:   HSA   Sampler   Light grave   Light									
Drilling Co./Driller: Cascade/James Drilling Equipment: HSA Sampler Type: - Use Total Well Depth: 45.0 feet bgs Surface Seat: Concrete Total Well Depth: 45.0 feet bgs Surface Seat: Concrete Senting Seat Seat Depth: Seat Depth: 45.0 feet bgs Surface Seat: Concrete Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Surface Seat: Concrete Seat Depth: 45.0 feet bgs Surface Seat: Concrete Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs Seat Depth: 45.0 feet bgs	Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Samp ID	ole USC Clas	Graphic	Lithologic Description Construction
Drilling Equipment: HSA Sampler Type: Screen Slot Size: 0.020 inches Hammer Type/Weight: Ibs Filter Pack Used: #2/12 Sand Total Boring Depth: 45.0 feet bgs Total Well Depth: 45.0 feet bgs Annular Seal: Bentonite	5—								Cuttings: Damp, silty SAND with gravel. Brown.
Total Well Depth: 45.0 feet bgs Annular Seal: Bentonite	Drillin Samp Hamn	ig Equ ler Ty ner Ty	uipmer /pe: /pe/We	nt:    -  -  -	HSA  	lbs	Well Scree Screen Slo Filter Pack	ened Interv ot Size: : Used:	al: 30 - 45 ft bgs feet bgs 0.020 inches #2/12 Sand
	Total	Well	Depth:	4	45.0	feet bgs	Annular S	eal:	Bentonite



Surface Conditions: Gravel
Well Location N/S: 11.5 feet South of southeast corner of northern Avtech building.

5.5 feet West of southeast corner of northern Avtech building.

Reviewed by: CCC
Date Completed: 06/23/14

Well Location E/W:

BORING | IW07 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

35 feet bgs

Water Depth
After Completion 33

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Samp ID	ole US	SCS lass	Graphic	Litt	nologic De	scription		Well Construction Detail
25 —									Cuttings: Damp	, silty SAND	with gravel. Br	own.	
35 — - - -	35 —												
40 — - - - 45 —													
									End of boring at installed to 45.0	t 45.0 ft bgs. feet bgs.	injection well l	IWU/	
		./Drille		Cascade/James				ameter:	2" / 7.25" O.D.	inches	Notes/Comme	ents:	
		uipmer		HSA	I			d Interval:		feet bgs			
Samp	-	-			I	Screen			0.020	inches			
		ype/We				Filter Pa			#2/12 Sand				
		ıg Dept		45.0	- 1	Surface			Concrete				
		Depth:		45.0	- 1	Annular			Bentonite				
State	Well	ID No.:		BID 534		Monum	ent Ty	pe:	Flush grade		Page:	2	of 2



Surface Conditions: Gravel
Well Location N/S: 11.8 feet South of southeast corner of northern Avtech building.
Well Location E/W: 29 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/23/14

BORING | IW08

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

35

5 feet bgs

Water Depth

After Completion 35.6 feet bgs

				Di	ate Complete	ea: 06/23	3/14		Aiter complet	ion 35.6 leet bys
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic De	escription	Well Construction Detail
0	ng Co	./Drille	: (	Cascade/James		Vell/Auger D	ameter:	Gravel surface.  Cuttings: Damp, silty SANI	O with gravel. Bro	
Drillir	ıg Eq	uipmen	it: l	HSA	l v	Vell Screene	d Interval:	30 - 45 ft bgs feet bgs	Notes/Commer	no.
Samp		/pe: ype/We	iaht: -	-		Screen Slot S Filter Pack Us		0.020 inches #2/12 Sand		
		ype/we ıg Dept		- I5.0		Surface Seal:		#2/12 Sand Concrete		
		Depth:		15.0	٠ ا	Annular Seal:		Bentonite		
		ID No.:	E	BID 535		Monument Ty		Flush grade	Page:	1 of 2



Surface Conditions: Gravel
Well Location N/S: 11.8 feet South of southeast corner of northern Avtech building.

29 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/23/14

Well Location E/W:

BORING | IW08 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

35 feet bgs

Water Depth

After Completion 35.6 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic D	escription	Well Construction Detail
25 — -										
30 —										
- 35 — -	<u> </u>									
								Cuttings: Damp, silty SAN	D with gravel. Brown.	
- 45 —								End of boring at 45.0 ft bg installed to 45.0 feet bgs.	s. Injection well IW07	
Drillin Samp Hamn Total	ng Eq bler Ty ner Ty Borin	ype/We ng Dept	ight:	45.0	lbs Feet bgs S	/ell/Auger Di /ell Screene creen Slot S ilter Pack Us urface Seal: nnular Seal:	d Interval: Size: sed:	2" / 7.25" O.D. inches	Notes/Comments:	•
	Total Well Depth: 45.0		45.0 BID 535	- 1	nnular Seal: Ionument Ty		Flush grade	Page: 2	2 of 2	



Surface Conditions: Gravel

Well Location N/S: 13.0 feet South of southeast corner of northern Avtech building.
Well Location E/W: 44.0 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/24/14

BORING | IW09 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs



After Completion 44.0 feet bgs

L							.,		<u> </u>	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	e USCS Class	Graphic	Lithologic De	escription	Well Construction Detail
5								Cuttings: Damp, silty SANI	T	
Drillin Samp Hamn Total	g Equ ler Ty ner Ty Borin	ype/We ig Dept	nt: H [ 		re S Ibs F feet bgs S	Vell/Auger D Vell Screene Screen Slot S Filter Pack U Surface Seal	d Interval: Size: sed: :	0.020 inches #2/12 Sand Concrete	Notes/Comments: Elevated PID readings recovered soil samples	observed for
	Total Boring Depth: Total Well Depth: State Well ID No.:			<b>1</b> 5.0	- 1	Annular Seal Monument Ty		Bentonite Flush grade	Page:	1 of 3
	State Well ID No.:								, ago.	. 0. 0



Surface Conditions: Gravel

Well Location N/S: 13.0 feet South of southeast corner of northern Avtech building.
Well Location E/W: 44.0 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/24/14

BORING | IW09 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 44.0 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Des	cription	Well Construction Detail
20 —		52/6"	100	52.9	IW09-30	SM	20020 20020 20020 20020 20020 20020 20020 20020	Damp, very dense, silty fine s	SAND with	
-						Jivi		subrounded gravel. Tan. No solvent odor (25-60-15).	hydrocarbon or	
Drillin Samp Hamn Total	Drilling Co./Driller: Cascade/James Drilling Equipment: HSA Dames and Moore Hammer Type/Weight: 140 lbs Total Boring Depth: 45.5 feet bgs Total Well Depth: 45.0 feet bgs State Well ID No.:		e S Ibs Fi feet bgs feet bgs A	/ell/Auger Di /ell Screene creen Slot S ilter Pack Us urface Seal: nnular Seal: onument Ty	d Interval: size: sed:	2" / 7.25" O.D. inches 30 - 45 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete Bentonite Flush grade	Notes/Comments: Elevated PID readings obserecovered soil samples.  Page: 2	rved for		



Surface Conditions: Gravel
Well Location N/S: 13.0 feet South of southeast corner of northern Avtech building.
Well Location E/W: 44.0 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/24/14

## BORING | IW09 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 44.0 feet bgs

					te Completeu	. 06/24	T/ 1 T	<u> </u>	11.0 100t bg5
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
35 —		80/6"	100	36.1	IW09-35	SM	20000 20000 20000 20000 20000 20000 20000 20000	Damp, very dense, silty fine SAND with subrounded gravel. Tan-medium brown. No hydrocarbon or solvent odor (30-55-15).	
40 —		31 50/6"	100	53.0	IW09-40	ML		Damp, very dense, clayey SILT. Gray. No hydrocarbon or solvent odor (100-0-0).	
45 — -		50/6"	100	30.4	IW09-45	ML SM-SP	]]]]]]]]	Damp, very dense, clayey SILT with trace grave Gray. No hydrocarbon or solvent odor (95-0-5). Underlain by wet SAND with silt and gravel. Gra No hydrocarbon or solvent odor (10-80-10).  End of boring at 45.5 ft bgs. Injection well IW09 installed to 45.0 feet bgs.	ay.
Drillir Samp Hamn Total Total	Drilling Equipment: HSA		Dames and Moor 40 5.5	e Scilbs Filtifeet bgs An	III/Auger Di III Screene reen Slot S rer Pack Us rface Seal: nular Seal: nument Ty	d Interval: Size: sed: :	2" / 7.25" O.D. inches Notes/Comments:	observed for	



Surface Conditions: Gravel
Well Location N/S: 13.5 feet North of southeast corner of northern Avtech building.

64.0 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/24/14

Well Location E/W:

BORING | IW10 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

~35 feet bgs

Water Depth
After Completic

After Completion Dry feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	escription	Well Construction Detail
0 -								Gravel surface.		
-										
5										
-										
10 —										
-										
-										
15 —										
_										
20 —										
_										
									T	
Drillin	ng Eq	./Drille uipmer	nt: H	ascade/James SA	l v	/ell/Auger D /ell Screene	d Interval:		Notes/Comme	nts:
	ner T	ype/We			lbs F	creen Slot S ilter Pack Us	sed:	0.020 inches #2/12 Sand		
Total	Well	ng Dept Depth:	47		feet bgs A	urface Seal: nnular Seal:	:	Concrete Bentonite		
State	Well	ID No.:			l M	lonument Ty	/pe:	Flush grade	Page:	1 of 2



Surface Conditions: Gravel
Well Location N/S: 13.5 feet North of southeast corner of northern Avtech building.
Well Location E/W: 64.0 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/24/14

BORING | IW10 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

~35 feet bgs

Water Depth

\_ After Completion Dry feet bgs

							.,			
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	le USCS Class	Graphic	Lithologid	c Description	Well Construction Detail
25 —    30 —   35 —   40 —   45 —								Cuttings: Wet, silty SA  Cuttings: Wet, SILT. Br		
Drillir	na Co	./Drille	<u> </u>	Cascade/James		     Well/Auger Di	ameter:	installed to 47.0 feet bg 2" / 7.25" O.D. inche	js.	
		uipmer		HSA		Well/Auger Di				
Samp						Screen Slot S		0.020 inche		
		ype/We				Filter Pack Us		#2/12 Sand		l
						Filler Pack Us Surface Seal:		#2/12 Sand Concrete		
		ng Dept			9					l
		Depth:		47.0	- 1	Annular Seal:		Bentonite		
State	Well	ID No.:				Monument Ty	pe:	Flush grade	Page:	2 of 2
					1				@	



Surface Conditions: Gravel
Well Location N/S: 13.0 feet South of southeast corner of northern Avtech building.
Well Location E/W: 111.0 feet West of southeast corner of northern Avtech building.

Reviewed by: CCC
Date Completed: 06/24/14

BORING | IW11 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

~35 feet bgs

Water Depth

After Completion 39.9 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Samp ID	ole USC Clas	SS SS	Grapnic	Lithologic De	escription		Well Construct Detai	tion
5		(Pailla)				Moll/Augus			Cuttings: Damp, silty SAND				
Drillin	Orilling Co./Driller: Cascade/James Orilling Equipment: HSA					Well/Auge Well Scree	ened Inte		30 - 45 ft bgs feet bgs	Notes/Commo	ents:		
	Sampler Type: Dames and Moore				Screen Slo			0.020 inches					
				140 16.0	I	Filter Pack			#2/12 Sand				
		ng Dept			- 1	Surface S			Concrete				-
				15.0	- 1	Annular S			Bentonite				
State	otal Well Depth: 45.0 feet bgs tate Well ID No.:					Monumen	t Type:		Flush grade	Page:	1	of 4	
										. ~95.	<u> </u>	<del></del>	



Surface Conditions: Gravel 13.0 feet South of southeast corner of northern Avtech building. 111.0 feet West of southeast corner of northern Avtech building.

Reviewed by: CCC **Date Completed:** 06/24/14

Well Location E/W:

BORING | IW11 LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

~35 feet bgs

**Water Depth** 

After Completion 39.9 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Litl	hologic De	scription		Well Construct Detai	tion
15 —													
20 —													
Drilling Co./Driller: Drilling Equipment: Sampler Type: Hammer Type/Weight: Total Boring Depth: Total Well Depth: State Well ID No.:		nt: F 	Cascade/James HSA Dames and Moore 140 lbs 46.0 feet bgs 45.0 feet bgs		Well/Auger Diameter: Well Screened Interval: Screen Slot Size: Filter Pack Used: Surface Seal: Annular Seal: Monument Type:		2" / 7.25" O.D. 30 - 45 ft bgs 0.020 #2/12 Sand Concrete Bentonite Flush grade	inches feet bgs inches	Notes/Comme		of 4		



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 06/24/14

Surface Conditions: Gravel

Well Location N/S: 13.0 feet South of southeast corner of northern Avtech building.
Well Location E/W: 111.0 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/24/14

## BORING | IW11 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

~35 feet bgs

Water Depth

After Completion 39.9 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	le USCS Class	Graphic	Lit	hologic De	scription		Well Construction Detail
25 —		50/6" 23 50/6"	100	57.0	IW11-30	GM-SP SM	Control   Cont	Damp, very den with trace silt. Todor (5-60-35).  Wet, dense, fine subrounded grasolvent odor (5-60-35).  Wet, very dense gravel. Tan. No 80-5).	e to medium avel. Tan. No 60-35). e, silty fine S	SAND with hydrocarbon of	or	
	_	./Drille uipmer		ascade/James SA		Well/Auger Di		2" / 7.25" O.D.	inches feet bgs	Notes/Commo	ents:	
Samp		-		ames and Moor		Screen Slot S		0.020	inches			
1 -		ype. ype/We				Filter Pack Us		#2/12 Sand	51100			
		ng Dept	-			Surface Seal:		Concrete				
		Depth:			٠ ١	Annular Seal:		Bentonite				
		-		·· <del>·</del>	٠ ١					<u> </u>		
State	State Well ID No.:				Monument Ty	pe:	Flush grade		Page:	3	of 4	



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 06/24/14

Surface Conditions: Gravel

Well Location N/S: 13.0 feet South of southeast corner of northern Avtech building.

Well Location E/W: 111.0 feet West of southeast corner of northern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/24/14

BORING | IW11 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

~35 feet bgs

Water Depth

\_ After Completion 39.9 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
40 —		39 50/6"	100	1.2	IW11-40	SP		Saturated, very dense, fine to medium SAND with trace silt and gravel. Tan. No hydrocarbon or solvent odor (5-90-5).	
_	$\bigvee$	50/6"	100	1.8	IW11-45	SP		Saturated, very dense, fine to medium SAND with trace silt and gravel. Tan. No hydrocarbon or solvent odor (5-90-5).	
_								End of boring at 46.0 ft bgs. Injection well IW11 installed to 45.0 feet bgs.	
Drillir Samp Hamn Total Total	Drilling Co./Driller: Cascade/James Drilling Equipment: HSA Sampler Type: Dames and Moore Hammer Type/Weight: 140 lbs Total Boring Depth: 46.0 feet bgs Total Well Depth: 45.0 feet bgs					Vell/Auger Di Vell Screene Icreen Slot S ilter Pack Us Iurface Seal:	d Interval: size: sed:	0.020 inches #2/12 Sand Concrete Bentonite	
State	State Well ID No.:				N	Ionument Ty	/pe:	Flush grade Page: 4	of 4



Project: AMLI Avtech Project Number: 0789-004 Logged by: CGC Date Started: 06/24/14

Surface Conditions: Gravel 13 feet South of southeast corner of northern Avtech building. 135 feet West of southeast corner of northern Avtech building.

Reviewed by: CCC **Date Completed:** 06/24/14

Well Location N/S:

Well Location E/W:

BORING **IW12** LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

**Water Depth** 

After Completion 36.0 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	escription	Well Construction Detail
0								Gravel surface.		
20 —										П
Drillin Samp Hamn Total Total	Drilling Co./Driller: Cascade/James Drilling Equipment: HSA Sampler Type: Ibs Total Boring Depth: 45.0 feet bgs Total Well Depth: 45.0 feet bgs State Well ID No.:		We Sc Sc Fill feet bgs An An	ell/Auger Di ell Screene reen Slot S ter Pack Us rface Seal: nular Seal:	d Interval: Size: sed:	2" / 7.25" O.D. inches 30 - 45 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete Bentonite Flush grade	Notes/Comments:	of 2		



Project: AMLI Avtech Project Number: 0789-004 Logged by: CGC Date Started: 06/24/14

Surface Conditions: Gravel 13 feet South of southeast corner of northern Avtech building. 135 feet West of southeast corner of northern Avtech building.

Reviewed by: CCC **Date Completed:** 06/24/14

Well Location E/W:

BORING | IW12 LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

**Water Depth** 

After Completion 36.0 feet bgs

## PID (ppmv)   Sample   USCS   \$\frac{9}{60}    Lithologic Description   Detail   Construction Detail   Description   Detail   Construction   Detail   Deta					Da	ite Complete	u. 06/24	+/ 14		/ into: Completion	oo.o loot bgo
Cuttings: Wet, silty SAND with gravel. Tan.  Cuttings: Wet, silty SAND with gravel. Tan.  Find of boring at 45.0 ft bgs. Injection well IW12  Drilling Co./Driller:  Cascade/James HSA HSA Well Screen di Interval:  Well Screen d	Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic De	escription	Construction
Drilling Co./Driller: Cascade/James Well/Auger Diameter: 2" / 7.25" O.D. inches Drilling Equipment: HSA Well Screened Interval: 30 - 45 ft bgs feet bgs Sampler Type: Screen Slot Size: 0.020 inches Hammer Type/Weight: Ibs Filter Pack Used: #2/12 Sand Total Boring Depth: 45.0 feet bgs Surface Seal: Concrete Total Well Depth: 45.0 feet bgs Annular Seal: Bentonite	35										
Drilling Equipment:     HSA     Well Screened Interval:     30 - 45 ft bgs     feet bgs       Sampler Type:      Screen Slot Size:     0.020     inches       Hammer Type/Weight:      lbs     Filter Pack Used:     #2/12 Sand       Total Boring Depth:     45.0     feet bgs     Surface Seal:     Concrete       Total Well Depth:     45.0     feet bgs     Annular Seal:     Bentonite									installed to 45.0 feet bgs.	T	
	Drilling I Sampler Hammer Total Bo	Equi r Typ r Typ oring	ipmen pe: pe/Wei g Depti	t: ⊦  ight: h: 4	ISA - - 5.0	lbs Feet bgs S	Vell Screene Screen Slot S ilter Pack Us Surface Seal:	d Interval: ize: sed:	30 - 45 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete	Notes/Comments:	
					- <del>-</del>	· ·				Page:	2 of 2



Project: AMLI Avtech **Project Number:** 0789-004 Logged by: CGC 06/25/14 Date Started: Surface Conditions: Asphalt

14 feet North of northeast corner of southern Avtech building. 109 feet West of northeast corner of southern Avtech building.

Reviewed by: CCC **Date Completed:** 06/25/14

Well Location E/W:

BORING | IW13 LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

**Water Depth** \_ After Completion --

Depth (feet bgs) Interval Blow Count Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic D	escription	Well Construction Detail
0			Asphalt		2-inch thick asphalt surfac	e.	
Drilling Co./Driller: Drilling Equipment: Sampler Type: Hammer Type/Weight: Total Boring Depth:		ISA Well Scr	II/Auger Di II Screene een Slot S er Pack Us face Seal:	d Interval: Size: sed:	2" / 7.25" O.D. inches 35 - 50 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete	Notes/Comments:	
Total Well Depth: State Well ID No.:		feet bgs Anr	nular Seal: nument Ty		Bentonite Flush grade	Page: <b>1</b>	of 4



Project: AMLI Avtech **Project Number:** 0789-004 Logged by: CGC Date Started: 06/25/14 **Surface Conditions:** 

Asphalt 14 feet North of northeast corner of southern Avtech building. 109 feet West of northeast corner of southern Avtech building.

Well Location E/W: Reviewed by: CCC **Date Completed:** 06/25/14 BORING | IW13 LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

**Water Depth** After Completion --

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lit	hologic De	scription		Well Construction Detail
20 —												
25 —												
30 —												
35 —	20 Co	/Drillo	r. (	Paccade/James	W	all/Auger D	ismeter-	2" / 7.25" O.D.	inches	Notes/Commen	ite:	
Drillir Samp Hamn Total Total	ng Equ pler Ty ner Ty Borin Well I	g Equipment: Limited Access HSA er Type: Dames & Moore er Type/Weight: 140 lbs Boring Depth: 70.3 feet bgs Well Depth: 50.0 feet bgs		SA W Sc Ibs Fi feet bgs Sc feet bgs Ar	ell/Auger D ell Screene creen Slot S ter Pack U urface Seal: nular Seal:	d Interval: Size: sed:	35 - 50 ft bgs 0.020 #2/12 Sand Concrete Bentonite	inches feet bgs inches				
State	ate Well ID No.: Monument Type:			/pe:	Flush grade		Page:	2	of 4			



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 06/25/14

Surface Conditions: Asphalt
Well Location N/S: 14 feet North of northeast corner of southern Avtech building.

109 feet West of northeast corner of southern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/25/14

Well Location E/W:

BORING | IW13 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth
After Completion --

				Da	te Completed	1: 06/2	5/14		Aiter Comple	:	reet bys
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	escription		Well Construction Detail
40 —		50/6"	100	0.7	IW13-40	SP-SM		Wet, very dense, fine to me and subrounded gravel. Ta solvent odor (10-80-10). At thick layer of wet, very den No hydrocarbon or solvent	n. No hydrocarb 40.5 feet bgs: ~2 se, sandy SILT.	on or 2-inch	
45 —											
-		50/6"	100	5.1	IW13-50	ML		Damp, very dense, sandy S Gray. No hydrocarbon or s	SILT with trace golvent odor (65-	ravel. 30-5).	
1	ıg Eq	o./Drille uipmer	nt: Li	ascade/James mited Access H ames & Moore	SA W	ell/Auger D ell Screene creen Slot S	d Interval:	2" / 7.25" O.D. inches 35 - 50 ft bgs feet bgs 0.020 inches	Notes/Comme	ents:	
Hamn	ner T	ype/We	ight: 14	10	lbs <b>Fi</b>	iter Pack Us Irface Seal:	sed:	#2/12 Sand Concrete			
Total Well Depth: 50.0 feet bgs Annul						nnular Seal	:	Bentonite Flush grade	Page:	2	of 4
1	State Well ID No.: Monument Type:							-	ı ay <del>c</del> .	3	UI <del>I</del>



Project: AMLI Avtech
Project Number: 0789-004
Logged by: CGC
Date Started: 06/25/14

Surface Conditions: Asphalt
Well Location N/S: 14 feet North of northeast corner of southern Avtech building.
Well Location E/W: 109 feet West of northeast corner of southern Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/25/14

BORING | IW13 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth
After Completion --

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Des	scription	Well Construction Detail
55 —	X	50/6"	100	3.0	IW13-55	SM	0000 0000 0000 0000 0000 0000 0000	Damp, very dense, silty fine subrounded gravel. Gray. No solvent odor (25-55-20).	SAND with o hydrocarbon or	
60 —	<b>&gt;</b>	50/6"	100	0.5	IW13-60	SM	00000 00000 00000 00000 00000 00000	Moist to wet, very dense, silt SAND with subrounded grav hydrocarbon or solvent odoi	el. gray. No	
- 65 — -	X		0					No recovery.		
70 —	<b>&gt;</b>	50/4"	100	0.8	IW13-70	SM	3888888	Damp, very dense, silty fine subrounded gravel. Gray. No solvent odor (25-55-20).  End of boring at 70.3 ft bgs.	o hydrocarbon or	
Drillin Samp Hamn Total Total	ng Eq ler T ner T Borin Well	o./Drille uipmer ype: ype/We ng Dept Depth: ID No.:	nt: Li Da eight: 14 th: 70	.3	SA We Sc Ibs Fill feet bgs An Indianal File feet bgs An Indianal File File File File File File File Fil	ell/Auger D ell Screene reen Slot S ter Pack U rface Seal nular Seal nument Ty	d Interval: Size: sed: :	installed to 50.0 feet bgs.  2" / 7.25" O.D. inches 35 - 50 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete Bentonite Flush grade	Notes/Comments:	of 4



Project: AMLI Avtech Project Number: 0789-004 Logged by: CGC Date Started: 06/25/14

Surface Conditions: Asphalt 14 feet North of northeast corner of southern Avtech building. 89 feet West of northeast corner of southern Avtech building.

Reviewed by: CCC **Date Completed:** 06/25/14

Well Location E/W:

BORING | IW14 LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

**Water Depth** 

After Completion 43.3 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	escription	Well Construction Detail
0 _ - - 5— - - 10—								2-inch thick asphalt surface	e.	
15 —								Cuttings: Damp, silty SANI brown.	O with gravel. Tan-	
25 — - - -										Ш
30 —										888 888
40 —										
45 — - - - -										
50 — -								End of boring at 50.0 bgs. I installed to 50.0 feet bgs.	njection well IW14	
Drillin Samp Hamn Total	ig Equ ler Ty ner Ty Borin	./Drille uipmer ype: ype/We ng Dept Depth:	it: L  ight: h: 50	0.0	SA We Scilbs Filt feet bgs Sui	II/Auger D II Screene reen Slot S er Pack Us rface Seals nular Seals	d Interval: Size: sed:	2" / 7.25" O.D. inches 35 - 50 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete Bentonite	Notes/Comments:	
State Well ID No.: Monum				nument Ty	/pe:	Flush grade	Page:	1 of 1		



Project: AMLI Avtech
Project Number: 0789-004
Logged by: EAM
Date Started: 06/26/14

Date Started: 06/26/14 Surface Conditions: Gravel

Well Location N/S: 3.3 feet North of power pole near NW corner of south Avtech building.

Well Location E/W: 16.5 feet West of power pole near NW corner of south Avtech building.

**Reviewed by:** CCC **Date Completed:** 06/26/14

## BORING | IW15 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 44.5 feet bgs

						00/2	5/11	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Construction  Detail
0 _								Gravel surface.
5—								Cuttings: silty SAND. Tan-brown.
10 —								Cuttings: Damp, silty SAND with some gravel. Gray-brown.
20 —								
25 — - - 25 —								
30 —								Cuttings: Damp, silty SAND with some gravel.
35 —								Cuttings: Damp to moist, silty SAND with some gravel.
45 —								
-								Cuttings: Wet, sandy SILT. Gray.
50 —								End of boring at 50.0 bgs. Injection well IW15 installed to 50.0 feet bgs.
	g Eq	./Drille uipmer /pe:		ascade/James imited Access H	ISA W	ell/Auger D ell Screene creen Slot S	d Interval:	2" / 7.25" O.D. inches : 35 - 50 ft bgs feet bgs 0.020 inches
Hamn Total	ner Ty Borin	ype/We ng Dept	<b>h:</b> 50	0.0	feet bgs Su	ter Pack Us	:	#2/12 Sand Concrete
		Depth: ID No.:		o. <del>o</del>	9	nular Seal onument Ty		Bentonite Flush grade Page: 1 of 1



Project: AMLI Avtech Project Number: 0789-004 Logged by: EAM Date Started: 06/26/14

Surface Conditions: Gravel

Well Location N/S: 3.3 feet North of power pole near NW corner of south Avtech building. Well Location E/W: 16.5 feet West of power pole near NW corner of south Avtech building.

Reviewed by: CCC **Date Completed:** 06/26/14 BORING **IW16** LOG

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Water Depui...
Time of Drilling

feet bgs

**Water Depth** 

After Completion 44.5 feet bgs

Depth   Count   Coun	PID (ppmv) Sam	nple USCS Class	Cuttings: Damp, silty SAND with some gravel.  Cuttings: Damp, silty SAND with some gravel.  Gray-tan.	Well Construction Detail
5—  10—  15—  20—  25—  30—  -  -  -  -  -  -  -  -  -  -  -  -  -			Cuttings: Damp, silty SAND with some gravel. Brown-tan.  Cuttings: Damp, silty SAND with some gravel.	
20 — 25 — 30 — 30 —			Cuttings: Damp, silty SAND with some gravel. Gray-tan.	
40—			Cuttings: Damp, silty SAND with some gravel. Gray-tan.	
45 —			Cuttings: Wet, silty fine SAND. Gray-tan.	
50 —			Cuttings: Wet, sandy SILT.  End of boring at 50.0 bgs. Injection well IW15 installed to 50.0 feet bgs.	
_	ascade/James mited Access HSA    lbs     1.0   feet bgs	Well/Auger Diame Well Screened Int Screen Slot Size: Filter Pack Used: Surface Seal: Annular Seal: Monument Type:	erval: 35 - 50 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete Bentonite	1 of 1



Project: AMLI Avtech Project Number: 0789-004 Logged by: EAM Date Started: 06/26/14

Surface Conditions: Gravel

Well Location N/S: 3.2 feet North of power pole near NW corner of south Avtech building. Well Location E/W: 57.4 feet West of power pole near NW corner of south Avtech building.

Reviewed by: CCC **Date Completed:** 06/26/14

Site Address: 3400 Wallingford Avenue North Seattle, WA

> Water Depth At Time of Drilling

LOG

BORING | IW17

feet bgs

**Water Depth** 

After Completion 42.0 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description  Construction  Detail
0 _								Gravel surface.
5— 5—								Cuttings: silty SAND with some gravel. Tanbrown.
10 —								DIOWII.
-								
15								
20 —								
- -								
25 — - -								
30 —								
35 —								
-								
40 —	_							
45 —	_							Cuttings: Wet, sandy SILT and silty SAND. Tan-
- - -								gray.
50 —								End of boring at 50.0 bgs. Injection well IW17 installed to 50.0 feet bgs.
		./Drille uipmer		Cascade/James Limited Access H		ell/Auger D		2" / 7.25" O.D. inches 35 - 50 ft bgs feet bgs
Samp	ler Ty	уре:	-		Sc	reen Slot S	Size:	0.020 inches
		ype/We				ter Pack Us		#2/12 Sand
		ng Dept Depth:			٠ ١	rface Seal: nular Seal:		Concrete Bentonite
		ID No.:				nument Ty		Flush grade Page: 1 of 1
								<u> </u>



Project: AMLI Avtech
Project Number: 0789-004
Logged by: EAM
Date Started: 06/27/14

Surface Conditions: Gravel
Well Location N/S: 13.1 feet North of NW corner of Varsity Inn building.
Well Location E/W: 28.9 feet East of NW corner of Varsity Inn building.

**Reviewed by:** CCC **Date Completed:** 06/27/14

BORING | IW18 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 49.0 feet bgs

Depth (feet bgs) Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description Well Construction Detail
0							Gravel surface.  Cuttings: silty SAND with some gravel. Tanbrown.
15 —							Cuttings: silty SAND with some gravel. Tanbrown.
25 —							Cuttings: silty SAND with some gravel. Gray.
35 —							
45 —	-						Cuttings: sandy SILT.  End of boring at 50.0 bgs. Injection well IW18 installed to 50.0 feet bgs.
Total Boring Depth: 50.0 fe			SA We Sc Ibs Fill feet bgs Su feet bgs An	ell/Auger D ell Screene reen Slot S ter Pack Us rface Seals nular Seals nular Seals	d Interval: Size: sed:	2" / 7.25" O.D. inches 35 - 50 ft bgs feet bgs 0.020 inches #2/12 Sand Concrete Bentonite Flush grade  Page: 1 of 1	



Project: AMLI Avtech
Project Number: 0789-004
Logged by: EAM
Date Started: 06/27/14

06/27/14

Surface Conditions: Gravel
Well Location N/S:
Well Location E/W:
Reviewed by: CCC

Date Completed:

## BORING | IW19 LOG |

Site Address: 3400 Wallingford Avenue North

Seattle, WA

Water Depth At
Time of Drilling

feet bgs

Water Depth

After Completion 40.9 feet bgs

Sample   S	L				, Da	te Completeu	. 06/2	7714		
Cuttings: Damp, silty SAND with some gravel.  Cuttings: Damp, silty SAND with some gravel.  Cuttings: Damp, silty SAND with some gravel.  Cuttings: Damp, silty SAND with some gravel.  Tan-gray.  Cuttings: Damp, silty SAND with some gravel.  Tan-gray.  End of boring at 45.0 bgs, Injection well IW19 installed to 45.0 feet bgs.  Cuttings: Damp, silty SAND with some gravel.  Tan-gray.  Cuttings: Damp, silty SAND with some gravel.  Tan-gray.  End of boring at 45.0 bgs, Injection well IW19 installed to 45.0 feet bgs.  Well/Auger Diameter:  Well/Auger Diameter:  Well/Screened Interval.  Sorene Silts:  Sore	Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)			Graphic	Lithologic Description	Construction
25 - 335 - 40 - 45 - 25 - 25 - 25 - 25 - 25 - 25 - 25	0								Gravel surface.	
25 — 30 — 35 — 40 — 25 — 45 — 45 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 —	5—								Cuttings: Damp, silty SAND with some gra	vel.
25— 35— 40— 45— 45— Drilling Co/Driller: Cascade/James Limited Access HSA Sampler Type: Limited Access HSA Sampler Type: Hammer Type/Weight:	10 —									
25 — 30 — 30 — 35 — 40 — 40 — 40 — 45 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 —	15 — - -									
Cuttings: Damp, silty SAND with some gravel.  Cuttings: Damp, silty SAND with some gravel.  Tan-gray.  Cuttings: Damp, silty SAND with some gravel.  End of boring at 45.0 bgs. Injection well IW19 installed to 45.0 feet bgs.  End of boring at 45.0 bgs. Injection well IW19 installed to 45.0 feet bgs.  Well/Auger Diameter:  Well Screened Interval:  Screen Slot Size:  Total Boring Depth:  45.0 feet bgs  Total Well Depth:  45.0 feet bgs  Filter Pack Used:  Surface Seal:  Concrete  Annular Seal:  Bentonite	20 —									
Cuttings: Damp, silty SAND with some gravel.  Tan-gray.  End of boring at 45.0 bgs. Injection well IW19 installed to 45.0 feet bgs.  Drilling Co./Driller: Cascade/James Limited Access HSA Sampler Type: Hammer Type/Weight: Total Boring Depth: 45.0 feet bgs Total Well Depth:  Well/Auger Diameter: 2" / 7.25" O.D. inches Well Screened Interval: 30 - 45 ft bgs feet bgs Filter Pack Used: #2/12 Sand Concrete Annular Seal: Bentonite	25 — - - -									
Cuttings: Damp, silty SAND with some gravel.  Tan-gray.  End of boring at 45.0 bgs. Injection well IW19 installed to 45.0 feet bgs.  Drilling Co./Driller: Cascade/James Drilling Equipment: Limited Access HSA Sampler Type:	30 —									
## Drilling Co./Driller: Cascade/James Drilling Equipment: Limited Access HSA Sampler Type: Hammer Type/Weight: Ibs Total Boring Depth: 45.0 feet bgs Total Well Depth: 45.0 feet bgs    End of boring at 45.0 bgs. Injection well IW19 installed to 45.0 feet bgs.	35 — - - -								Cuttings: Damp, silty SAND with some gra	vel.
Drilling Co./Driller:   Cascade/James   Well/Auger Diameter:   2" / 7.25" O.D.   inches   Notes/Comments:	40 —	_							Tan-gray.	
Drilling Co./Driller:Cascade/JamesWell/Auger Diameter:2" / 7.25" O.D.inchesDrilling Equipment:Limited Access HSAWell Screened Interval:30 - 45 ft bgsfeet bgsSampler Type:Screen Slot Size:0.020inchesHammer Type/Weight:lbsFilter Pack Used:#2/12 SandTotal Boring Depth:45.0feet bgsSurface Seal:ConcreteTotal Well Depth:45.0feet bgsAnnular Seal:Bentonite	45 —								End of boring at 45.0 bgs. Injection well IW installed to 45.0 feet bgs.	/19
Drilling Equipment:     Limited Access HSA     Well Screened Interval:     30 - 45 ft bgs     feet bgs       Sampler Type:      Screen Slot Size:     0.020     inches       Hammer Type/Weight:      Ibs     Filter Pack Used:     #2/12 Sand       Total Boring Depth:     45.0     feet bgs     Surface Seal:     Concrete       Total Well Depth:     45.0     feet bgs     Annular Seal:     Bentonite									1	
Total Boring Depth:     45.0     feet bgs     Surface Seal:     Concrete       Total Well Depth:     45.0     feet bgs     Annular Seal:     Bentonite	Drilling Equipment: Sampler Type:			<b>nt:</b> L	imited Access H	SA We	Well Screened Interval: Screen Slot Size:		30 - 45 ft bgs feet bgs 0.020 inches	ents:
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