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DRAFT REMEDIAL INVESTIGATION AND FEASIBILITY STUDY REPORT



Property:
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

Prepared for:
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Seattle, Washington

Report Date:
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Draft Remedial Investigation and Feasibility Study Report

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January 10, 2014

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ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
ARAR	applicable or relevant and appropriate requirements
asl	above sea level
Avtech	Avtech Corporation
bgs	below ground surface
CFR	Code of Federal Regulations
cis-1,2-DCE	cis-1,2-dichloroethene
COC	chemical of concern
CSM	conceptual site model
CUL	cleanup level
DCA	disproportionate cost analysis
DPD	Seattle Department of Planning and Development
EAI	Environmental Associates Inc.
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ERM-West	ERM-West, Inc.
ESA	Environmental Site Assessment
GaiaTech	GaiaTech Incorporated
gpm	gallons per minute
GPR	ground-penetrating radar
HSA	hollow-stem auger
ISCO	in-situ chemical oxidation pilot

ACRONYMS AND ABBREVIATIONS (CONTINUED)

kg	kilograms
Metro	King County-Metro
mg/kg	milligrams per kilogram
MTCA	Washington State Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
NCP	National Soil and Hazardous Substances Pollution Contingency Plan
North Block	north side of North 34th Street
O&M	operation and maintenance
OMB	U.S. Office of Management and Budget
PAH	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene (perchloroethene)
PCS	petroleum-contaminated soil
PID	photoionization detector
the Property	3400 Wallingford Avenue North, Seattle Washington
psi	pounds per square inch
QA/QC	quality assurance/quality control
RAO	remedial action objectives
RECs	recognized environmental conditions
RCW	Revised Code of Washington
RI/FS Report	Draft Remedial Investigation and Feasibility Study Report
ROW	right-of-way

ACRONYMS AND ABBREVIATIONS (CONTINUED)

the Site	groundwater contaminated with TCE beneath the Avtech Property as well as beneath portions of the adjoining 34th Avenue North right-of-way, and soil contaminated with TCE and PCE on the North Block of Avtech.
SoundEarth	SoundEarth Strategies, Inc.
South Block	south side of North 34th Street
SPU	Seattle Public Utilities
TCE	trichloroethene
TEE	Terrestrial Ecological Evaluation
TPH	total petroleum hydrocarbon
USC	United States Code
USGS	U.S. Geological Survey
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

SoundEarth Strategies, Inc. has prepared this Draft Remedial Investigation and Feasibility Study Report for the Avtech Corporation property located at 3400 Wallingford Avenue North in Seattle, Washington (the Property), on behalf of AMLI Residential Partners, LLC. The Property is currently enrolled in the Washington State Department of Ecology's Voluntary Cleanup Program (Voluntary Cleanup Program Project No. NW2739, Facility/Site No. 71755531). The Property also includes the following addresses: 3320, 3326, and 3422 Wallingford Avenue North, 1815 North 34th Street, and 3421 Burke Avenue North.

This Draft Remedial Investigation and Feasibility Study Report was developed to meet the requirements of a remedial investigation and feasibility study as defined by the Washington State Model Toxics Control Act Regulation in Parts 350 through 390 of Chapter 340 of Title 173 of the Washington Administrative Code.

The Property is a 2.04-acre commercial property spanning six parcels on the north and south sides of North 34th Street (the North and South Blocks). The Property was initially developed by the early 1900s with four single-family residences. A two-story factory building (Building 2) was constructed on the north side of North 34th Street (North Block) in 1909 (Figure 2). Building 2 contained a shoe manufacturer from 1909 to the 1940s and Grandmas Cookies in the 1950s and 1960s. Avtech Corporation, a manufacturer of aviation electronics, occupied Building 2 from 1974 to 2011.

Two furniture workshop buildings (Buildings 3 and 4, Figure 2) were constructed on the south side of North 34th Street (South Block) in the 1930s, with an additional single-story warehouse constructed in 1965. Avtech occupied the South Block buildings from the 1980s to 2011.

Based on the results of the investigations summarized in later sections of this report, subsurface soil beneath the Site consists primarily of localized near-surface anthropogenic fill soil overlying Vashon-age glacial till, which overlay glacial advance sand outwash deposits. Groundwater was encountered within the advance outwash deposits during site explorations. This water-bearing zone was typically encountered at depths ranging from approximately 21.5 to 45 feet below ground surface and appeared to extend beyond the maximum depth explored of 55 feet below ground surface. Groundwater migration direction has been consistently toward the southeast.

The results of the remedial investigation indicate that the site is defined by the lateral and vertical extent of groundwater contamination that has resulted from a release of trichloroethene on the north side of North 34th Street. Sampling conducted to date indicates that soil is impacted by trichloroethene generally in the loading dock area of Building 2 at depths ranging from 9 to 20 feet below grade. Trace levels of 1,2-dichlorethene and tetrachloroethene were also detect in this area. Soil is likely impacted by trichloroethene at other depths, as indicated by the presence of trichloroethene in groundwater. Localized areas of surface soil containing lead near the Building 1 house (likely from lead paint) and polycyclic aromatic hydrocarbons at the south end of the Property (likely from the former gasworks to the south) exceeding Method A cleanup levels are also present.

Groundwater containing trichloroethene concentrations exceeding the Washington State Model Toxics Control Act Method A cleanup level is present on the southern half of the North Block and has migrated to the south, across North 34th Street to the South Block. Groundwater contamination may also extend to the east, beneath Burke Avenue North.

EXECUTIVE SUMMARY (CONTINUED)

Based on the results of the remedial investigation and completion of a conceptual site model, the feasibility study was conducted to develop and evaluate cleanup action alternatives that would facilitate selection of a final cleanup action for the Site in accordance with Part 350(8) of Chapter 340 of Title 173 of the Washington Administrative Code.

The three following cleanup action alternatives were evaluated and developed through screening all applicable remedial technologies for the Site conditions and the development scenario for the Property, and then each alternative was further evaluated in the course of this feasibility study:

- Cleanup Action Alternative 1, Excavation of Soil with In Situ Chemical Oxidation of Groundwater by Permanganate
- Cleanup Action Alternative 2, Excavation of Soil with Groundwater Treatment by a Zero Valent Iron Permeable Reactive Barrier
- Cleanup Action Alternative 3, Excavation of Soil with a Groundwater Pump and Treat System

Common to all applicable alternatives is the excavation and off-site land disposal of soil exceeding the applicable cleanup levels. The trichloroethene-impacted soil is intended to be disposed of under a "Contained-Out" designation by the Washington State Department of Ecology's approval. The alternatives differ only in the type of treatment employed to remediate groundwater beneath the parts of Parcels 3, 4, and 5 and North 34th St right of way (Figure 2). Due to the nature of the planned redevelopment plan, the following elements are common with all three cleanup action alternatives:

Redevelopment Excavation. The entire Property will be excavated from lot-line to lot-line as part of the redevelopment, this cleanup action will remove a large portion of trichloroethene-impacted source soil. The Redevelopment Excavation will also remove most of the soil impacted with polycyclic aromatic hydrocarbons and lead.

Remedial Excavation. The costs for each alternative include the removal and disposal of all soil within the identified Remedial Excavation Area. The depth of the trichloroethene source area Remedial Excavation is approximately 6 feet deeper than the proposed redevelopment excavation. The total volume of contaminated soil within the Remediation Excavation Area will be approximately 2,500 tons. Soil will be excavated and directly loaded into trucks for transport to off-Property land disposal at a permitted Subtitle D landfill (assumes a Contained-Out waste designation will be approved).

Demolition. Because the remediation activities will be conducted as part of a larger redevelopment project, the alternatives discussed below assume that the buildings on the Property will be demolished before beginning shoring and excavation. The demolition of Building 2 on the north side of 34th Street is necessary before excavation for remediation, and the costs associated with the pre-demolition hazardous materials surveys are not included in the cost estimates provided in this Draft Remedial Investigation and Feasibility Study Report.

Vapor Intrusion Mitigation. Each alternative includes the planned construction of a below-ground concrete parking garage structure with an associated venting system. The removal of all soil contamination by excavation, the thickness of the proposed parking slab foundation, and the parking area ventilation system will mitigate the potential for intrusion and/or collection of unsafe levels of contaminant vapors into the parking garage and above-grade building. For

EXECUTIVE SUMMARY (CONTINUED)

alternatives that do not immediately address dissolve chemicals of concern in groundwater, an impermeable vapor barrier will extend over most of the Property to act as a permanent vapor barrier to contaminant migration.

Based on the analysis as presented in the feasibility study, Cleanup Action Alternative 1 is the recommended alternative for the Site because it ranks comparatively high in environmental benefit and is both technically feasible and cost effective. Cleanup Action Alternative 1 satisfies requirements of the Washington State Model Toxics Control Act and significantly reduces risk from contamination to the maximum extent practicable by removal of the source by excavation and in situ chemical oxidation to address residual groundwater contamination beneath the Property and rights-of-way. The selected remedy will be integrated with an appropriate groundwater monitoring program.

This executive summary is presented solely for introductory purposes, and the information contained in this section should be used only in conjunction with the full text of this report. A complete description of the project, Site conditions, investigative methods, and investigation results is contained in this report.

1.0 INTRODUCTION

SoundEarth Strategies, Inc. (SoundEarth) has prepared this Draft Remedial Investigation and Feasibility Study Report (RI/FS Report) for the Avtech Corporation (Avtech) Property located at 3400 Wallingford Avenue North in Seattle, Washington (the Property) on behalf of AMLI Residential Partners, LLC. The general location of the Property is shown on Figure 1. The Property includes Parcels 1 through 3 on the north side of North 34th Street (North Block) and Parcels 4 through 6 on the south side of North 34th Street (South Block), as shown on Figure 2. Both blocks were occupied by Avtech for manufacturing of aviation electronics.

This RI/FS Report was prepared for the Voluntary Cleanup Program (VCP) participation between AMLI Residential Partners, LLC and the Washington State Department of Ecology (Ecology). The RI/FS Report was developed to meet the requirements of the Washington State Model Toxics Control Act (MTCA) Regulation Parts 350 through 390 of Chapter 340 of Title 173 of the Washington Administrative Code (WAC 173-340-350).

The Site is defined by the full lateral and vertical extent of contamination exceeding applicable cleanup levels (CULs) that has resulted from releases at or near the Site. Based on the information gathered to date, the Site includes soil contaminated with of trichloroethene (TCE), tetrachloroethene (PCE), lead, and polycyclic aromatic hydrocarbons (PAHs) (Figure 7). TCE and PCE impacts are likely from past degreasing activities at the former Avtech facility. PAH contamination is near-surface and is likely from airborne emissions from the former gasworks plant to the south. Lead contamination is near-surface and likely from a release of lead-based paint chips. Groundwater is impacted by TCE beneath the North Block and the south-adjoining North 34th Street right-of-way (ROW), and limited portions of the South Block and Burke Avenue North ROW (Figure 8).

The Site was accepted into Ecology's VCP on June 11, 2013 (VCP Project No. NW2739, Facility/Site No. 71755531).

1.1 DOCUMENT PURPOSE AND OBJECTIVES

The purpose of the RI/FS Report is to summarize data necessary to adequately characterize the Site to develop and evaluate cleanup action alternatives. This report presents historical information regarding the former use of the Property and surrounding parcels, summarizes the information obtained during the review of historical information, and summarizes the scope and findings of each subsurface investigation that has been conducted on the Site and presents a conceptual site model (CSM) to represent the extent of contamination and identified exposure receptors.

This RI/FS Report is organized into the following sections:

- **Section 2.0, Background.** This section provides a description of the Site features and location; a summary of the current and historical uses of the Property and adjoining properties; and a description of the Site's environmental setting, including the local meteorology, geology, and hydrology.
- **Section 3.0, Previous Investigations.** This section provides a description of the investigations conducted at the Site by others.

- **Section 4.0, Remedial Investigation Field Program.** This section provides a description of the remedial investigation field work program conducted at the Site by SoundEarth between December 2011 and July 3013, including a summary of the pre-field activities, scope of work, results, a data validation review, and a discussion of data gaps based on the findings of the remedial investigation.
- **Section 5.0, Conceptual Site Model.** This section provides a summary of the CSM derived primarily from the results of the historical research and the cumulative investigations performed at the Site. Included is a discussion of the confirmed and suspected source areas, the chemicals and media of concern, the fate and transport characteristics of the release of hazardous substances, and the potential exposure pathways.
- **Section 6.0, Technical Elements.** The section summarizes technical elements of the remedial analysis, including the remedial action objectives (RAOs), applicable or relevant and appropriate requirements (ARARs), chemicals of concern (COCs), media of concern, and cleanup standards.
- **Section 7.0, Feasibility Study.** The feasibility study develops and evaluates cleanup alternatives, discusses the screening of remedial technologies, and identifies the recommended cleanup alternative.
- **Section 8.0, Bibliography.** This section lists the information sources used to create this RI/FS Report.
- **Section 9.0, Limitations.** This section discusses document limitations.

2.0 BACKGROUND

This section provides a description of the Site features and location; a summary of historical Site use; and a description of the local geology, hydrology, and land use pertaining to the Site. Historical documentation referenced in this section is provided in Appendix A.

2.1 SITE LOCATION AND DESCRIPTION

The Site is defined by the extent of contamination caused by the releases of hazardous substances at the Property, as discussed in Section 1.0 above.

The Property consists of the following six King County tax parcels and addresses: #408330-6660 (3421 Burke Avenue North), #408330-6670 (3400 Wallingford Avenue North), #408330-6695 (3422 Wallingford Avenue North), #408330-7105 (1815 North 34th Street), #408330-7155 (3320 Wallingford Avenue North), and #408330-7160 (3326 Wallingford Avenue North). The Property covers approximately 88,920 square feet (2.04 acres) of land and is bisected by North 34th Street. The Property is located at 3400 Wallingford Avenue North in Seattle, Washington, approximately 1 mile north of downtown Seattle, Washington, as shown in Figure 1. Figure 2 shows a plan view/layout of the Property. According to King County's iMAP website, the Property is located at an approximate elevation ranging from 55 feet above mean sea level at the southeast corner to 95 feet above mean sea level at the northwest corner.

2.2 STRUCTURES AND IMPROVEMENTS

The Property is currently occupied by numerous structures, which are situated in the North Block and South Block. The three parcels located on the North Block are currently occupied by the following developments:

- A 1909-vintage, two-story single-family residence (Building 1) that includes approximately 3,120 square feet of space. The wood-framed structure has a wood-shingle roof and asbestos-tile siding. No heating source is currently present for Building 1.
- A 1912-vintage, two-story industrial facility (Building 2) that includes 9,600 square feet of space. The masonry-framed structure has a newer vinyl-covered roof and is heated by natural gas and electric heaters. Additions were constructed to the north side of the building in 1957 and in the 1980s. The former machine shop/solder room and shipping and receiving rooms are shown on Figure2. The additions are masonry-framed, gas- and electric-heated workspaces and storage area including 40,960 square feet of space.
- Additional improvements on the North Block include a basketball court and an asphalt-paved loading area and parking lot to the north of Building 2.

The three parcels located on the South Block are occupied by four structures:

- A 1934-vintage, one-story warehouse (Building 3) that includes approximately 10,390 square feet of space. The wood-framed structure is heated by electric heaters.
- A 1936-vintage, one-story warehouse (Building 4) that includes 9,120 square feet of space. The wood-framed structure is unheated.
- A 1961-vintage, one-story warehouse (Building 5) that includes 12,080 square feet of space. The masonry-framed structure is heated by a forced-air natural gas furnace.
- A 1976-vintage, one-story warehouse and office (Building 6) that includes 2,880 square feet of space. The wood-framed structure is heated by a heat exchanger.

Potable water and sewer service are provided to the Property by Seattle Public Utilities. According to City of Seattle Department of Planning and Development (DPD), the sanitary sewer was connected to the on-Property buildings in 1907. Puget Sound Energy provides natural gas, and Seattle City Light provides electricity to the building. Solid waste disposal and recycling services are provided by Seattle Public Utilities. No evidence of potable or process water supply wells on the Property was observed.

2.3 CURRENT PROPERTY USE

The Property was vacated by its former occupier, Avtech Corporation, a manufacturer of aviation electronics in December 2011. The Property is zoned Commercial (Seattle zoning code C2-40). Exterior areas of the Property include an asphalt-paved parking lot located to the north of Building 2, an open space used for recreation on the northeastern corner of the Property, open vegetated areas located in the vicinity of Building 1, and small loading docks located in the vicinity of Buildings 3 and 6.

2.4 ADJOINING PROPERTIES

Development in the vicinity of the Property is a mix of residential and commercial. Uses of nearby properties at the time of the SoundEarth site reconnaissance are summarized below, and are also shown in Figure 2.

2.4.1 North

Residential apartment buildings are located to the north of the North Block. The Varsity Inn restaurant is located to the north of Building 5 on the South Block.

2.4.2 East

Properties to the east of the Property on the north side of North 34th Street are occupied by a multifamily residential building, a parking lot, and a vacant retail building. Properties to the east of the Property on the south side of North 34th Street are occupied by a fisheries supply commercial warehouse and fisheries service center.

2.4.3 South

The properties to the south of the Property are occupied by an office building and a single family residence.

2.4.4 West

Four multifamily residential structures are situated to the west of the Property across Wallingford Avenue North.

2.5 UNDERGROUND UTILITIES

This section describes underground utilities present beneath the Site based on a site reconnaissance, DPD side sewer cards, county utility and road maps, building plans, private utility locates, a sewer line camera survey conducted by Applied Professional Services Inc., and an ALTA land survey conducted by Bush, Roed & Hitchings, Inc. in February 2012.

Sewer mains serving the Property are present beneath Burke Avenue North and Wallingford Avenue North. A 10-foot diameter King County-Metro (Metro) sewer line is present below North 34th Street, approximately 55 feet below the street. Side sewers serving Buildings 1, 2 (northern portion), 5, and 6 outlet to the sewer main below Wallingford Avenue North. Side sewers serving Buildings 2 (southern portion), 3, and 4 outlet to the sewer main below Wallingford Avenue North. A side sewer shown on DPD sewer cards on the east side of the Building 2 solder room could not be located during the Applied Professional Services Inc. sewer survey and have likely been taken out of service.

Other underground utilities include a natural gas line entering Building 2 at the southeast corner of the building, and water lines entering from North 34th Street and Wallingford Avenue North.

2.6 LAND USE DESIGNATION

The current land use of the Site is light industrial (vacant). The surrounding area is predominately residential, with a mix of retail, office, and restaurant use. The Site is zoned as Commercial 2 (C2-40).

2.7 LAND USE HISTORY OF THE SITE

The historical use of the Property is summarized in this section. Available King County Archived Records, Sanborn Fire insurance maps, and City of Seattle archived building permit files are included in Appendix A of this report. Figure 2 includes current and historical Site features and the project parcel numbers (Parcels 1 through 3 on the North Block and Parcels 4 through 6 on the South Block).

Between 1901 and 1909, three single-family residences were constructed on the North Block and two single-family residences were constructed on the South Block. Building 2 was constructed on Parcel 3 in

1909 and was initially occupied by the Zimmerman-Degen Shoe Factory. The original heat system was coal, with a furnace room located in the basement at the east end of the building.

In the 1930s, the Property contained single-family residences on Parcels 1, 2, 5, and 6, the shoe factory on Parcel 3, and a warehouse building on Parcel 4. In 1934, a wood-framed furniture manufacturing building was also constructed on Parcel 4. According to historical newspaper accounts, a building was destroyed on Parcel 4 in 1936, likely due to a blaze starting at a sawdust collector at the furniture factory. It was not stated which of the two workshops the fire had damaged.

In 1946, a one-story, masonry-framed garage building was constructed on Parcel 3, north of Building 2. The tax records indicate that a 550-gallon tank was located in the vicinity of the garage, which was located near the northwestern corner of Parcel 3. The contents of the tank were unlisted in the tax records. The garage was incorporated into a warehouse building constructed in 1957 on Parcel 3.

By 1950, Building 2 was occupied by Grandma's Baking Company. A one-story, reinforced-concrete-framed garage and machine shop was built as an addition to the 1912-vintage building. The addition was listed as heated by natural gas and was constructed along the Wallingford Avenue North frontage. In 1958, DPD records indicate that a 1,000-gallon tank was installed at Building 2. The contents and location of the tank were not listed.

In the 1960s, a one-story, unheated masonry warehouse was constructed on Parcel 5 (Building 5). The residence previously occupying Parcel 5 was demolished at this time. A paint spraying booth was shown within Building 3 on Parcel 4. Building 4 was listed as a cabinet shop, and Building 3 was listed as storage and shipping facilities for the cabinet shop. Building 5 was a plywood manufacturer's warehouse. By 1965, aerial photographs indicate Building 2 was expanded again to include the current solder room space.

In 1974, DPD records indicate that alterations were made to Building 2 to accommodate Avtech's occupancy of the building. The current solder room was listed as a "fabrication shop." The current shipping and receiving was not present at the time.

The shipping and receiving area for Building 2 was present by 1986. The 1986 plan shows a gasoline underground storage tank (UST) on the east side of the loading dock (location shown on Figure 2). The northwest corner of the Building 2 basement is shown as the "metal treatment" room. The 1970s-era Fabrication Shop is shown as the "machine shop" in the 1986 plan.

A 1989 letter from Avtech to the City of Seattle land use office includes a detailed list of all chemicals transported to Avtech's facilities, as well as their estimated use frequency and total volume annually used. The letter also detailed that Avtech's liquid chemical wastes were removed from the Property every 90 days by a hazardous waste transportation company, that chromate waste from the chromate plating room was discharged to the sanitary sewer to be received by Metro, and that an industrial waste discharge permit was held by Avtech for this purpose. Chemical wastes included trichloroethene, acetone, toluene, ammonium hydroxide, xylenes, methyl isobutyl ketone, varnish, nitric acid, paint etcher, Freon, ethanol, and hydraulic oil.

Avtech acquired and occupied all of the South Block buildings by 1986, except for Building 5, which was acquired in 1989. Building 5 was occupied by the Budweiser Hydroplane racing team repair and service shop.

A meth lab operated out of the basement of the residence at 3424 Wallingford Avenue North (Building 1). The meth lab, which was reportedly capable of producing up to 100 pounds of meth per week, was discovered and raided by police on November 17, 1990. The residence included 18 gallons of diethyl ether at the time of the police raid. The state reportedly was responsible for the cleanup operation, and the drug laboratory was listed under federal databases as a hazardous materials cleanup site. The charged individual in the meth lab case, Terrell King, was the listed occupant in reverse directories for the Property from 1986 until 1990. Avtech was the owner of the residence located on Parcel 1 at the time of the meth laboratory raid. King County Health Department received a final decontamination report concerning Building 1 on May 9, 1991, from Morris Environmental Services. The report indicated that decontamination was successful and that Building 1 posed no significant threat to an occupant. The letter further cited Avtech's use at Building 2 of TCE, methylene chloride, and toluene.

A 1989 annual Dangerous Waste Report submitted to Ecology identified 3,000 pounds of waste TCE generated by Avtech. Other wastes included paint thinning solvents and ammonium hydroxide.

In 1990, a construction permit indicated that a spray booth was installed at Building 3. Seattle Fire Department records indicated that Building 4 was emitting visible clouds of solvents from the facility due to Avtech's operations, which smelled of ketone and/or paint fumes. An unpermitted paint spray booth located within Building 3 was observed in a previous inspection cited in this letter.

DPD records indicate that a chromate process room was located in the basement of Building 2 in 1993. Present on the first floor were a spray booth, a "ballast area," a "PCB Assy" room, a print shop, a paint shop, a chemical storage room, an engineering laboratory, a burn-in room, and an assembly floor.

In 2007, Buildings 3 and 4 were used by Avtech Corporation as a mechanical and electrical engineering facility, including numerous welding stations, two paint booths, storage areas, and various other electrical assembly and testing stations.

2.8 HISTORICAL LAND USE OF SURROUNDING PARCELS

The surrounding Wallingford neighborhood was largely residential until the turn of the 20th century. The area was low-density residential, with a Northern Pacific Railroad running along the southern edge of the neighborhood. After the early 1900s, the neighborhood was redeveloped to include light industrial and commercial use. The vicinity of the property north of North 35th Street was strictly residential, while properties to the south were a mixture of residential, commercial, and industrial uses. The Washington Natural Gas gasification plant operated approximately 100 feet south of the Property from 1907 until it was decommissioned in 1957. From 1907 until 1936, the plant converted coal into carbon monoxide for use in heating, lighting, and cooking. From 1936 until 1957, the plant produced gas from petroleum sources. As a result of the gasification process, considerable air-fall from smokestacks located at the plant sent coal debris, smoke, ash, and embers onto neighboring land. The plant included the current extent of Gas Works Park and the adjacent areas to the south of Northlake Way North. One six-story and two three-story gas holding tanks were situated approximately 100 feet to the south of Parcels 4 and 6.

A Standard Oil Company bulk storage facility was formerly located to the east of the Property. The shoreline of Lake Union near the Property has been used for a variety of maritime construction businesses. The current footprint of the Burke-Gilman trail was historically the location of a spur line of the Northern Pacific Railroad, which brought coal and later petroleum from bulk terminals and mines

from outside the neighborhood. Numerous coal bunkers existed along the line, and a large storage bin for coal existed near the Property at the gasification plant.

The following presents a summary of the historical land use on parcels adjoining the Site.

2.8.1 North Adjoining

The properties located to the north of the Property are currently occupied by a 1986-vintage, four-story, wood-framed condominium complex and a 1984-vintage, three-story, wood-framed condominium complex. Available tax records and Sanborn Maps indicate that the north-adjoining properties have been occupied by single-family and multifamily residential structures since at least 1890. No evidence to suggest that the residential structures were heated by oil-burning furnaces was observed in the available records.

2.8.2 East Adjoining

The properties located to the east of the Property are currently occupied, from north to south, by a 1989-vintage, three-story, wood-framed condominium complex; a 1981-vintage, four-story, wood-framed office building; a 1953-vintage, one-story, wood-framed retail structure; and Mariner Square, which is a commercial complex that includes five separate commercial structures and a parking lot constructed in 1979. Mariner Square include offices, warehouse space, retail space, and a loading area. Available tax records and Sanborn Maps indicated that the east-adjoining properties were occupied solely by single-family residences until approximately 1930, when a warehouse was constructed adjacent to the east of Parcel 4 of the Property. The warehouse was occupied by Washington Natural Gas Company. By 1953, an office and storage building was constructed to the east of Parcel 3. By 1968, the property to the east of Parcel 3 was occupied by a fiberglass boat repair shop. The existing Mariner Square development was constructed by 1979 and the existing office building located to the east of Parcel 3 was constructed by 1981. No evidence to suggest that the residential or commercial structures were heated by oil-burning furnaces was observed in the available records.

2.8.3 South Adjoining

The properties located to the south of the Property (including the property located at 1801 North 34th Street) are currently occupied by a 1945-vintage, one-story, wood-framed restaurant; a 1906-vintage, two-story, wood-framed apartment building; and a 1980-vintage, three-story, wood-framed office building and warehouse. Available tax records and Sanborn Maps indicate that the south-adjoining properties were occupied by single-family residences before 1902. At least one of the residences was heated by an oil-burning furnace. Storage buildings, an office building, and a bunker, all owned by Pacific Materials, were constructed in 1940 on the property to the southeast. The Pacific Materials property was later used to store lime for mixing plaster.

2.8.4 West Adjoining

The properties located to the west of the Property are currently occupied, from north to south, by a 1969-vintage, four-story, wood-framed apartment building; a 1987-vintage, five-story, wood-framed condominium complex; a 2005-vintage, four-story, wood-framed office and condominium complex; and a 2002-vintage, five-story, wood-framed office building and

condominium complex. A restaurant and retail structure is situated within an inset area along the west-central portion of the Property.

Available tax records and Sanborn Maps indicate that the west-adjoining properties were occupied by single-family residences before 1890; at least one of the residences was heated by an oil-burning furnace. By 1922, a laundry facility was constructed on the property located to the west of Parcels 5 and 6. Although not specifically listed as such, laundry facilities of this era commonly also performed dry cleaning activities. The facility, which operated until at least 1957, was heated by an oil-burning furnace. In 1947, a 3,500-gallon UST was installed at the laundry facility to store the fuel for the furnace. The existing buildings within the inset area to the west of the Property were constructed by 1945 and were originally heated by an oil-burning furnace, although the heat source was later changed to natural gas. The property to the southwest of the Property was occupied by the American Tar Company between 1943 and 1964. The facilities of the American Tar Company (also known as Nortar; Figure 2), which manufactured tar paper and other petroleum products, included an aboveground tank farm for the storage of tar and other petroleum products, a tar mixing building, a storage building, and a boiler room. The laundry facility was demolished and replaced by the existing condominium by 2002 and the American Tar Company facilities were replaced with the existing condominiums by 2005.

2.9 FUTURE LAND USE

The planned development project will include the construction of apartment buildings on each block with two to three levels of subgrade parking. The lowest level of parking on the North Lot will have an approximate top of slab elevation of 67 feet. The lowest level of parking on the South Lot will have an approximate top of slab elevation of 54 feet. Approximate slab elevations are shown on geologic cross-sections (Figures 3 through 5).

2.10 ENVIRONMENTAL SETTING

This section provides a summary of the environmental setting of the Site.

2.10.1 Meteorology

Climate in the Seattle area is generally mild and experiences moderate seasonal fluctuations in temperature. Average temperatures range from the 60s in the summer to the 40s in the winter. The warmest month of the year is August, which has an average maximum temperature of 74.90 degrees Fahrenheit (°F), while the coldest month of the year is January, which has an average minimum temperature of 36.00 °F.

The annual average rainfall in the Seattle area is 38.25 inches, with December as the wettest month of the year when the area receives an average rainfall total of 6.06 inches (IDcide.com).

2.10.2 Topography

The Site and vicinity lie within the Puget Trough or Lowland portion of the Pacific Border Physiographic Province. The Puget Lowland is a broad, low-lying region situated between the Cascade Range to the east and the Olympic Mountains and Willapa Hills to the west. In the north, the San Juan Islands form the division between the Puget Lowland and the Strait of Georgia in British Columbia. The province is characterized by roughly north-south-oriented valleys and ridges, with the ridges that locally form an upland plain at elevations of up to about

500 feet above sea level (asl). The moderately to steeply sloped ridges are separated by swales, which are often occupied by wetlands, streams, and lakes. The physiographic nature of the Puget Lowland was prominently formed by the last retreat of the Vashon Stade of the Fraser Glaciation, which is estimated to have occurred between 14,000 and 18,000 years before present.

The Site is located on southeast-facing hill side, with elevations ranging between 55 feet at southeast corner of the South Block, to 97 feet at the northwest corner of the North Block. Lake Union is located to the south, with the closest location approximately 650 feet to the southeast (USGS 1983).

2.10.3 Groundwater Use

According to the Ecology Water Well Logs database (Ecology online 2013), no water supply wells are present within approximately 2 miles of the Site.

Seattle Public Utilities (SPU) provides the potable water supply to the City of Seattle. SPU's main source of water is derived from surface water reservoirs located within the Cedar and South Fork Tolt River watersheds. According to King County's Interactive Map for the County's Groundwater Program, there are no designated aquifer recharge or wellhead protection areas within several miles of the Site.

2.11 GEOLOGIC AND HYDROGEOLOGIC SETTING

This section summarizes the regional geology and hydrogeology in the Site vicinity, and the geologic and hydrogeologic conditions encountered beneath the Site.

2.11.1 Regional Geology

According to the Geologic Map of Seattle (Troost et al. 2005), the surficial geology in the vicinity of the Site consists of deposits corresponding to the Vashon Stade of the Fraser Glaciation and pre-Fraser glacial and interglacial periods. In the immediate Site vicinity, surficial deposits have been mapped as Vashon-age glacial till (Troost et al. 2005).

2.11.2 Site Geology

Based on the results of the investigations summarized in this RI/FS Report, subsurface soil beneath the Site consists primarily of local near-surface anthropogenic fill overlying Vashon-age glacial till overlying Vashon-age advance outwash deposits.

The locations of the borings and wells advanced during explorations at the Site are shown in Figure 2. Cross sections showing subsurface soil characteristics and geologic units encountered in the explorations are presented in Figures 3 through 5. Detailed boring logs with well construction details are included as Appendix B.

Anthropogenic fill or disturbed native soils consisting of loose sands to silty sands were encountered locally in some of the property borings to depths of up to about 7 feet below ground surface (bgs). SoundEarth also anticipates that fill soils are present associated with backfilled walls, under building foundations, and utility corridors that were not encountered in the soil borings.

The near surface fill soils, where present, are underlain by Vashon Glacial till deposits that were encountered in all of Site soil borings that extended through the upper fill soils. In general, these

deposits consisted of dry-damp to moist, very dense silty sand with variable gravel and cobbles, and local thin sand-rich and silt-rich horizons. The glacial till is often cemented. Glacial till deposits extended to depths ranging from approximately 25 feet bgs (boring B09) to approximately 40 feet bgs (boring B16) across the Site.

Vashon-age advance outwash deposits were encountered in nearly all of the borings throughout the Site that were in excess of 35 feet deep. In general, these deposits consisted of damp to wet, very dense sand to sand with some silt with variable gravel and local silty sand and silt-rich horizons. The hard silt-rich interbeds are typical of the transition zone between the advance outwash sand and the overlying glacial till, and may act as aquitards to groundwater flow. The advance sand deposits are first encountered at depths of approximately 25 feet bgs (boring B09) to about 40 feet bgs (boring B16), and appear to extend to the full explored in all of the deeper Site borings (up to 55 feet bgs).

A 1908-vintage, hand-dug 132-inch outside-diameter sewer line is located under 34th Avenue North, between the northern and southern portions of the site, at depths of about 50 feet to 65 feet bgs (Figures 3 and 4). A drilling assessment along the sewer alignment completed by the Metropolitan Engineers in 1974 identified loose soil and voids in the soil above the sewer line occurring at elevations of approximately 30 feet to 40 feet asl.

2.11.3 Site Hydrology

Near surface perched groundwater conditions were not encountered in the Site explorations. The near surface water-bearing zone below the Property was encountered near the lower contact of the overlying glacial till and the underlying glacial outwash sand. Boring logs for five of the fifteen monitoring wells showed a moist, non-saturated fine grained soil stratum at or near the bottom of the borings, while the ten other borings converted into wells were terminated in saturated conditions. Groundwater depths in the wells in 2013 have ranged from 21.49 feet to 44.74 below tops of well casings, and elevations ranging from 31.27 feet to 64.01 feet North American Vertical Datum of 1988 (NAVD 88). Groundwater migration direction has been consistently toward the south to south-southeast, with a gradient ranging from 0.142 feet/foot to 0.147 feet/foot between wells MW10 and MW11 for the 2013 depth-to-groundwater events.

A 1908-vintage hand-dug 132-inch outer-diameter sewer line is located at a depth of approximately 50 feet bgs (invert elevation 26 feet NAVD 88), aligned along the center of North 34th Street. Subsequent studies completed by the City of Seattle Engineering Department indicated that voids were present under the North 34th Street ROW, possibly owing to settlement associated with installing the sewer line. It is not known what affect the sewer line and associated voids have on groundwater gradient and movement, or if the sewer line serves a preferred pathway for contaminant transport.

SoundEarth completed slug tests on wells MW09, MW12, and MW13 in July of 2013 to estimate hydraulic conductivities of the water table aquifer encountered beneath and downgradient of the Property. At least one set of both falling head and rising head slug tests were completed and analyzed in each of the wells. Average hydraulic conductivity estimates for each of the wells range from about 0.52 to 1.11 feet per day.

Groundwater velocities were calculated for each well based off of the average hydraulic conductivity of the rising test for the given well. A porosity of 0.2 was assumed for calculations. The hydraulic gradient was calculated based off of groundwater elevations taken from April 24

to 26, 2013. Hydraulic gradients ranged from 0.07 to 0.12 feet per foot and groundwater velocities averaged from 0.31 to 0.66 feet per day.

3.0 PREVIOUS INVESTIGATIONS

This section summarizes the results of previous investigations conducted at the Property. Information regarding the previous investigations conducted by others at the Site and on the adjoining upgradient property was obtained from the following reports:

- Phase 1 Environmental Site Assessment (ESA) and Compliance Review, Avtech Corporation, 3400 Wallingford Avenue, Seattle, Washington, by GaiaTech Incorporated (GaiaTech), dated March 11, 2003 (GaiaTech 2003).
- Phase 1 Environmental Site Assessment and Limited Compliance Review, Avtech Corporation, 3400 Wallingford Avenue North, Seattle, Washington, by ERM-West. Inc. (ERM-West), dated December 2006 (ERM-West 2006).

3.1 2003 GAIATECH PHASE I SITE ASSESSMENT

GaiaTech Incorporated completed a Draft Phase I Environmental Assessment (GaiaTech 2003) of the Property in 2003. The GaiaTech report indicated that previous reports for the Property included a 1995 Phase I Environmental Audit by Environmental Associates Inc. (EAI), a 1998 Supplemental Environmental Studies Report by EAI, a 1998 Environmental Assessment by Pilko & Associates, and a 2003 Environmental Review conducted by Strata Environmental.

The GaiaTech report indicated that a gasoline UST located near the Building 2 loading dock was removed in 1989 (GaiaTech referred to Building 2 as “Building 1” in the report). Sampling of the UST area was not conducted. In 1995, three fuel oil USTs ranging from 300 to 1,760 gallons were removed. The 1,760 gallon UST was located next to the former gasoline tank area. Three soil samples collected from the tank excavation did not contain detectable petroleum hydrocarbons. A 500-gallon UST was located on the southern end of the South Block (the specific location was not given). According to facility representatives, petroleum-impacted soil was over-excavated in this area, though no report of the cleanup was provided. A 300-gallon UST was located at the residence on the North Block. Petroleum impacted soil was reportedly not encountered.

A 1998 subsurface investigation conducted by EAI in the former gasoline and 1,760-gallon fuel oil UST area was described as “north and northeast of Building 1” (current Building 2). Four borings (B-1 through B-4) were drilled. Total petroleum hydrocarbons (TPH) were identified at a depth of 8 feet in one boring (Boring B-3 at 400 milligrams per kilogram [mg/kg]). No other TPH or benzene, toluene, ethylbenzene, total xylenes was detected in the four borings. GaiaTech (2003) did not include a site plan showing the locations of the borings.

GaiaTech noted that Avtech stored chemicals in a curbed storage area including isopropyl alcohol (150 gallons), paint thinners (75 gallons), paint (30 gallons), and oils (110 gallons). GaiaTech did not identify any significant waste handling or disposal practices at Avtech.

GaiaTech (2003) identified the following potential environmental impacts for the Property:

- The former UST area at Boring B-3 (the report noted that the TPH concentration was above the MTCA Method cleanup level (200 mg/kg at the time).

- Historical operations including shoe, boat, and furniture manufacturing.

3.2 2006 ERM-WEST PHASE I SITE ASSESSMENT

ERM-West completed a Draft Phase I Environmental Assessment of the Property in December 2006 (ERM-West 2006). At the time of the report, Avtech was a medium-quantity Resource conservation and Recovery Act waste generator. Five waste streams were identified: isopropyl alcohol, mixed solvents, spent lab packs, chromate solid waste, and lead waste. The report concluded that "In general, the facility operations appear to be orderly and well maintained; however, certain permits and report have not been obtained/submitted that are required for environmental compliance." The ERM-West report obtained by SoundEarth did not include a site plan.

ERM-West (2006) identified the following recognized environmental conditions (RECs) for the Property:

- The former presence of four USTs, which were removed from the Property between 1989 and 1995, with confirmed soil impacts in the vicinity of the diesel UST east of the fabrication shop.
- Petroleum-contaminated soil (PCS) was encountered in one of four borings advanced by EAI in 1998. The PCS was encountered to the northeast of Building 2 (location not given).
- The environmental quality of groundwater beneath the Property was not evaluated in the course of the UST removal or subsurface investigation activities conducted at the Property.
- Etching was observed on the concrete floor of the basement of Building 2, where the chromate plating line operated for approximately 25 years. The plating line reportedly discharged into the municipal sewer system through a single drain line, the integrity of which was not evaluated.
- Paint spraying occurred within Building 3 on the Property for approximately 40 years. Cabinet coating paints and solvents were likely also used as part of the paint spraying operation.
- The Property is situated proximal to and downwind of Gas Works Park, which was formerly a gasification plant that may have resulted in adverse environmental impacts to the Property from airfall of material generated by the former plant.

3.3 2011 - 2012 SOUNDEARTH STRATEGIES PHASE I SITE ASSESSMENT

SoundEarth was commissioned by AMLI Residential Partners, LLC to complete a Phase I ESA of the Property. At the time of a Property visit conducted by SoundEarth in September 2011, Mr. Scott Graebke and Mr. Jim Jenkins, facilities manager and manufacturing engineer with Avtech, respectively, were interviewed. Mr. Graebke and Mr. Jenkins were both aware of the use and storage of chemicals at the Property. Mr. Graebke provided SoundEarth with the industrial wastewater permit for the chromate process room, and material safety data sheets of all chemicals stored at the Property. Mr. Graebke and Mr. Jenkins were reportedly not aware of UST decommissioning records or any subsurface investigations or remedial efforts that may have been conducted at the Property.

Cutting oil, lacquers, lubrication oil, compressor oil, toluene, xylenes, mineral oil, paints, paint thinners, methyl ethyl ketone, petroleum solvents, glues, resins, and plastic coatings were used and stored at the Property. At the time of the site visit, interior portions of Buildings 2, 3, and 4 were still used for storage of lubrication oil, lacquer, and waste petroleum. These materials were reported by Mr. Graebke to be

removed by January 2012. Some cutting oil and lubrication oil staining was observed on the ground of Building 3 in the vicinity of former equipment. Drums of used oil were stored to the west of Building 6 awaiting disposal by a hazardous materials handler. The drums contained cutting oil formerly used in metal cutting machines in Building 6.

The chromate process room was present on the second floor of Building 4. Mr. Graebke indicated that the chromate process room discharged to the sanitary sewer in accordance with the industrial wastewater permit held by Avtech. SoundEarth made an inquiry with Mr. Doug Hilderbrand, Industrial Waste Compliance Investigator for Metro's Industrial Waste Division. Mr. Hilderbrand was familiar with the Avtech facility, having toured it several times through the years. He was not aware of any significant problems regarding waste handling or discharges to the Metro system.

SoundEarth also made an inquiry with Nortar Inc. Ecology site manager Maura O'Brien. Ms. O'Brien indicated that, according to most recent data available, subsurface soil and groundwater contamination resulting from the historical operation of a tar products facility located to the west of the South Block did not extend to the east of Wallingford Avenue North toward the Property.

The following RECs were identified during the course of the SoundEarth Phase I ESA:

- The former industrial uses of the Property.
- The former use and storage of petroleum hydrocarbons in USTs located in the vicinity of Building 2.
- The former use and storage of heating oil for former residences on the Property.
- The former presence of a clandestine methamphetamine production laboratory at the Property.
- Air-fall contamination resulting from the nearby historical operation of the coal gasification plant.

4.0 REMEDIAL INVESTIGATION FIELD PROGRAM

SoundEarth conducted the subsurface assessment work at the Site between December 2011 and July 2013. The objectives of the initial field program for the Property were to further assess the potential for RECs to have impacted the Property. Subsequent field programs were conducted to assess the extent and potential source of TCE contamination.

Soil data is summarized in Tables 1 through 5.The locations of soil borings, groundwater monitoring wells and other Site features are shown on Figure 2. Subsurface cross sections are shown on Figures 3 through 5. Groundwater elevations and flow directions are shown on Figure 6. The soil and groundwater analytical results for COCs exceeding MTCA Method A cleanup levels are summarized on Figures 7 and 8. The soil descriptions and observations were recorded in boring logs attached as Appendix B. Laboratory analytical reports for the Site are included in Appendix C.

4.1 2011-2012 PHASE II ENVIRONMENTAL SITE ASSESSMENT

Two subsurface investigations comprised the Phase II ESA conducted by SoundEarth at the Property in 2011 and 2012 (SoundEarth 2012b). The first phase was conducted between December 2011 and January 2012 to evaluate the potential for subsurface environmental impacts that may have resulted

from recognized environmental conditions identified in SoundEarth's Phase I Environmental Site Assessment (SoundEarth 2012a). Elevated concentrations of TCE were identified in groundwater and soil near a potential source area on the northern half of the Property. A supplemental subsurface investigation was conducted in April 2012 to further evaluate the extent of impacts identified during the initial Phase II ESA.

Elements of the field work included conducting a ground-penetrating radar (GPR) survey for abandoned USTs, conducting a camera survey of accessible sewer lines, advancing 15 direct-push soil borings and 20 hollow-stem auger (HSA) borings, completing 15 of the HSA borings as monitoring wells, collecting representative soil and groundwater samples from the borings and wells, and measuring groundwater elevations.

The results of drilling confirmed the presence of glacial till underlying the Property. Soil borings encountered minor amounts of fill and/or reworked native soils overlying very dense silty sand with variable gravel that extended to depths of approximately 27 to 45 feet bgs. The subsurface generally exhibited decreased silt content with greater depth. Wet soil conditions were noted in the borings at elevations of approximately 58 feet (northern end of the site) to 40 feet asl (southern end of the Site). No petroleum odors or sheens were noted. Photoionization detector (PID) readings from soil samples were generally less than 5 parts per million per volume, with most readings showing less than 1.0 part per million by volume. The following summarizes the findings of the 2011-2012 Phase II ESA.

- Groundwater along the south side of Building 2 is impacted by TCE at concentrations exceeding the MTCA Method A cleanup level. Soil is also impacted by TCE on the south and east sides of Building 2 at depths ranging from 20 to 35 feet.
- A concentration of lead slightly exceeding the MTCA Method A cleanup level was detected in a near-surface soil sample collected near Building 1 (the former residence/methamphetamine laboratory) and may be associated with lead paint. Another shallow soil sample collected near Building 1 contained a concentration of lead that was elevated but below the cleanup level.
- Concentrations of benzo(a)pyrene exceeding the MTCA Method A cleanup level were detected in a surface/near-surface soil sample collected in an unpaved area south of Building 4 and in a near-surface sample near Building 1. These detections could be the result of combustion material air-fall from the former coal gasification plant located nearby to the south.
- The GPR survey identified two magnetic anomalies indicating potential heating oil USTs were identified near the former residence on Parcel 2. The anomalies were approximately 4-feet square and identified at depths of approximately 4 feet (typical for heating oil tanks). The potential UST locations indicated by GPR anomalies are shown on Figure 2. No potential USTs were identified in the other areas surveyed.
- A camera survey of the sewer lines at the Property was conducted to identify degraded sewer lines that could potentially release contaminants into the Property subsurface. The sewer leading from the former chromate process room appeared intact; however, a potential hole was observed off-Property near the junction with the main beneath Burke Avenue North. An array of sewer lines shown on City of Seattle sewer cards for the solder room (former machine shop) in Building 2 appear to have been decommissioned. The wave solder area was equipped with a storage tank and pump leading to a ceiling-hung line,

apparently discharging to sewer lines on the west side of the building. The sewer discharge for Building 3 could not be traced completely to the building exterior. No line breaks were observed over the traced area. No line breaks were observed in the Building 6 sewer cleanout.

- Two large air compressors were located at the facility. One sample of compressor oil was collected from each compressor and submitted for analysis of polychlorinated biphenyls (PCBs). Neither sample contained detectable concentrations of PCBs.

4.2 2013 SUPPLEMENTAL PHASE II SOIL ASSESSMENT

To further evaluate the location and depth of TCE-impacted soil at Building 2, SoundEarth advanced seven shallow interior borings in the soldering room (borings P101 through P105) and former chromate process room (P106 and P107). The interior borings were advanced to refusal by a limited access tractor rig or hand-held probes. Four deep HSA borings were advanced outside Building 2 adjacent to the potential source areas (borings B101 through B104). Borings B101, B103, and B104 were drilled at a 30-degree angle to access areas beneath the buildings. 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. Analytical results are discussed below (SoundEarth 2013a).

- A concentration of TCE exceeding the Method A MTCA cleanup level was detected in soil collected at a depth of 9 feet in boring B104. This boring was located approximately 10 feet south of April 2012 boring B14, in which a concentration of 2.8 mg/kg TCE was detected at a depth of 20 feet. TCE was not detected in soil samples collected from boring B102 located 20 to 30 feet northeast of B14 and B104, or in B101 located 40 feet to the southeast. Therefore, the TCE-impacted soil area was likely limited to the B14/B104 area, and possibly extended beneath the northeastern portion of Building 2 (shipping area).
- Soil beneath the former chromate process room at the west end of building did not appear to be impacted by TCE. Four shallow borings (P106, P107, P07, and P08 conducted in January 2012) and deep angle boring B103 did not encounter detectable concentrations of TCE.
- Shallow soil beneath the former soldering room did not appear to be impacted by TCE. Deep angle boring B103, which was advanced beneath the northeast corner of the room, also did not encounter TCE-impacted soil. However, the western half of Building 2 is upgradient to TCE-impacted monitoring well MW04; therefore, TCE-impacted soil appeared to be present in other areas beneath the western half of Building 2.

4.3 2013 SUPPLEMENTAL SUBSURFACE SOIL ASSESSMENT, LOADING DOCK AREA

A subsurface assessment of the Loading Dock area was conducted to further assess the extent and concentrations of TCE in soil at the loading dock area (SoundEarth 2013c). This included the use of a limited-access, HSA drilling rig. Borings SB201 through SB204 were advanced inside the shipping and receiving room, and boring SB205 was advanced outside in the loading dock parking area. All borings were advanced to a depth of 20 to 22 feet. However, refusal was encountered at a depth of 8 feet in SB202 (gravelly conditions).

Concentrations of TCE slightly exceeding the MTCA Method A cleanup level were detected in soil collected at depths of 15 to 20 feet on the southern half of the shipping and receiving room (Borings

SB201 and SB204). Previous soil samples collected from this area that contained detectable TCE were in boring B14 at 20 feet (2.8 mg/kg) and boring B104 at 9 feet (0.12 mg/kg). TCE and other volatile organic compounds (VOCs) were not detected in any of the other samples that were submitted for analysis from the five borings completed during this investigation.

4.4 2013 GROUNDWATER MONITORING

Quarterly groundwater monitoring events were conducted in January, April, and July 2013. The events were conducted to evaluate the environmental quality, flow direction, and gradient of groundwater beneath the Site, and to establish conditions before conducting future remedial activities.

The monitoring events included measuring depths to groundwater in monitoring wells MW01 through MW15. Groundwater samples were typically collected from monitoring wells MW04, MW11, MW12, and MW13, located along North 34th Street; wells MW05, MW06, and MW07, located on the downgradient parcels to the south of 34th Street; and from MW09 in the Building 2 loading dock area.

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 was performed using a bladder pump or peristaltic pump and dedicated polyethylene tubing at low-flow rates. 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 YSI 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 dissolved oxygen and/or turbidity stabilized.

Samples were submitted for analysis of VOCs by EPA Method 8260c. Groundwater data for the monitoring periods is summarized in Table 6, with TCE concentrations summarized on Figure 8.

The groundwater contours for each of the quarters indicate groundwater is generally flowing to the south-southeast. Groundwater elevations typically range from 63 feet in MW10 near the northwest corner of the North Block, to 32 feet in MW05 at the southeast corner of the South Block.

For the most recent quarter (Third Quarter/July 2013) gradient flowed south-southeast with an average gradient of 0.07 feet per foot between wells MW10 and MW05. However, groundwater in well MW11, located on the south side of North 34th Street, is consistently several feet lower than expected based on position. This is likely due to the presence of a 132-inch outside-diameter sewer main located beneath North 34th Street. The sewer main is a 1908-vintage brick-lined tunnel with an invert elevation of 26 feet (approximately 50 to 54 feet below grade).

Groundwater analytical results for the all of the monitoring events in 2012 as well as the Quarterly 2013 events are summarized in Figure 8 and Table 6. Third Quarter results are summarized below:

- 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 MW04, MW07, MW09, MW11, MW12, and MW13. The highest concentration of TCE detected was 150 µg/L in MW04.

- The concentration of TCE in well MW13 (37 µg/L) was higher than what was observed during previous rounds of monitoring (TCE ranged from 1.0 to 2.5 µg/L between April 2012 and April 2013).
- Concentrations of TCE in downgradient wells MW05 and MW06 remained below the MTCA Method A cleanup level.
- All other VOCs were below their respective laboratory reporting limits and/or MTCA Method A cleanup levels in the groundwater samples collected during the Third Quarter 2013 groundwater monitoring event.

4.5 SLUG TEST

Slug testing was conducted on July 10 and 11, 2013, to estimate hydraulic conductivities of the water table aquifer encountered beneath and downgradient of the Property. A total of three wells were tested; MW09, MW12, and MW13. At least one set of both falling head and rising head slug tests were completed and analyzed in each of the wells.

The slug consisted of a 5-foot-long, 1-inch-diameter PVC pipe filled with clean sand. Water levels were monitored during the slug tests using an Instrumentation Northwest PT2X vented pressure transducer that incorporates automatic logging of water level data using Instrumentation Northwest software Aqui4Plus. The pressure transducer data logger was programmed to record readings at the following intervals during the tests:

- 0 to 2 minutes: 1 second intervals
- 2 to 5 minutes: 5 second intervals
- 5 to 15 minutes: 15 second intervals
- greater than 15 minutes: 1 minute intervals

An electronic water-level meter was also used to obtain periodic manual water-level measurements during the slug tests.

Before conducting the tests, each well was opened and allowed to equilibrate with the atmosphere for at least 30 minutes. The pressure transducer was placed at a depth of approximately 1 foot above the bottom of the well. Water levels were monitored after placing the pressure transducer in the well to confirm that the level had restabilized before inserting the slug.

The falling head test (slug in) commenced by quickly lowering the slug into the monitoring well until the slug was completely submerged (approximately 1 foot below initial water level). The falling head test continued until the measured water levels returned to within at least 95 percent of the initial water level. The rising head test (slug out) commenced by quickly removing the slug from the well, and monitoring the rising water levels until the levels returned to within at least 95 percent of the water level measured at the start of the test.

All equipment placed in the monitoring wells was decontaminated following similar procedures as used for decontaminating groundwater sampling equipment at the Site. Decontamination water was placed in the designated 55-gallon drum(s) being used on the Property for temporary storage of decontamination and well purge water from other Site field activities.

TEST ANALYSIS AND RESULTS

Following field testing, the water level data were downloaded from the pressure transducers, compiled, and processed for analysis. Data processing included selecting the time interval of interest, reducing the measurement frequency where appropriate, and converting the water levels to displacements (change versus the initial water level). Time series files of the recorded displacements for each test were then exported to AquiferWin32 version 4.05 (Environmental Simulations, Inc., 2012) for analysis.

The Bouwer and Rice (1976) analysis was applied to the resulting rising and falling head (water level) initially in all of the wells. This analytical solution assumes the following:

- Aquifer is confined or unconfined.
- Aquifer is homogeneous, and of uniform thickness.
- Aquifer has infinite areal extent.
- Aquifer potentiometric surface is initially horizontal.
- Well fully or partially penetrates the aquifer.
- Groundwater flow to the well is steady.
- A volume of water or slug is instantaneously injected into, or is discharged from, the well.

These aquifer and well assumptions were generally met for the slug testing and analysis with respect to the Site data needs and project objectives. The primary discrepancy with the listed assumptions pertains to the heterogeneous nature of the aquifer.

Estimates of hydraulic conductivity were obtained by manually best-fit matching of the data to a linear line using the AquiferWin32 software program. Effects from the drainage of the sand pack around the well casing, resulting from the incomplete submergence of the well screen were observed and corrected for as noted in Bouwer (1989). The first line is the hydraulic conductivity of the sand pack and the second straight line is the aquifer. Therefore, the second straight line is used for analysis.

Because the screened interval was not fully submerged the falling water-level tests (dropping the slug) will also create artificial results. Water will be able to flow into the vadose zone (area above the water table) instead of into the aquifer, which will also increase hydraulic conductivity. Therefore, for these analyses only the rising water level tests were analyzed.

The time for water levels to recover during slug tests ranged from about 9 to 50 minutes. Average hydraulic conductivity estimates for each of the wells range from about 0.52 to 1.11 feet per day.

Groundwater velocities were calculated for each well based off of the average hydraulic conductivity of the rising test for the given well. A porosity of 0.2 was assumed for calculations. The hydraulic gradient was calculated based off of groundwater elevations taken from April 24 to the April 26. Hydraulic gradients ranged from 0.07 to 0.12 feet/foot and groundwater velocities averaged from 0.31 to 0.66 feet per day.

4.6 2013 IN SITU CHEMICAL OXIDATION PILOT TEST

On September 28, 2013, SoundEarth conducted an in-situ chemical oxidation pilot (ISCO) test to evaluate the efficacy of ISCO using potassium permanganate as a remedial technology. The ISCO pilot

test consisted of injecting eight 150 gallon batches of potassium permanganate into four monitoring wells (MW03, MW04, MW12, and MW13). The wells are located on the north side of North 34th Street, immediately downgradient of TCE impacted areas beneath the former Avtech manufacturing building.

SoundEarth's portable injection skid was used to mix and inject a 2.2 percent potassium permanganate solution. The solution was prepared in the injection skid's 175 gallon batch tank by adding approximately 12.5 kilograms (kg) of potassium permanganate powder to 150 gallons of tap water. Mixing was accomplished by circulating with the skid's 0.5 horsepower pump.

Two 150 gallon batches of 2.2 percent potassium permanganate were injected into each selected monitoring well for a total of 300 gallons and 25 kg permanganate. The injection pressure was approximately 20 pound per square inch (psi) on each well. The injection skid was capable of injecting at up to 30 psi, but field personnel limited the injection pressure to 20 psi to minimize the injection pressures and maximize flow rate. Each batch was injected in roughly 30 minutes, resulting in an injection flow rate of 5 gallons per minute. No day-lighting or well failure was observed. No groundwater elevation changes were observed in adjacent monitoring wells.

SoundEarth is currently monitoring well MW11 on the south side of North 34th Street to observe indications of dissolved permanganate. A purple tint is typically observable at permanganate concentrations above 1 milligram per liter. Slug testing previously conducted on two wells at the site (MW09 and MW12) indicated an approximate groundwater flow rate ranging from of 0.31 to 0.66 feet per day. Based on the minimum distance from the injection wells (45 feet), visual indications of permanganate in MW11 are expected in 68 to 145 days (between December 2013 and February 2014) A check of well MW-11 on January 9, 2014 did not indicate purple tint.

The relatively low injection pressures and high flow rate indicate that large volumes of permanganate solution could be injected with relative ease.

4.7 PERMANGANATE OXIDANT DEMAND

The natural oxidant demand of the soil and groundwater at the Site are important parameters to consider when designing a full scale permanganate ISCO program. Two soil samples of saturated zone soil cuttings collected from borings B-14 and B-18 were sent to Carus Corporation for analysis of permanganate natural oxidant demand. The permanganate natural oxidant demand average of 0.5 g permanganate per kg dry soil suggests that this site would be favorable for ISCO with permanganate. A groundwater sample from MW-11 was also sent to Carus Corporation for analysis of permanganate water oxidant demand. The 48-hour permanganate water oxidant demand for the sample was 0.021 grams permanganate per liter of groundwater. Although a moderately high demand, ISCO with permanganate is still recommended. Both the permanganate natural oxidant demand and permanganate water oxidant demand results indicate that the natural oxidant demand at the site is so low as to be favorable for permanganate ISCO.

4.8 WELL ELEVATION SURVEY

On May 3, 2012, Triad Associates surveyed the horizontal top of casing and monument elevations for MW01, MW02, and MW04 through MW15. MW03 was not assessable for survey because of a parked vehicle. Well MW03 was surveyed previously by SoundEarth on January 16, 2012. Elevations were determined for the purposes of calculating groundwater flow gradient and direction. Elevations were

surveyed by Triad relative to the NAVD88 using City of Seattle benchmarks #2609CC 58A (elevation 60.344 feet) and #2609CC 55A (elevation 32.066 feet).

4.9 DATA VALIDATON

Upon receipt of the final laboratory reports, SoundEarth conducted a quality assurance/quality control (QA/QC) review of all data sets. The following QA/QC criteria were reviewed:

- The data package for completeness.
- Sample chain-of-custody forms, including a comparison of the requested analyses against laboratory reported information, signatures, sample condition upon receipt by the laboratory, and sample preservation.
- Holding times for each analysis.
- Laboratory QC including recoveries for surrogate, matrix spike, matrix spike duplicates, laboratory control standards, and relative percent differences for duplicate sample analysis and matrix spike/matrix spike duplicates and laboratory control standards/laboratory control duplicates.
- Blank results for possible field or laboratory contamination.

The results of QA/QC review indicated that the following criteria were acceptable:

- All data packages/laboratory reports were complete.
- No issues with the chain of custody forms and holding times were identified.
- No analytes were detected in any of the method blanks.

4.10 SUMMARY OF DATA GAPS

The borings and monitoring wells completed as part of this remedial investigation represent SoundEarth's reasonable efforts to evaluate the Site. The eastern extent of the TCE plume was not bounded along Burke Avenue. Soils deeper than 6 feet have not be sampled in the former machine shop/soldering room due to overhead drilling limitations. These data gaps will be addressed following building demolition and before the cleanup action. No other data gaps were identified for this remedial investigation.

5.0 CONCEPTUAL SITE MODEL

This section provides a conceptual understanding of the Site derived primarily from the results of the historical research and subsurface investigations performed at the Site. Included is a discussion of the confirmed and suspected source areas, the chemicals and media of concern, the fate and transport characteristics of the release of hazardous substances, the potential exposure pathways, and the definition of the Site. The CSM serves as the basis for developing technically feasible cleanup alternatives and selecting a final cleanup action. The CSM is considered to be dynamic and may be refined throughout the cleanup action process as additional information becomes available.

This section discusses the components of the CSM developed for the Site based on the completion of multiple phases of investigation conducted by SoundEarth and others.

5.1 CONFIRMED AND SUSPECTED SOURCE AREA

The source area is the location of a release of the COCs that have affected soil and groundwater quality at the Site. Subsurface investigations conducted at the Site in 2012 and 2013 defined the nature and extent of the COCs in the affected media. The results from subsurface investigations at the Site have identified one primary source area for COCs. The source area is located proximate to the northeast corner of Building 2 and is defined by elevated concentrations of TCE in the soil and groundwater proximate to the Shipping and Receiving Room and a TCE groundwater plume that extends from the monitoring well MW04 to approximately 230 feet downgradient between MW07 and MW05 (Figure 8). The vertical lateral extent of subsurface contamination is presented in Figure 4.

5.2 AFFECTED ENVIRONMENTAL MEDIA

Based on results from previous investigations, concentrations of TCE have been confirmed in soil and groundwater at the Site at concentrations that exceed the applicable MTCA Method A CULs. A discussion of the affected media is presented below.

5.2.1 Soil

Subsurface investigations conducted at the Site identified the nature and extent of COCs in soil at the Site. Analytical results for soil samples collected during these investigations eliminated petroleum hydrocarbons, metals, PCBs, and chlorinated solvents, with the exception of TCE (and one positive PCE result), as potential chemical of concern because their concentrations in soil were below applicable CULs. Results from the investigations did identify concentrations of TCE in subsurface soil with concentrations above CUL near the loading dock and shipping and receiving room at Building 2 (Figure 7). TCE contaminated soil ranged in depth from 9 to 20 feet bgs (Figure 4). TCE detected in saturated soil at trace levels in B06 (0.046 mg/kg) and B18 (0.032 mg/kg) was likely due to TCE concentrations detected in groundwater collected from wells installed in those borings (MW04 and MW13). TCE contaminated soil appears to be confined to the vadose zone, which is composed of gradations of silt and silty fine sand. Soil samples collected below 20 feet bgs in the vadose zone did not contain concentrations of TCE above the CUL.

5.2.2 Groundwater

Based on the hydraulic conductivity obtained from slug testing conducted at the Site in 2013, TCE contaminated groundwater occurs within a dense fine to medium sand with some silt. The groundwater has an average seepage velocity of 0.5 feet per day, primarily due to the relatively steep gradients at the Site. The average gradient the Site, based on groundwater elevations from July 2013 is 0.07 feet per foot. Groundwater contours from the July 2013 sampling event indicate the groundwater is generally flowing to south-southeast. The depth of groundwater at the Site in July 2013 ranged from 22.63 (MW10) to 43.90 (MW11) feet below the top of the monitoring well casings.

The extent and concentrations of TCE in groundwater at the Site were delineated during the July 2013 groundwater monitoring and sampling event. One TCE groundwater plume that originates at or near the shipping and receiving room/loading dock area and extends approximately 230 feet downgradient has been defined at the Site (Figure 8).

5.2.3 Soil Vapor and Indoor Air

Indoor air has been retained as a medium of potential concern based on the concentrations of TCE in soil and groundwater beneath the Site. To date, no soil gas or indoor air sampling has been collected to determine if there are impacts to indoor air quality at the Site.

Groundwater samples collected in April and July 2013 indicate that 9 out of 15 monitoring wells had concentrations of TCE exceeding the groundwater screening level protective of indoor air as defined on Table B-1 in the draft G*uidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remediation* prepared by Ecology, dated October 2009 and updated in Ecology's cleanup levels and risk calculations (CLARC) database in September 2012 (Figure 8). The groundwater screening level protective of indoor air of 1.5 µg/L was calculated for TCE based on the MTCA Level B residential air screening levels and using Equation 1 from Ecology's guidance document (Ecology 2009).

The future redevelopment of the Property will result in a lot-line to lot-line excavation of both the North and South Block to depths of 10 to 20 feet bgs and in situ treatment of residual groundwater contamination. The future remediation of the affected soil and groundwater beneath the Property would be expected to result in the elimination of soil vapor as a future medium of concern. However, there is one parcel with a restaurant located on it, that is affected by the site-wide groundwater plume and is not included in the redevelopment plans for the Property.

In order to evaluate the off-Property vapor intrusion risk to indoor air from groundwater contamination the Johnson and Ettinger model was utilized to estimate the concentration of TCE in indoor air (Appendix D). The model utilized Site specific parameters and the groundwater concentrations detected in MW11, which is located along the northern restaurant property boundary, and MW12, which is located hydraulically upgradient to the restaurant, to estimate indoor air concentrations. Based on the highest detected concentration of TCE groundwater in MW11 and MW12, 78 µg/L and 14 µg/L, respectively, an indoor air concentration of 0.166 and 0.031 micrograms per cubic meter (µg/m^3), respectively, was estimated (Appendix D). The estimated indoor air concentrations are below the MTCA Method B indoor air screening level of 0.37 µg/L. The groundwater concentrations in MW11 and MW12 would be expected to decrease once the soil source is excavated and implementation of the in situ groundwater treatment.

5.2.4 Surface Water

Lake Union is the nearest surface water body to the Site, located approximately 650 feet southeast from the Site. To date empirical evidence has not been collected to determine if there are potential impacts to surface water from the Site. However, based a trend analysis conducted on downgradient monitoring wells MW05, MW06, and MW15, the TCE plume is stable and poses no risk to Lake Union at this time.

5.3 CHEMICALS OF CONCERN

Based on the findings from the subsurface investigations, the primary COC for the Site is TCE for all the media of concern. Abiotic and biotic break down products of TCE have not been detected in soil and groundwater at concentrations above laboratory reporting limits.

5.4 CONTAMINANT FATE AND TRANSPORT

This section discusses the fate and transport characteristics of TCE in soil, groundwater, and ambient air that are relevant to the evaluation of potential remedial technologies and exposure pathways.

5.4.1 Transport Mechanisms Affecting the Distribution of TCE in the Subsurface

The lateral, crossgradient, and upgradient distribution of TCE in the vadose zone likely is a result of vapor-phase transport via diffusion and advection from source areas and transport over time. In addition to vapor-phase transport, TCE in the subsurface can be transported in the dissolved-phase via groundwater or other water that comes into contact with the contaminated soil. TCE in groundwater generally follows horizontal and vertical groundwater gradients, assuming some degree of seasonal fluctuation in groundwater flow direction. Groundwater beneath the Site generally flows south southeast (Figure 6). Concentrations of TCE in groundwater generally decrease with increasing distance from the source area (Figure 8). The distribution of TCE in groundwater is consistent with the observed groundwater flow direction and subsequent advective transport, long-term diffusion, and dispersion.

5.4.2 Environmental Fate of TCE in the Subsurface

The primary COC at the Site is TCE. Once TCE enters the subsurface, abiotic attenuation processes such as hydrolysis, direct mineralization, and reductive dehalogenation may affect the PCE in soil and groundwater, resulting in a natural reduction or breakdown into nontoxic components such as chloride and carbon dioxide. Biotic attenuation processes such as reductive dechlorination and cometabolic degradation also may affect the reduction of TCE in soil and groundwater under favorable subsurface conditions. If reductive biodegradation of TCE is occurring, the first indication is the presence of degradation compounds that include cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride. The soil and groundwater analytical data indicate that concentrations of TCE degradation products have not been detected in the vadose zone or in groundwater beneath the Site, suggesting that neither abotic nor biotic attenuation processes are occurring at the Site.

TCE is a volatile compound that will volatilize into a gaseous state from soil and/or groundwater. In areas of the Site where an impermeable cover is not present, some TCE in vapor may escape to the atmosphere. Once in the atmosphere, it will rapidly attenuate via photo-degradation.

5.5 NATURE AND EXTENT OF CONTAMINATION AT THE SITE

The nature and extent of TCE in soil and groundwater was accessed through a series of subsurface investigations conducted at the Site in 2012 and 2013. The nature and extent of TCE in the soil and groundwater at the Site are discussed below.

5.5.1 Soil

Soil containing TCE is has been detected at concentrations above the CUL beneath the shipping and receiving area at a depth of 9 to 20 feet bgs (Figure 7). Soil samples collected below 20 feet bgs did not contain concentrations of TCE above the CUL.

TCE contaminated soil appears to be confined to the vadose zone, which is composed of gradations of silt and silty fine sand. Degradation products of TCE are not present, indicating that intrinsic abiotic and/or biotic degradation of the TCE is not occurring in the soil. The

absence to TCE degradation products also suggests that TCE is persistent in the soil and will act as a secondary source for TCE in the groundwater.

5.5.2 Groundwater

One TCE plume has been identified at the Site. The plume originates at the shipping and receiving area of Building 2 and extends approximately 230 feet downgradient (Figure 8). Concentrations of TCE at the downgradient edge of the plumes are below the CUL and/or laboratory reporting limits.

The absence of TCE degradation products in the groundwater suggests that the geochemistry of groundwater is not sufficiently anaerobic to degrade TCE. Based on field parameters collected during the July 2013 groundwater sampling event, the groundwater beneath the Site is aerobic with dissolved oxygen concentrations greater than 1 milligrams per liter and oxidation reduction potentials greater than 100 millivolts.

A trend analysis performed using TCE analytical results for groundwater samples collected at the Site between April 2012 to July 2013 indicates that concentrations of TCE at the downgradient edge of the plume are currently stable (monitoring wells MW05 and MW06). Concentrations of TCE in the groundwater near Source Area 1 (monitoring well MW04) are also stable. Analysis of TCE results from groundwater monitoring wells MW07 and MW11, located in the center of the Source Area 1 plume, indicates that the plume is stable at these wells; however, the slope of the trend line and correlation coefficient suggests the plume may be expanding. An analysis of TCE results from groundwater monitoring well MW03, located near Source Area 2, indicates the TCE plume is stable. The stability of the plume is supported by the fact that TCE has not been detected above laboratory reporting limits in downgradient monitoring well MW15 (Figure 8).

5.5.3 Soil Vapor and Indoor Air

The nature and extent of soil vapor and the potential for vapor intrusion in indoor air has not been evaluated at the Site. A preliminary assessment indicates that 9 out of 15 monitoring wells beneath the Site exceed the TCE groundwater screening level protective of indoor air (Ecology 2009). However, the future remediation of the affected soil and groundwater beneath the Property would be expected to result in the elimination of soil vapor as a future medium of concern. Section 5.6.3 provides a discussion and evaluation of the soil vapor to an indoor air exposure pathway.

5.5.4 Surface Water

The nature and extent of surface water impact downgradient of the Site has not been evaluated. However, based a trend analysis conducted on downgradient monitoring wells MW05 and MW06, TCE plume is stable and poses no risk to Lake Union at this time.

5.6 PRELIMINARY EXPOSURE PATHWAYS

There are two general types of receptors that are potentially at risk from exposure associated with the presence of TCE in soil and groundwater at the Site. The receptors include terrestrial wildlife (birds and burrowing animals) and humans (commercial, utility, construction, and environmental workers). Because the Site qualifies for a Terrestrial Ecological Evaluation (TEE) exclusion based on WAC 173-340-7491 and discussed further in Section 5.7, mitigating the potential human health risk, if any, will be the primary objective of any cleanup action implemented. This section presents the evaluation and conclusions pertaining to the exposure pathways at the Site. The goal of this section is to identify

potential exposure scenarios that will assist in the evaluation of potential feasible cleanup alternatives that are protective of terrestrial and human health. The CSM highlighting the source areas, potential pathways, and potential receptors for each medium of concern is presented on Figure 9 and discussed below.

5.6.1 Soil

Soil with concentrations of TCE exceeding the CUL present a potential risk to human receptors. The potential release mechanism for soil at the Site includes soil to groundwater by leaching, airborne dust generated redevelopment of the Site, and volatilized TCE in the soil. The potential exposure pathways for soil that could be complete are as follows:

- **Dermal Contact and Ingestion (Direct Contact) of Contaminated Soil.** The release mechanisms for this exposure pathway includes soil and leaching of contaminants from soil to groundwater. This exposure pathway may be complete for environmental field personnel and construction and utility workers who may come in contact with contaminated soil and groundwater during excavation and dewatering operations conducted in conjunction with redevelopment of the Site. Groundwater at the Site is not a likely source for drinking water. Drinking water at the Site and the vicinity is supplied by the City of Seattle.
- **Inhalation of Airborne Soil.** The release mechanism for this exposure pathway is the inhalation of airborne soil particles during excavation and construction activities in conjunction with redevelopment of the Site. This exposure pathway could be complete for environmental field personnel and construction and utility workers during redevelopment.
- **Inhalation of Vapors.** The release mechanism for this exposure pathway is volatilization. This exposure pathway may be complete for environmental, construction, and utility workers during redevelopment of the Site. The redevelopment of the Property and the future remediation of the affected soil and groundwater beneath the Property will eliminate this pathway for future residence and commercial workers.

5.6.2 Groundwater

Contaminated groundwater at the Site presents a potential risk to workers during redevelopment of Site. Groundwater beneath the Site is not a potential source for drinking water, drinking water is supplied to the Site by the City of Seattle. The potential release mechanism for groundwater is vapor migrating from groundwater to the indoor ambient air. The potential exposure pathways for groundwater and the potential receptors include the following:

- **Direct Contact and Ingestion of Contaminated Groundwater.** This exposure pathway may be complete for environmental field personnel and construction and utility workers during redevelopment of the Site. This pathway is not complete for current commercial workers at the Site because drinking water is supplied by the City of Seattle. Future exposure to contaminated groundwater by commercial workers and residents is unlikely because institutional and engineering controls will eliminate any potential exposures to contaminated groundwater. Therefore, the

direct contact pathway will be incomplete for residents and commercial workers at the completion of the redevelopment.

- **Inhalation of Vapors.** The release mechanism for this exposure pathway is volatilization of TCE in the groundwater. This exposure pathway could be complete for environmental, construction, and utility workers during redevelopment of the Site. The redevelopment of the Property and the future remediation of the affected soil and groundwater beneath the Property will eliminate this pathway for future commercial workers and residents.

5.6.3 Vapor Pathway

The air-filled pore space between soil grains in the unsaturated zone or partially saturated zone is referred to as soil gas or soil vapor. Soil vapor can become contaminated from volatilization of a TCE source, specifically from TCE as a nonaqueous phase liquid but also from TCE adsorbed to soil mineral surfaces and, to a lesser degree, dissolved in groundwater. Ecology guidance for evaluating soil vapor intrusion risks into structures provides generic chemical-specific screening levels for both groundwater and soil vapor that are protective of human health (Ecology 2009). The planned future land use at this Property involves excavating the soil contamination exceeding applicable cleanup levels and active groundwater treatment for dissolved phase TCE concentrations, which will remove the source of potential soil vapors.

The presence or absence of TCE vapor in indoor air in structures throughout the Site has not been evaluated. A preliminary exposure assessment for the Property and off-Property receptors was completed using the Johnson and Ettinger model based on the current groundwater concentrations (Appendix D). The model input was based on Site specific parameters from well boring logs and the highest detected historical TCE groundwater concentration to evaluate a worst case scenario (Appendix D). Monitoring well MW04 was used for the on Property evaluation and monitoring wells MW11 and MW12 were used for the off-Property evaluation. The on Property evaluation from MW04 estimated the indoor air concentration of TCE to be 0.502 µg/m^3, which is 1.3 times the indoor air screening level of 0.37 µg/m^3. However, the future redevelopment of the Property and building design features, which are discussed in more detail below, will eliminate soil vapor as a potential medium of concern. The off-Property evaluation from MW11 and MW12 estimated an indoor air concentration of TCE to be 0.166 and 0.031 µg/m^3, respectively. The MTCA Method B screening level for a residential exposure is considered conservative since the receptors for both on- and off-Property are commercial workers and the exposure duration will be significantly less than a residential exposure.

The MTCA default exposure factors assume a residential exposure, which is a conservative model because commercial workers and business patrons are expected to have a significantly less exposure duration.

Redevelopment of the Site will result in the mass excavation of TCE to an approximate elevation of 60 feet mean sea level, which will remove most of the TCE mass in the soil (Figures 3, 4, 5 and 11). Once soil removal is completed, groundwater treatment will commence. Source removal via excavation and the treatment of dissolved phase groundwater plume will significantly reduce TCE beneath the Site over the next 1 to 3 years. The anticipated remedial time frame for the selected cleanup action alternative is 3 years, with most of the groundwater plume being treated before the building is occupied.

Building design features, such as, the construction of one to two levels of subgrade parking and the operation of an active ventilation system in the parking garage, provide some engineering control should any contaminated soil gas infiltrate the 4-inch concrete floor slab. The exchange of air in the parking garage is intended to mitigate carbon monoxide and is helpful in reducing any potential vapors in the parking garage. Vapor barriers will be installed in elevator pits and beneath storage areas. Based on the planned remedial action and redevelopment of the Site, the vapor intrusion pathway is considered incomplete.

5.6.4 Surface Water

The nearest surface water body to the Site is Lake Union. Potential receptors include recreational users of the lake and aquatic organisms. Based on the analysis of TCE concentrations in downgradient monitoring wells, the TCE plume originating from the source area is not expanding at the downgradient edge of the plume (MW05, MW06, and MW15). This suggests that groundwater containing TCE, and originating at the Site, is unlikely to discharge to Lake Union. Therefore, this pathway is considered incomplete for recreational users of Lake Union and aquatic organisms.

5.7 TERRESTRIAL ECOLOGICAL EVALUATION

A TEE is required by WAC 173-340-7940 at locations where a release of a hazardous substance to soil has occurred. The TEE is intended to assess potential risk to plants and animals that live entirely or primarily on affected land. A simplified TEE was required under MTCA to assess the potential ecological risks posed by contamination at the Site, and to evaluate whether a more detailed investigation of potential ecological risk would be required. SoundEarth conducted a simplified TEE in accordance with Table 749-1 of WAC 173-340-900 and the protocols established in WAC 173-340-7492 to assess the potential ecologic risk associated with the presence of COCs at the Site.

The Site qualifies for a TEE exclusion based on WAC 173-340-7491. The results of ranking for the simplified TEE under Table 749-1 of WAC yields a score of 12, which qualifies the Site for the TEE exclusion per WAC 173-340-7492(2)(a)(ii) on the basis that land use at the Site and surrounding area makes substantial wildlife exposure unlikely (Appendix E). The TEE considers Site area, Site land use, Site habitat quality, likelihood that the Site will attract wildlife, and COCs occurring in Site soil. No further consideration of ecological impacts is required under MTCA.

6.0 TECHNICAL ELEMENTS

The RAOs developed for the Site were used to define the technical elements for the screening evaluation and to select remedial alternatives as part of the feasibility study conducted for the Site and discussed in Section 7.0. The technical elements include ARARs, COCs, media of concern, and cleanup standards.

6.1 REMEDIAL ACTION OBJECTIVES

RAOs are statements of the goals that a remedial alternative should achieve in order to be retained for further consideration as part of the feasibility study. The purpose of establishing RAOs for a site is to provide remedial alternatives that protect human health and the environment (WAC 173-340-350). In addition, RAOs are designated to:

- Implement administrative principles for cleanup (WAC 173-340-130).

- Meet the requirements, procedures, and expectations for conducting and feasibility study and developing cleanup action alternatives as discussed in WAC 173-340-350 through 173-340-370.
- Develop CULs (WAC 173-340-700 through 173-340-760) and remedial alternatives that are protective of human health and the environment.

In particular, RAOs must address the following threshold requirements from WAC 173-340:

- Protect human health and the environment.
- Comply with CULs.
- Comply with applicable state and federal laws.
- Provide for compliance monitoring.

There are two RAOs for this Site. The first RAO includes bringing the Property into compliance with the applicable soil and groundwater cleanup criteria for each of the COCs. The final RAO is to bring those portions of the Site into compliance with soil and groundwater cleanup criteria for each of the COCs and obtain a Property-specific No Further Action Determination.

6.2 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Under WAC 173-340-350 and 173-340-710, applicable requirements include regulatory cleanup standards, standards of control, and other environmental requirements, criteria, or limitations established under state or federal law that specifically address a contaminant, remedial action, location, or other circumstances at a site.

MTCA defines relevant and appropriate requirements as:

> Those cleanup action standards, standards of control, and other human health and environmental requirements, criteria or limitations established under state and federal law that, while not legally applicable to the hazardous substance, cleanup action, location, or other circumstances at a site, the department determines address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site. The criteria specified in WAC 173-340-710(3) shall be used to determine if a requirement is relevant and appropriate.

Remedial actions conducted under MTCA must comply with the substantive requirements of the ARARs but are exempt from their procedural requirements (WAC 173-340-710[9]). Specifically, this exemption applies to state and local permitting requirements under the Washington State Water Pollution Control Act, Solid Waste Management Act, Hazardous Waste Management Act, Clean Air Act, State Fisheries Code, and Shoreline Management Act. ARARs were screened to assess their applicability to the Site. The following table summarizes the preliminary ARARs for the Site.

Preliminary ARARs for the Site

Preliminary ARAR	Citation or Source
MTCA	Chapter 70.105 of the Revised Code of Washington (RCW)

Preliminary ARAR	Citation or Source
MTCA Cleanup Regulation	WAC 173-340
Ecology, Toxics Cleanup Program – Guidance To Be Considered	*Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*, Review DRAFT, October 2009, Publication No. 09-09-047
State Environmental Policy Act	RCW 43.21C
Washington State Shoreline Management Act	RCW 90.58; WAC 173-18, 173-22, and 173-27
The Clean Water Act	33 United States Code [USC] 1251 et seq.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980	42 USC 9601 et seq. and Part 300 of Title 40 of the Code of Federal Regulations [40 CFR 300]
The Fish and Wildlife Coordination Act	16 USC 661-667e; the Act of March 10, 1934; Ch. 55; 48 Stat. 401
Endangered Species Act	16 USC 1531 et seq.; 50 CFR 17, 225, and 402
Native American Graves Protection and Repatriation Act	25 USC 3001 through 3013; 43 CFR 10 and Washington's Indian Graves and Records Law (RCW 27.44)
Archaeological Resources Protection Act	16 USC 470et seq.; 43 CFR 7
Washington Dangerous Waste Regulations	WAC 173-303
Solid Waste Management Act	RCW 70.95; WAC 173-304 and 173-351
Occupational Safety and Health Administration Regulations	29 CFR Parts 1910, 1926
Washington Department of Labor and Industries Regulations	WAC 296
Water Quality Standards for Surface Waters of the State of Washington	RCW 90.48 and 90.54; WAC 173-201A
Water Quality Standards for Ground Water	WAC 173-200
Department of Transportation Hazardous Materials Regulations	40 CFR Parts 100 through 185
Washington State Water Well Construction Act	RCW 18.104; WAC 173-160
City of Seattle regulations, codes, and standards	All applicable or relevant and appropriate regulations, codes, and standards.
King County regulations, codes, and standards	All applicable or relevant and appropriate regulations, codes, and standards.

6.3 CHEMICALS AND MEDIA OF CONCERN

The COCs for the Site are those compounds that were detected at concentrations exceeding their respective CULs. The COCs and the media where the COCs were detected are listed below:

- TCE, PCE, lead, and PAHs in soil
- TCE in groundwater

6.4 CLEANUP STANDARDS

The selected cleanup alternative must comply with the MTCA cleanup regulations specified in WAC 173-340 and with applicable state and federal laws. The CULs selected for those portions of the Site located within the Property boundary and for the greater Site are consistent with the RAOs, which state that the remedial objective is to reduce concentrations of COCs in soil and groundwater beneath the Site to below their applicable groundwater CULs. In addition to mitigating risks to human health and the environment, achieving the RAOs will allow Ecology to issue a Site-wide No Further Action determination. The associated media-specific CULs for the identified COCs are summarized in the following sections.

6.4.1 Cleanup Levels

The CULs for the media and COCs are tabulated below, including the source of the cleanup standard. The proposed CUL for impacted soil beneath the Property is the MTCA Method A Standard Formula Value for COCs. The proposed cleanup levels for groundwater at the Site are the MTCA Method A CULs for Unrestricted Land Use for COCs that have a Method A CUL.

Proposed Cleanup Levels for Soil

COC	Cleanup Level (mg/kg)	Source
TCE	0.03	MTCA Method A, Unrestricted; WAC 173-340-740(2)(b)(i)
PCE	0.05	
Lead	250	
PAHs (benzo(a)pyrene)	0.1	

COC = chemicals of concern
mg/kg = milligrams per kilogram
MTCA Washington State Model Toxics Control Act
PAH = polycyclitic aromatic hydrocarbon
PCE = tetrachloroethene (perchloroethene)
TCE = trichloroethene (trichloroethylene)
WAC = Washington Administrative Code

Proposed Cleanup Levels for Groundwater

COC	Cleanup Level (µg/L)	Source
TCE	5	MTCA Method A, Table Value; WAC 173-340-720(3)(b)(i)

µg/L = micrograms per liter
COC = chemicals of concern
MTCA Washington State Model Toxics Control Act
TCE = trichloroethene (trichloroethylene)
WAC = Washington Administrative Code

6.4.2 Points of Compliance

The point of compliance is the location where the enforcement limits that are set in accordance with WAC 173-200-050 will be measured and cannot be exceeded (WAC 173-200-060). Once

the CULs have been attained at the defined points of compliance, the impacts present beneath the Site will no longer be considered a threat to human health or the environment.

6.4.2.1 Point of Compliance for Soil

In accordance with WAC 173-340-740 (6) (b-d), the point of compliance for direct contact exposure is throughout the Property from the ground surface to 15 feet bgs, which is a reasonable estimate of the depth of soil that could be excavated and distributed at the soil surface as a result of development activities. All soil containing concentrations of COCs above the MTCA Method A CULs will be over-excavated and removed from the Property.

6.4.2.2 Point of Compliance for Groundwater

In accordance with WAC 173-340-720(8)(a)(b), the point of compliance for groundwater is defined as the uppermost level of the saturated zone extending vertically to the lowest depth that potentially could be impacted by the COCs throughout the Site.

7.0 FEASIBILITY STUDY

The purpose of this RI/FS Report is to develop and evaluate cleanup action alternatives to facilitate selection of a final cleanup action at the Site in accordance with WAC 173-340-350(8). A feasibility study includes the development, screening, and evaluation process for numerous remedial alternatives. Because Site-specific conditions preclude the implementation of many potential remedial components, a more focused evaluation was prepared including only those alternatives that are implementable and capable of achieving the remediation objectives.

The feasibility study is used to screen cleanup alternatives and eliminate those that are not technically possible, those with costs that are disproportionate under WAC 173-340-360(3)(e), or those that will substantially affect the future planned redevelopment at the Property. Based on the screening, the feasibility study presented below evaluates the most practicable remedial alternative to recommend a cleanup action for the Site in conformance with WAC 173-340-360 through 173-340-390.

7.1 IDENTIFICATION AND EVALUATION OF TECHNOLOGIES

Remedial components (technologies) were evaluated with respect to the degree to which they comply with the cleanup requirements set forth in MTCA. According to MTCA, a cleanup alternative must satisfy all of the following threshold criteria as specified in WAC 173-340-360(2):

- Protect human health and the environment.
- Comply with cleanup standards.
- Comply with applicable state and federal laws.
- Provide for compliance monitoring.

These criteria represent the minimum standards for an acceptable cleanup action.

WAC 173 340-360 (2)(b) also requires the cleanup action alternative to:

- Use permanent solutions to the maximum extent practicable.
- Provide for a reasonable restoration time frame.

- Consider public concerns on the proposed cleanup action alternative.

Using the above criteria, several remedial technologies were evaluated and screened for effectiveness, implementability, and relative cost to produce a short list for further inclusion in the development of alternatives. Table 7 summarizes the remedial component screening process. The remedial components that passed the screening process include the following:

- **Monitored Natural Attenuation.** Monitored natural attenuation refers to the methods used to evaluate whether natural attenuation processes are effectively remediating a contaminant plume, and if so, at what rate. Contaminants released to the environment in concentrations that pose risks to human health or the environment are subject to natural degradation processes such as volatilization, diffusion, biotic and abiotic reactions, and dilution. These naturally occurring attenuation processes are distinguished from an engineered remedy employed to increase the rate of remediation above the rate observed through these "natural" processes. In many cases, natural attenuation is the most cost effective means for achieving cleanup levels.

  Monitored natural attenuation is retained as a complimentary remedial component to other engineered remedial components rather than as a stand-alone or sole remedial component to be consistent with the expectations for natural attenuation stipulated under MTCA. Under MTCA, monitored natural attenuation can be considered an active remedial measure if Site conditions conform to the expectations listed in WAC 173-340-370(7), as follows:

  - Source control (including removal and/or treatment of hazardous substances) has been conducted to the maximum extent practicable.
  - Leaving contaminants in place during the restoration time frame does not pose an unacceptable threat to human health or the environment.
  - There is evidence that natural biodegradation or chemical degradation is occurring and will continue to occur at a reasonable rate at the Site.
  - Appropriate monitoring requirements are conducted to ensure that the natural attenuation process is taking place and that human health and the environment are protected.

- **Passive Vapor Barrier.** Passive vapor barriers are materials that exhibit very low gas flow permeability and that can prevent the intrusion of vapor-phase VOCs into the interior of the building. This technology was retained for use with groundwater remedies that will likely reduce groundwater concentrations below the vapor intrusion screening level before building occupancy.
- **Permeable Reactive Barrier.** A permeable reactive barrier is an in situ engineering control designed to passively treat contaminated groundwater. Groundwater flows through a permeable reactive barrier wall containing a mixture of zero-valent iron and sand and gravel. The zero-valent facilitates the reduction (dechlorination) of chlorinated compounds dissolved in the groundwater. This technology was retained for further evaluation for the passive treatment of the dissolved-phase plume.
- **Pump and Treat.** Pump and treat is a proven technology for the remediation of dissolved-phase COCs. A pump and treat remediation system includes groundwater extraction wells with submersible pumps and an aboveground treatment technology such as air-stripping or

granular activated carbon. The groundwater is extracted, treated, and discharged to the sanitary sewer.

- **In Situ Chemical Oxidation with Permanganate.** Permanganate has proven to be an effective chemical oxidant for the treatment of chlorinated solvents (PCE, TCE, cis-1,2-DCE, and vinyl chloride) in soil and groundwater. A solution of permanganate as a salt of either potassium or sodium is injected into the groundwater to chemically oxidize these target COCs.
- **Excavation and Land Disposal of Contaminated Soil (Source Removal).** This method involves over-excavation of contaminated soil to remove a significant portion of the ongoing source of COCs to the groundwater (Figures 10 and 11). Land disposal is the act of removing contaminated soil from an uncontrolled condition and placing it in a controlled condition where it will produce fewer adverse environmental impacts. A controlled condition generally refers to engineered landfills that feature low permeability liners, witness systems, and leachate collection systems to prevent the disposed soil from leaching into the environment and mitigate future liability associated with the contamination. Source excavation is common to all the remedial alternatives.

7.2 EVALUATION OF CLEANUP ALTERNATIVES

This section presents the criteria used to evaluate the potentially feasible cleanup alternatives with respect to the RAOs established for the Site. Remedial components were identified in accordance with the requirements set forth in MTCA under WAC 173-340-350(8)(b) and the focused screening of potential remedial components using the requirements and procedures for selecting cleanup actions as set forth in MTCA under WAC 173-340-360(2)(a)(b). The criteria used to evaluate and compare applicable cleanup alternatives were derived from WAC 173-340-360(3)(f) and include the following:

- **Protectiveness.** The overall protectiveness of human health and the environment, including the degree to which existing risks are reduced, the time required to reduce risk at the facility and attain cleanup standards, the risks resulting from implementing the alternative, and improvement of overall environmental quality of the Site.
- **Permanence.** The degree to which the alternative permanently reduces the toxicity, mobility, or volume of hazardous substances, including the adequacy of the alternative in destroying the hazardous substances, the reduction or elimination of hazardous substance releases and the sources of releases, the degree of irreversibility of the waste treatment process, and the characteristics and quantity of treatment residuals generated during the treatment process.
- **Effectiveness over the long term.** The degree of certainty that the alternative will be successful, the reliability of the alternative during the period of time over which hazardous substances are expected to remain on the Site, and the magnitude of residual risk associated with the contaminated soil and/or groundwater components. The following types of cleanup action components, presented in descending order, may be used as a guide when assessing the relative degree of long-term effectiveness of the chosen alternative: reuse or recycling; destruction or detoxification; immobilization or solidification; on-Site or off-Site disposal in an engineered, lined, and monitored facility; on-Site isolation or containment with attendant engineering controls; and institutional controls and monitoring.

- **Management of short-term risks.** The risk to human health and the environment associated with the alternative during its construction and implementation, and the effectiveness of measures that will be taken to manage such risks.
- **Technical and administrative implementability.** The ability to implement the alternative; includes consideration of the technical feasibility of the alternative, administrative and regulatory requirements, permitting, scheduling, size, complexity, monitoring requirements, access for construction operations and monitoring, and integration with the future development plans for the Property.
- **Consideration of public concerns.** Consideration of public concerns is mandated under the MTCA cleanup regulation for an Ecology-led or potentially liable person-led cleanup action under an Agreed Order or Consent Decree. This is typically implemented by Ecology through a mandatory public review and comment period on a proposed cleanup action plan. Because this public review and comment process is not implemented by the private party responsible for the cleanup under the VCP and because this RI/FS Report was prepared within the purview of the VCP, public concerns regarding cleanup actions for this Site were not evaluated in this document.

7.3 FOCUSED EVALUATION OF CLEANUP ALTERNATIVES

The focused evaluation of cleanup alternatives considered the practicable remedial components confirmed to be effective at treating COCs in the affected media of concern. SoundEarth also considered whether Site-specific constraints would preclude application of a remediation technology due to the creation of a greater risk to human health and/or the environment, or that such constraints could result in the remedial technology being technically or administratively infeasible to implement. A detailed description of the three cleanup alternatives that were retained for additional consideration is provided below.

Three cleanup alternatives have been developed and are comprised of various combinations of the remedial components retained from the component screening step. Common to all alternatives is the over-excavation and off-Site land disposal of source-zone soil exceeding the CULs. The alternatives differ only in the type of treatment employed to remediate groundwater beneath the ROW and the Property.

The three alternatives, which are described in more detail in the following subsections, include the following:

- Cleanup Action Alternative 1, Excavation of Soil with In Situ Chemical Oxidation of Groundwater by Permanganate
- Cleanup Action Alternative 2, Excavation of Soil with Groundwater Treatment by a Zero Valent Iron Permeable Reactive Barrier
- Cleanup Action Alternative 3, Excavation of Soil with a Groundwater Pump and Treat System

7.3.1 Common Components and Basic Assumptions

Due to the nature of the redevelopment plan, the following elements are common among all three cleanup alternatives.

Redevelopment Excavation. Redevelopment of the Site will require lot-line to lot-line excavation of both the North Block and South Block to depths of approximately 10 to 20 feet

bgs, which will remove a large portion of TCE mass in the soil. Approximately 1,300 tons of TCE-impacted soil is estimated to be removed as part of the redevelopment excavation.

Demolition. Because the remediation activities will be conducted as part of a larger redevelopment project, the alternatives discussed below assume that all buildings on the Property will be demolished before implementing the cleanup action. The costs associated with the demolition are not included in the cost estimates provided in this RI/FS Report.

Remedial Excavation. The costs for each alternative include the removal and disposal of all soil within the Remedial Excavation Area (Figures 10 and 11). Investigations to date indicate the TCE source is confined to the central portion of North Block. Four smaller spot excavations will remove soil impacted with benzo(a)pyrene, lead, and potential petroleum impacts near the former USTs.

The depth of the large Remedial Excavation Area is approximately 10 to 6 feet below the redevelopment excavation elevation (60 feet asl). Based on the estimated depth of individual areas, the volume of soil within the Remedial Excavation Area would be approximately 2,500 tons. Soil would be excavated directly loaded into trucks for off-Property land disposal at a permitted Subtitle D landfill.

Vapor Intrusion Mitigation. Each alternative includes the construction of a below-ground concrete parking garage structure with an associated venting system. The garage venting system would be designed to adequately increase the air exchange rate if vapor intrusion mitigation measures are required in the future. The removal of the source area via excavation, the substantial thickness of the proposed foundation, and the below-ground structure and venting system would mitigate the potential for intrusion and/or collection of unsafe levels of COC vapors into the parking garage and above-grade building. In addition, an impermeable vapor barrier will extend over the Site for treatment alternatives that do not immediately address site-wide groundwater contamination to act as a permanent barrier to contaminant migration.

Monitored natural attenuation of residual COCs in groundwater located within and beyond the active treatment area. Monitored natural attenuation is retained as a complimentary remedial component to other engineered remedial components rather than as a stand-alone or sole remedial component. In accordance with WAC 173-340-370, monitored natural attenuation is an appropriate supplement to the active treatment approach for the following reasons: source control (excavation) will be conducted to the maximum extent practicable and the concentrations and locations of the contaminated groundwater do not pose an unacceptable risk to human health or the environment.

7.3.2 Cleanup Action Alternative 1, Excavation of Soil with In Situ Chemical Oxidation of Groundwater by Permanganate

Cleanup Action Alternative 1 includes elements discussed above in 7.3.1, and the injection of a chemical oxidant to address groundwater contamination beneath the Site and the ROW. Figure 12 provide an illustration of the conceptual implementation of this cleanup action alternative.

A chemical injection will be completed once the existing buildings have been demolished. A potassium permanganate solution will be injected into approximately 59 temporary wells. Approximately 1,000 gallons will be injected into each temporary injection well. Mixing and injecting will be accomplished by a temporary injection system.

The ISCO pilot test indicated that the permanganate solution could be injected at a flow rate of 5 gallons per minute (gpm) per well. The injection system would be capable of injecting into 10 wells at once (50 gpm total). At this rate, approximately 7 working days would be required to inject the design volume of 59,000 gallons of permanganate solution. Confirmation groundwater samples will be used to demonstrate that the remediation objectives were attained at the conclusion of remediation. Included in this alternative is a second contingency injection if additional reduction in groundwater concentrations is required.

Key assumptions for this cleanup action include the following:

- All permits associated with the redevelopment excavation and site redevelopment activities are a development related cost.
- An underground injection control registration will be submitted to Ecology. UST decommissioning activities will be overseen by a certified professional with site assessor/decommissioner certifications. The necessary closure reports will be filed with Ecology.
- All monitoring wells within the redevelopment excavation boundary will be decommissioned.
- Approximately 2,500 tons of contaminated soil will be over-excavated and disposed of at a Subtitle D landfill.
- Injection of potassium permanganate into approximately 59 injection wells.
- Temporary injection wells will be installed by the drilling contractor in 12 days; injection field activities require 7 days; and well decommissioning requires 3 days.
- Access will be provided by the City of Seattle for injection well installation in the ROW.
- Permitting associated with the permanganate injection, such as sidewalk and lane closures fees and ROW permit fees, are included in the cost estimate for this alternative.
- Construction of a temporary chemical injection system.
- Installation of below-grade manifolds and piping access for future contingency permanganate injection.
- A second contingency injection may occur for groundwater polishing. Groundwater will be monitored for COCs, manganese, and the following monitored natural attenuation parameters: pH, dissolved oxygen, and oxidation-reduction potential.
- Groundwater will be monitored quarterly for 3 years.
- Monitoring wells installed at the Site will be decommissioned at the conclusion of 3 years of compliance groundwater monitoring, or when points of compliance are met.
- The life cycle for this alternative is assumed to be 3 years for the purpose of estimating the present worth cost. This duration should not be construed as a guaranteed remediation time frame.

The present worth cost estimate to implement Cleanup Action Alternative 1, assuming a real discount rate of 0.0 percent and a life cycle of 3 years, is approximately $1,237,350 (Table 8). This cost is a feasibility level cost and should not be considered a design cost estimate or guaranteed cost.

7.3.3 Cleanup Action Alternative 2, Excavation of Soil with Groundwater Treatment by a Zero Valent Iron Permeable Reactive Barrier

Cleanup Action Alternative 2 involves the elements discussed above in 7.3.1 and the installation of a zero valent iron permeable reactive barrier to passively reduce the chlorinated VOCs. As the dissolved COCs pass through the permeable reactive barrier, the zero valent iron chemically reduces the TCE to non-toxic ethane, which is easily biodegraded. Figure 13 provides an illustration of the conceptual implementation of this cleanup action alternative.

Installation of the permeable reactive barrier involves using a large diameter auger to drill 4 foot diameter boring. A mixture of zero valent iron sand and gravel would be emplaced in the saturated zone of the borings. Approximately 50 borings would be installed to create one continuous permeable reactive barrier. Confirmation groundwater samples will be used to demonstrate that the remediation objectives were attained at the presumed conclusion of remediation.

Key assumptions for this cleanup action include the following:

- All permits associated with the construction excavation and site redevelopment activities are a development related cost.
- All monitoring wells within the construction excavation boundary will be decommissioned.
- UST decommissioning activities will be overseen by a certified professional with a site assessor certification. The necessary closure reports will be filed with Ecology.
- Approximately 2,500 tons of contaminated soil will be excavated and disposed of at a Subtitle D landfill.
- The installation of a horizontal and vertical impermeable vapor barrier beneath the proposed buildings.
- Installation of 50 large diameter borings and emplacement of permeable reactive barrier media.
- Quarterly groundwater monitoring and reporting for 6 years.
- The life cycle for this alternative is assumed to be 6 years for the purpose of estimating the present worth cost. This duration should not be construed as a guaranteed remediation time frame.

The present worth cost estimate to implement Cleanup Action Alternative 2, assuming a real discount rate of 0.6 percent and a life cycle of 6 years, is approximately $2,616,400 (Table 9). This cost is a feasibility level cost and should not be considered a design cost estimate or guaranteed cost.

7.3.4 Cleanup Action Alternative 3, Excavation of Soil with a Groundwater Pump and Treat System

Cleanup Action Alternative 3 involves the elements discussed above in 7.3.1 and the installation of a groundwater pump and treat system to remediate COCs beneath the Property and the ROW. Figure 14 provides a conceptual illustration of how this cleanup action alternative might be implemented.

Implementation of the pump and treat remediation system involves the installation of vertical wells on the foremost edge of the contaminated groundwater plume. Submersible pumps would be installed in the wells to capture the groundwater plume. The groundwater would be pumped to an aboveground treatment system and be treated with activated carbon or air stripping. The treated water would then be discharged to the sanitary sewer.

Installation of five extraction wells was assumed to provide an adequate capture zone. Subsurface piping will extend from a remediation equipment enclosure located on the lower level of the parking garage to each extraction well. Confirmation groundwater samples will be used to demonstrate that the remediation objectives were attained at the conclusion of remediation.

Key assumptions for this cleanup action include the following:

- All permits associated with the construction excavation and Site redevelopment activities are a development related cost.
- Access will be provided by the City of Seattle for the installation of the extraction wells and subsurface piping in the ROW.
- Permitting associated with the installation of the pump and treat system, such as sidewalk and lane closures fees and ROW permit fees, are included in the cost estimate for this alternative.
- All monitoring wells within the construction excavation boundary will be decommissioned.
- UST decommissioning activities will be overseen by a certified professional with a site assessor certification. The necessary closure reports will be filed with Ecology.
- Approximately 2,500 tons of contaminated soil will be excavated and disposed of at a Subtitle D landfill.
- The installation of a horizontal and vertical impermeable vapor barrier beneath the proposed buildings.
- Installation of five groundwater extraction wells, remediation equipment, and subsurface piping.
- Operation of the pump and treat system for 10 years.
- Rental of two parking spots in the redevelopment parking garage for the placement of the remediation equipment enclosure for 10 years.
- Quarterly groundwater monitoring and reporting for 10 years, one of which will be completed after the system has been turned off.

- If necessary, the emissions from the extracted soil vapors will be modeled to determine whether an air discharge permit from Puget Sound Clean Air Agency and/or pretreatment of the vapor generated will be necessary.
- Once compliance groundwater monitoring is complete, the pump and treat system, remediation wells, and groundwater monitoring wells will be decommissioned.
- The life cycle for this alternative is assumed to be 10 years for the purpose of estimating the present worth cost. This duration should not be construed as a guaranteed remediation time frame.

The present worth cost estimate to implement Cleanup Action Alternative 3, assuming a real discount rate of 1.1 percent and a life cycle of 10 years, is approximately $2,608,210 (Table 10). This cost is a feasibility level cost and should not be considered a design cost estimate or guaranteed cost.

7.4 COMPARISON OF CLEANUP ACTION ALTERNATIVES

A summary of the evaluation of the cleanup action alternatives using the MTCA evaluation criteria (WAC 173-340-360[3][f]) is presented below (Table 11):

- **Protectiveness.** All of the cleanup action alternatives provide a similar measure of protectiveness for human health and environment as a result of source removal. Cleanup Action Alternatives 1 and 2 rely on an in situ technique to destroy the COCs in groundwater and saturated zone soil, whereas Cleanup Action Alternative 3 physically removes the COCs from groundwater. Cleanup Action Alternative 1 destroys the COCs in a shorter time frame than Alternative 2.
- **Permanence.** All of the cleanup action alternatives provide a permanent solution in the reduction of toxicity, mobility, and volume of COCs through both chemical or physical means. Cleanup Action Alternative 1 would actively address COCs in groundwater and saturated zone soil by chemically oxidization. Cleanup Alternative 1 would actively destroy COCs in groundwater and saturated zone soil. Cleanup Action Alternative 2 would passively reduce COCs as groundwater flows through the permeable reactive barrier. Cleanup Action Alternative 1 would physically remove COC impacted groundwater.
- **Effectiveness over the Long Term.** The long-term effectiveness of Cleanup Action Alternative 1 is slightly more than that of Cleanup Action Alternatives 2 and 3. Cleanup Action Alternative 1 chemically oxidizes COCs. Cleanup Action Alternative 2 chemically reduces COCs, but is limited by the rate of groundwater flow. Cleanup Action Alternative 3 physically removes COCs from the subsurface. Cleanup Action Alternatives 2 and 3 may be limited by the COCs rate of diffusion from contaminated media, but physically removes COCs from the subsurface.
- **Management of Short-Term Risks.** The short-term risks are similar for all three cleanup action alternatives. All cleanup action alternatives present short-term risks associated with the installation of remediation wells and/or infrastructure within a busy ROW with many utilities. Additionally, Cleanup Action Alternative 1 presents the risk of exposure to a powerful chemical oxidant and Cleanup Action Alternative 3 has risks inherent to using a large diameter auger to install the permeable reactive barrier.

- **Technical and Administrative Implementability.** Cleanup Action Alternative 1 scores the highest because it is the most readily implementable, and does not involve the installation of subsurface infrastructure. Cleanup Action Alternatives 2 and 3 score lower due to the complexities associated with permitting and installing 4-foot-diameter borings, or a semi-permanent infrastructure.

As indicated in Table 11, when equal weighting factors are used for each of the evaluation criteria, Cleanup Action Alternative 1 scored the highest (7.0). Cleanup Action Alternatives 2 and 3 achieved lower ranking scores, 6.1 and 5.4, respectively.

7.5 DISPROPORTIONATE COST ANALYSIS

The purpose of a disproportionate cost analysis (DCA) is to facilitate selection of the cleanup alternative providing the highest degree of permanence to the maximum extent practicable. The DCA considers Cleanup Action Alternatives 1 through 3. Costs are considered disproportionate if the incremental costs of one alternative versus a less expensive alternative exceed the incremental benefit achieved by the more expensive alternative. The results of the DCA indicate that Cleanup Action Alternative 1 has the lowest cost-to-benefit ratio and ranks the highest using the evaluation criteria.

7.5.1 Cleanup Action Alternative Cost Estimating

- **Capital Costs.** These costs include expenditures for equipment, labor, and material necessary to implement a remedial action. Indirect costs may be incurred for engineering, financial, or other services not directly involved with installation of remedial alternatives but necessary for completion of this activity.
- **Operation and Maintenance Costs.** Operation and maintenance (O&M) costs are post-construction costs necessary to provide effective implementation of the alternative. Such costs may include, but are not limited to, operating labor; maintenance materials and labor; disposal of residues; and administrative, insurance, and licensing costs.
- **Monitoring Costs.** These costs are incurred from monitoring activities associated with remedial activities. Cost items may include sampling labor, laboratory, analyses, and report preparation.
- **Present Worth Analysis.** Present worth analysis provides a method of evaluating and comparing costs that occur over different time periods by discounting all future expenditures to the present year. The present worth cost or value represents the amount of money which, if invested in year 0 and disbursed as needed, would be sufficient to cover all costs associated with a remedial alternative. The assumptions necessary to derive a present worth cost are inflation rate, discount rate, and period of performance. A discount rate, which is similar to an interest rate, is used to account for the time value of money. EPA policy on the use of discount rates for DCA cost analyses are stated in the preamble to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) published at the Federal Register (55 FR 8722) and in Office of Solid Waste and Emergency Response Directive 9355.3-20 titled *Revisions to OMB Circular A-94 on Guidelines and Discount Rates for Benefit-Cost Analysis*. Based on the NCP and this directive, a discount rate of 1 percent is recommended in developing present value cost estimates for remedial action

alternatives during the DCA. This specified rate of 1 percent represents a "real" discount rate in that it approximates the marginal pretax rate of return on an average investment in the private sector in recent years and has been adjusted to eliminate the effect of expected inflation. For this DCA, a more conservative real discount rate was selected based on the December 2012 revisions to Appendix C of the U.S. Office of Management and Budget (OMB) Circular A-94. The real discount rates used to estimate the present worth of annual operating costs are based on the estimated restoration time frame (life cycle) for each alternative and are extrapolated from the referenced OMB Circular, which is published annually.

Because it is assumed that all capital costs are incurred in year 0, the present worth analysis is performed only on annual O&M and groundwater monitoring costs. The total present worth for a given alternative is equal to the sum of the capital costs and the present worth of annual O&M and monitoring costs over the anticipated life cycle of the alternative.

Using these criteria, the present worth costs of Cleanup Alternatives 1 through 3 are as follows:

- Cleanup Action Alternative 1, $1,237,350 (Table 8)
- Cleanup Action Alternative 2, $2,616,400 (Table 9)
- Cleanup Action Alternative 3, $2,608,210 (Table 10)

As indicated above, the cost of Cleanup Action Alternative 1 less than Cleanup Action Alternatives 2 and 3. The ranking score for Cleanup Action Alternative 1 is also higher than that of the competing alternatives. Chart 1 plots the relative cost and ranking scores, and Chart 2 plots the cost–to-benefit ratios for the three alternatives in order to illustrate the relative cost and benefits afforded by each alternative. The charts clearly demonstrate that Cleanup Action Alternative 1 exhibits the lowest cost-to-benefit ratio.

7.6 RECOMMENDED CLEANUP ACTION ALTERNATIVE

After performing the comparative analysis and ranking of alternatives in accordance with the MTCA evaluation criteria, Cleanup Action Alternative 1 is the recommended alternative. Cleanup Action Alternative 1 entails the over excavation of source area soil and chemical oxidant injection to address residual groundwater contamination beneath the Site and the ROW. This combination of remedial methods is the recommended alternative because it achieves the RAOs, meets the requirements set forth in WAC 173-340-360(3) and WAC 173-340-370, and is the most favorable with respect to the established evaluation and ranking criteria. Cleanup Alternative 1 also exhibits the lowest cost-to-benefit ratio compared to the comparative alternatives.

8.0 BIBLIOGRAPHY

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9.0 LIMITATIONS

The services, findings, and conclusions described in this report were prepared for the specific application to this project and were developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. A potential always remains for the presence of unknown, unidentified, or unforeseen subsurface contamination on portions of the Site not sampled. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

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

FIGURES

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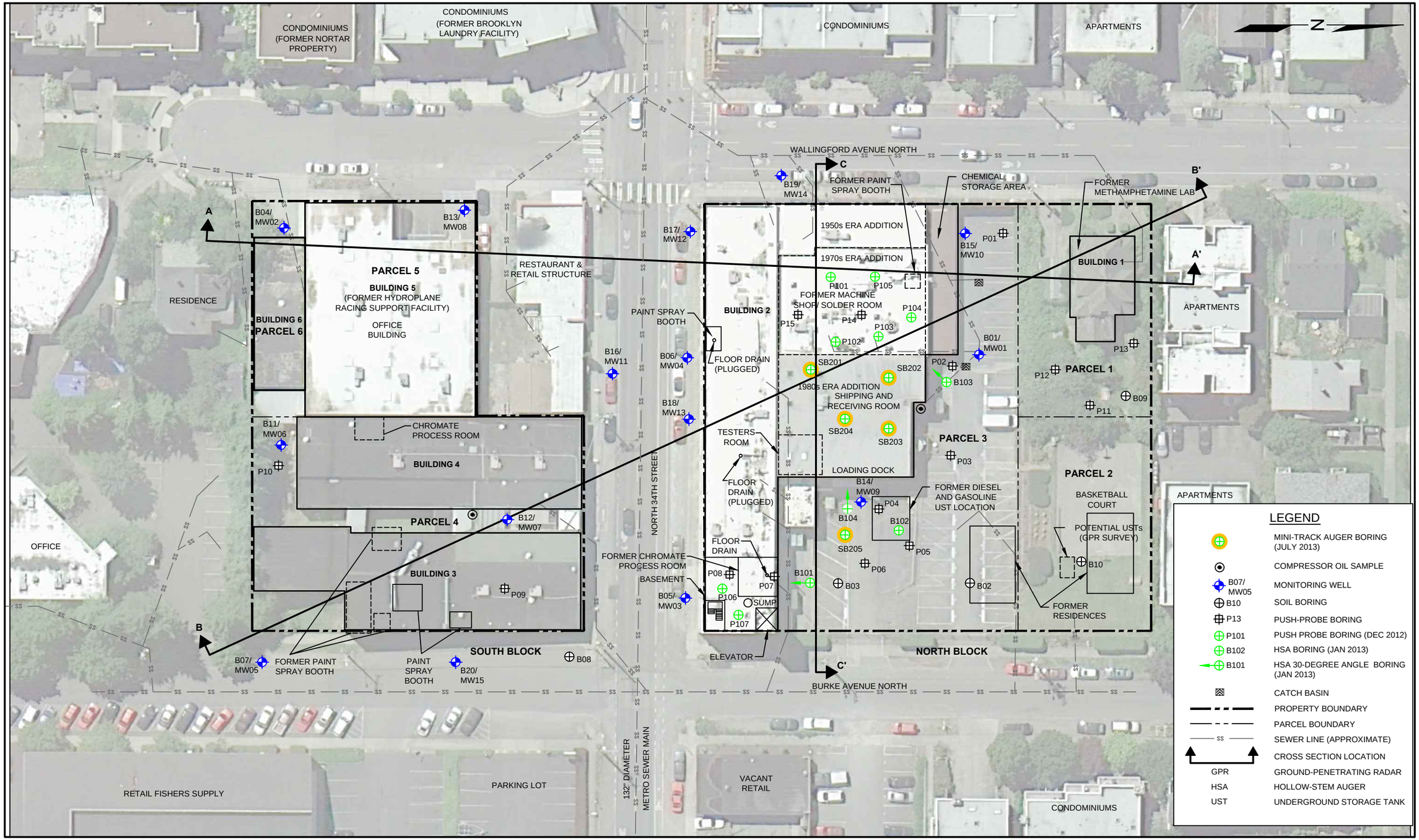
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PROJECT NUMBER: 0789-004-10
STREET ADDRESS: 3400 WALLINGFORD AVENUE NORTH
CITY, STATE: SEATTLE, WASHINGTON

FIGURE 1
PROPERTY LOCATION MAP

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTEC\TECHNICAL\GRAPHICS\FIGURE 1\0789-004 FIG1 F.DWG

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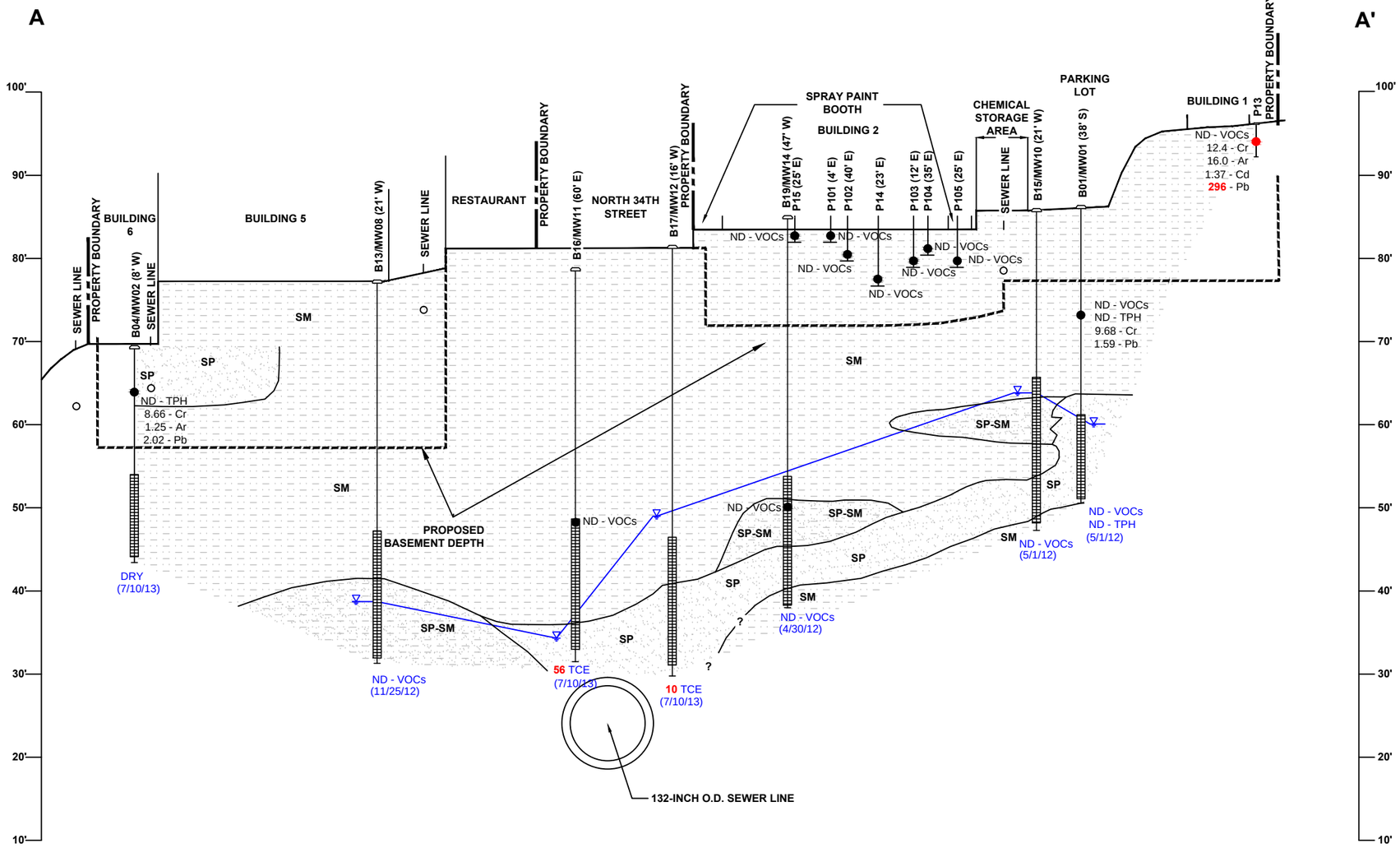
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0 25 50 100
APPROXIMATE SCALE IN FEET

FIGURE 2
PROPERTY AND EXPLORATION LOCATION PLAN

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LEGEND

(8' W) OFFSET 8' WEST MONITORING WELL

SCREEN INTERVAL

GROUNDWATER LEVEL (APRIL 2012)

SP - FINE SAND

SM - SILTY-FINE SAND

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

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

SOIL RESULTS (mg/kg):

VOCs	VOLATILE ORGANIC COMPOUNDS
TPH	TOTAL PETROLEUM HYDROCARBONS
12.4	CHROMIUM (Cr)
16.0	ARSENIC (Ar)
1.37	CADMIUM (Cd)
296	LEAD (Pb)

GROUNDWATER RESULTS (µg/L):

VOCs	VOLATILE ORGANIC COMPOUNDS
TPH	TOTAL PETROLEUM HYDROCARBONS
(7/10/13)	MOST RECENT SAMPLING DATE

mg/kg	MILLIGRAMS PER KILOGRAM
µg/L	MICROGRAMS PER LITER
RED	DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
ND	NOT DETECTED
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
TCE	TRICHLOROETHENE

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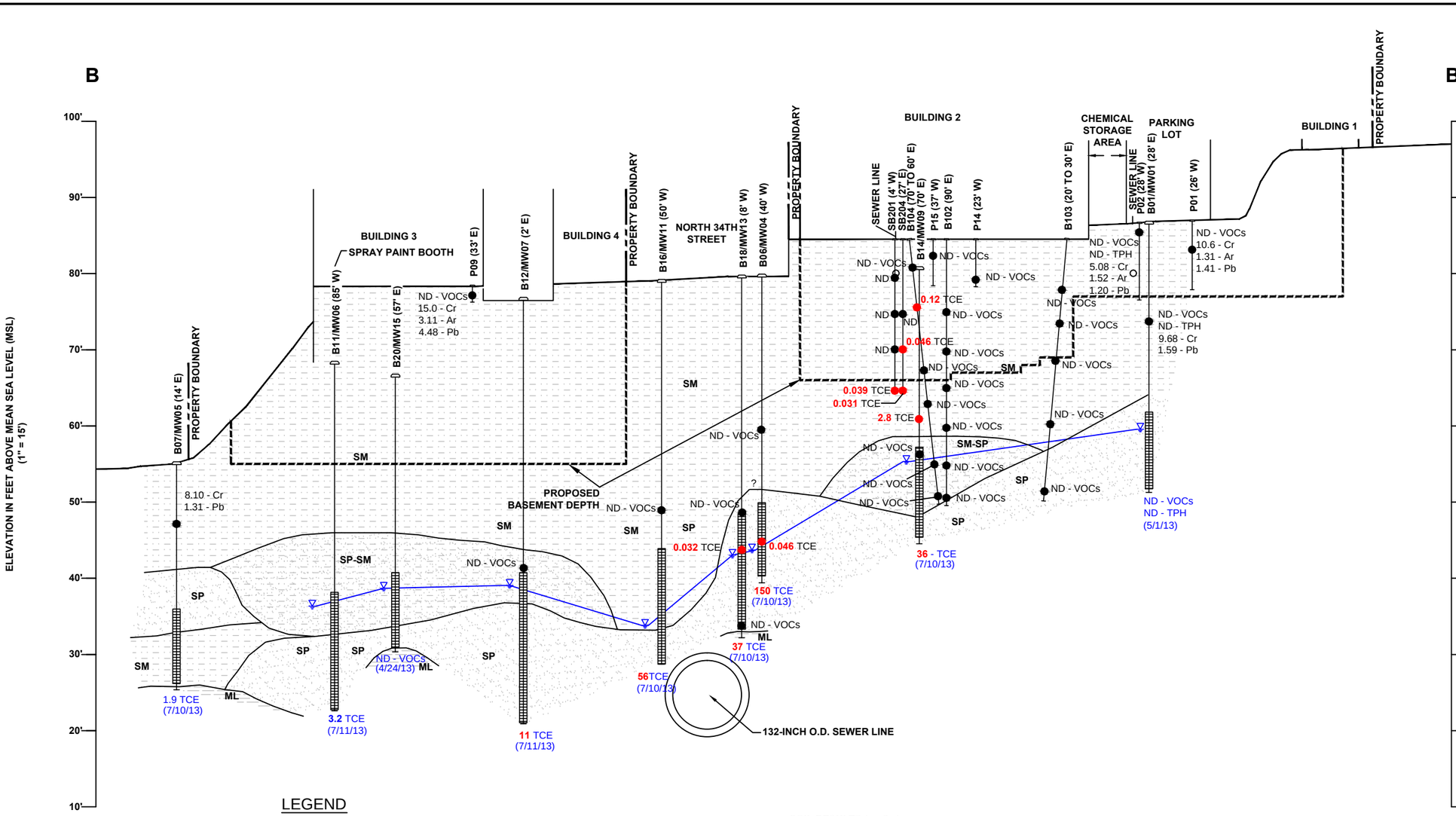
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0 25 50 100
APPROXIMATE HORIZONTAL SCALE IN FEET
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FIGURE 3
GEOLOGIC CROSS SECTION A-A'

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LEGEND

- **ML** - SILT
- **SP** - FINE SAND
- **SM** - SILTY-FINE SAND
- (8' W) OFFSET 8' WEST
- MONITORING WELL
- SCREEN INTERVAL
- GROUNDWATER LEVEL (APRIL 2012)

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

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

SOIL RESULTS (mg/kg):

VOCs	VOLATILE ORGANIC COMPOUNDS
TPH	TOTAL PETROLEUM HYDROCARBONS
15.0	CHROMIUM (Cr)
3.11	ARSENIC (Ar)
4.48	LEAD (Pb)

GROUNDWATER RESULTS (µg/L):

VOCs	VOLATILE ORGANIC COMPOUNDS
TPH	TOTAL PETROLEUM HYDROCARBONS
(7/10/13)	MOST RECENT SAMPLING DATE

mg/kg	MILLIGRAMS PER KILOGRAM
µg/L	MICROGRAMS PER LITER
RED	DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
ND	NOT DETECTED
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
TCE	TRICHLOROETHENE

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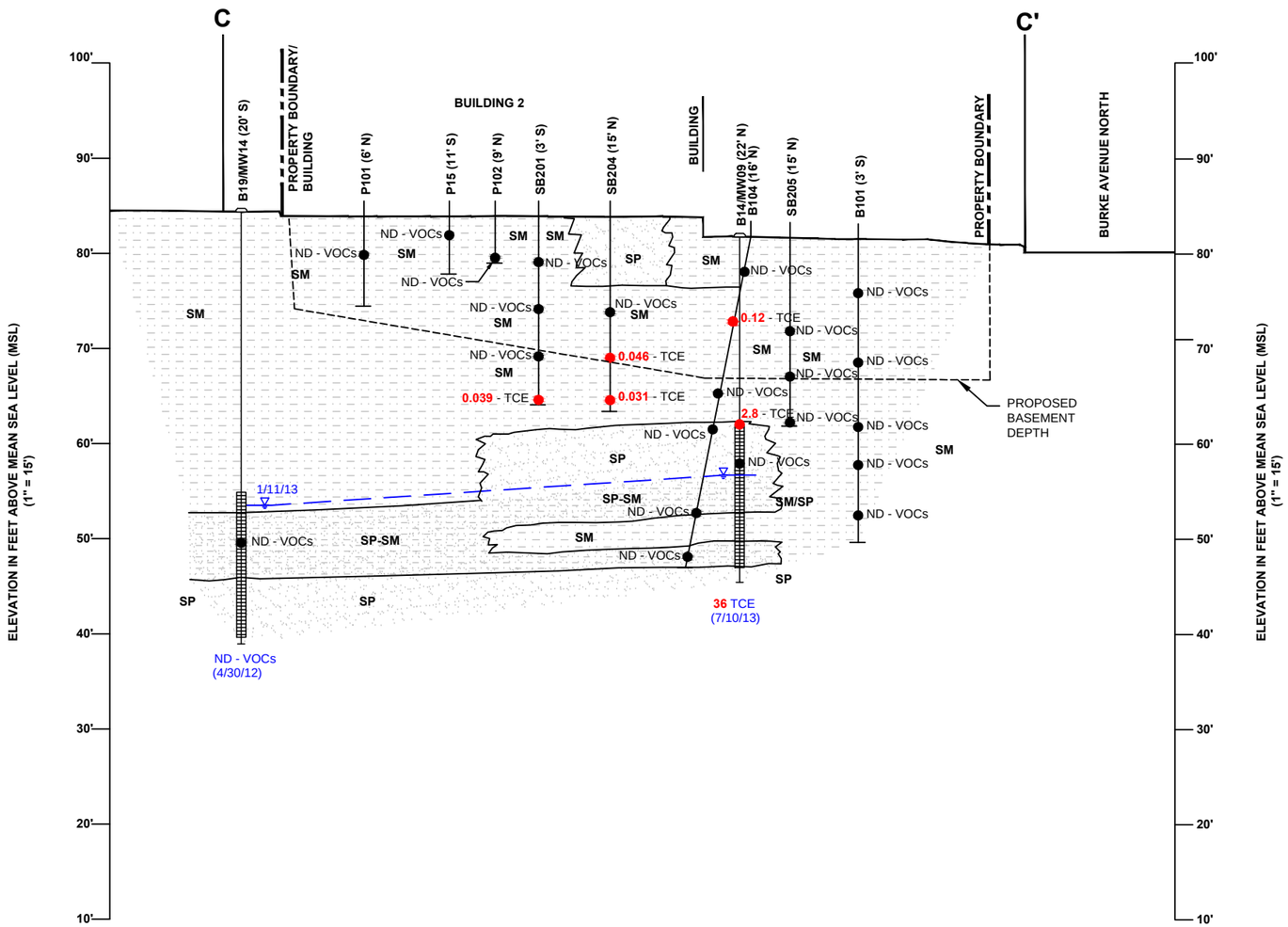
APPROXIMATE HORIZONTAL SCALE IN FEET
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FIGURE 4
GEOLOGIC CROSS SECTION B-B'

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LEGEND

(6' N) OFFSET 6' NORTH
MONITORING WELL
SCREEN INTERVAL
GROUNDWATER LEVEL (1/11/2013)

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

CONCENTRATIONS OF CHEMICALS OF CONCERN IN SOIL (mg/kg):
- CONCENTRATION BELOW MTCA METHOD A CLEANUP LEVEL
- CONCENTRATION ABOVE MTCA METHOD A CLEANUP LEVEL

SOIL RESULTS (mg/kg):
VOCs VOLATILE ORGANIC COMPOUNDS
TCE TRICHLOROETHYLENE

GROUNDWATER RESULTS (µg/L):
VOCs VOLATILE ORGANIC COMPOUNDS
TPH TOTAL PETROLEUM HYDROCARBONS
(7/10/13) MOST RECENT SAMPLING DATE

mg/kg MILLIGRAMS PER KILOGRAM
µg/L MICROGRAMS PER LITER
RED DENOTES CONCENTRATIONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
ND NOT DETECTED
MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT
TCE TRICHLOROETHYLENE

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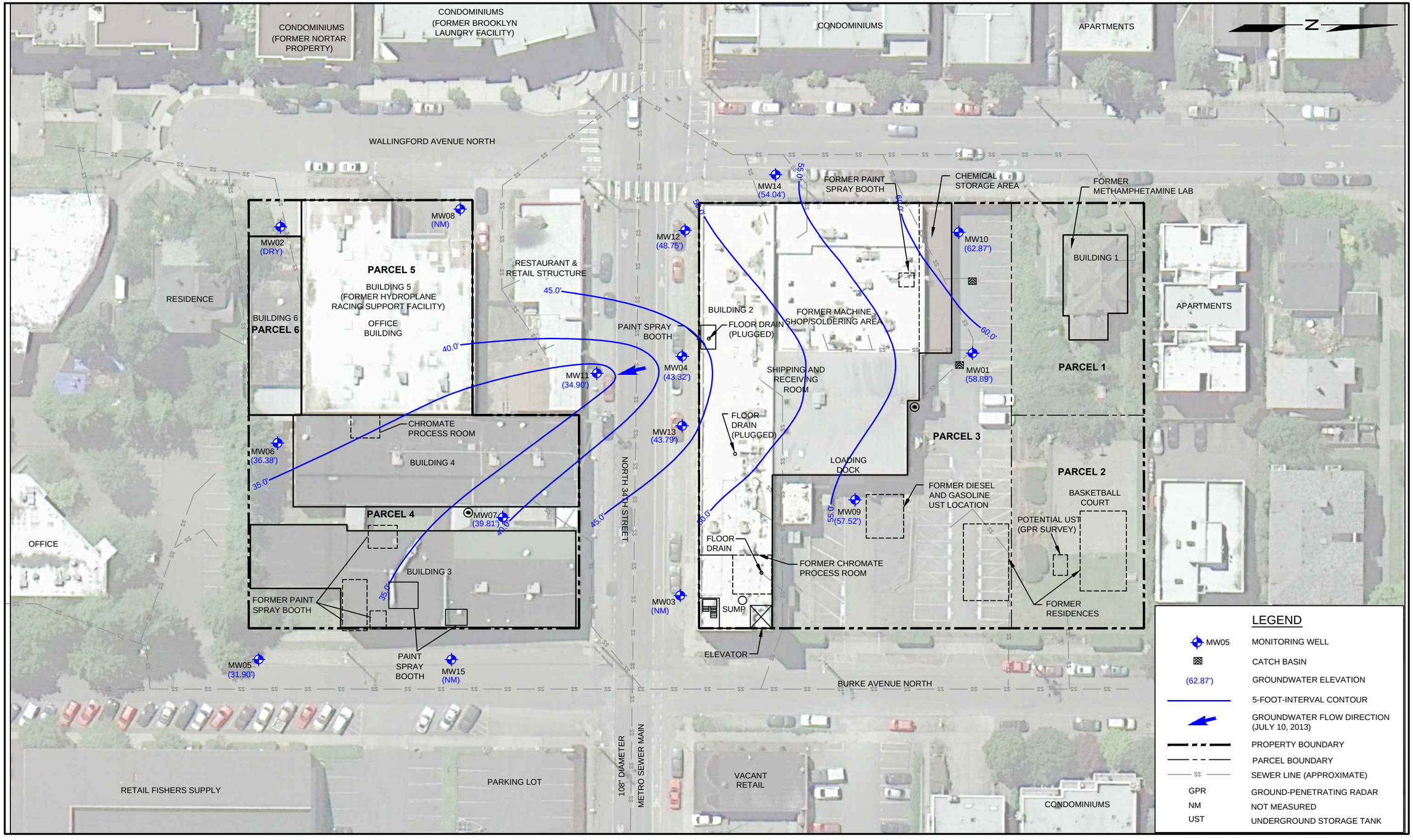
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0 25 50 100
APPROXIMATE HORIZONTAL SCALE IN FEET
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FIGURE 5
GEOLOGIC CROSS SECTION C-C'

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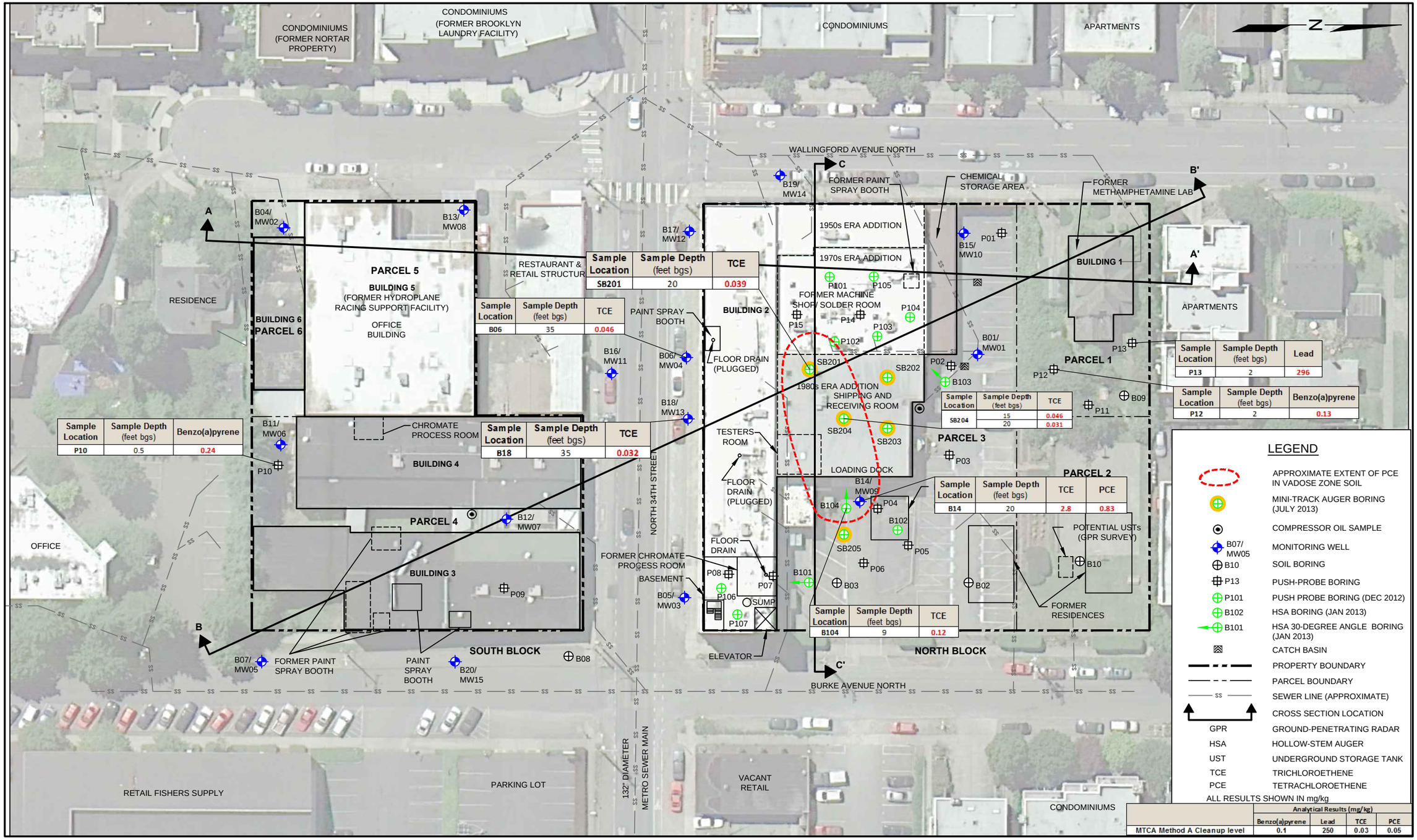
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STREET ADDRESS:	3400 WALLINGFORD AVENUE NORTH
CITY, STATE:	SEATTLE, WASHINGTON

REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET

FIGURE 6
GROUNDWATER CONTOUR MAP
(JULY 10, 2013)

8/30/2013
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Sample Location	Sample Depth (feet bgs)	TCE
SB201	20	0.039

Sample Location	Sample Depth (feet bgs)	TCE
B06	35	0.046

Sample Location	Sample Depth (feet bgs)	TCE
B18	35	0.032

Sample Location	Sample Depth (feet bgs)	Benzo(a)pyrene
P10	0.5	0.24

Sample Location	Sample Depth (feet bgs)	TCE
SB204	15	0.046
	20	0.031

Sample Location	Sample Depth (feet bgs)	Lead
P13	2	296

Sample Location	Sample Depth (feet bgs)	Benzo(a)pyrene
P12	2	0.13

Sample Location	Sample Depth (feet bgs)	TCE	PCE
B14	20	2.8	0.83

Sample Location	Sample Depth (feet bgs)	TCE
B104	9	0.12

LEGEND

- APPROXIMATE EXTENT OF PCE IN VADOSE ZONE SOIL
- MINI-TRACK AUGER BORING (JULY 2013)
- COMPRESSOR OIL SAMPLE
- B07/ MW05 — MONITORING WELL
- B10 — SOIL BORING
- P13 — PUSH-PROBE BORING
- P101 — PUSH PROBE BORING (DEC 2012)
- B102 — HSA BORING (JAN 2013)
- B101 — HSA 30-DEGREE ANGLE BORING (JAN 2013)
- CATCH BASIN
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SEWER LINE (APPROXIMATE)
- CROSS SECTION LOCATION
- GPR — GROUND-PENETRATING RADAR
- HSA — HOLLOW-STEM AUGER
- UST — UNDERGROUND STORAGE TANK
- TCE — TRICHLOROETHENE
- PCE — TETRACHLOROETHENE

ALL RESULTS SHOWN IN mg/kg

	Analytical Results (mg/kg)			
	Benzo(a)pyrene	Lead	TCE	PCE
MTCA Method A Cleanup level	0.1	250	0.03	0.05

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CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET

FIGURE 7
MTCA EXCEEDANCES IN SOIL

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CONDOMINIUMS (FORMER NORTAR PROPERTY)

CONDOMINIUMS (FORMER BROOKLYN LAUNDRY FACILITY)

CONDOMINIUMS

APARTMENTS

N

WALLINGFORD AVENUE NORTH

Sample ID	Sample Date	TCE
MW14	04/30/12	<1

Sample ID	Sample Date	TCE
MW10	05/01/12	<1

Sample ID	Sample Date	TCE
MW08	04/25/12	<1

Sample ID	Sample Date	TCE
MW02	01/17/12	DRY
	04/27/12	DRY
	01/11/13	DRY
	07/10/13	DRY

MW14

FORMER PAINT SPRAY BOOTH

CHEMICAL STORAGE AREA

FORMER METHAMPHETAMINE LAB

MW08

MW02

MW12

MW10

RESTAURANT & RETAIL STRUCTURE

PARCEL 5

BUILDING 5
(FORMER HYDROPLANE RACING SUPPORT FACILITY)

OFFICE BUILDING

RESIDENCE

BUILDING 6
PARCEL 6

Sample ID	Sample Date	TCE
MW12	04/27/12	14
	01/14/13	5.0
	04/25/13	5.7
	07/10/13	10

BUILDING 1

Sample ID	Sample Date	TCE
MW01	01/17/12	<1
	05/01/12	<1

APARTMENTS

PAINT SPRAY BOOTH

BUILDING 2

FORMER MACHINE SHOP/SOLDERING AREA

FLOOR DRAIN (PLUGGED)

Sample ID	Sample Date	TCE
MW11	04/30/12	14
	05/08/12	29
	01/11/13	78
	04/25/13	39
	07/10/13	56

MW11

MW04

MW01

PARCEL 1

Sample ID	Sample Date	TCE
MW04	01/17/12	110
	04/27/12	170
	01/11/13	85
	04/24/13	290
	07/10/13	150

Sample ID	Sample Date	TCE
MW06	04/25/12	3.2
	01/14/13	2.4
	04/26/13	4.5
	07/11/13	3.2

CHROMATE PROCESS ROOM

Sample ID	Sample Date	TCE
MW07	04/25/12	3.3
	01/11/13	3.5
	04/25/13	6.1
	07/11/13	11

BUILDING 4

MW06

MW07

PARCEL 4

NORTH 34TH STREET

MW13

FLOOR DRAIN (PLUGGED)

Sample ID	Sample Date	TCE
MW09	05/01/12	2.0
	01/14/13	42
	04/24/13	24
	07/10/13	36

PARCEL 3

PARCEL 2

BASKETBALL COURT

FORMER DIESEL AND GASOLINE UST LOCATION

MW09

POTENTIAL UST (GPR SURVEY)

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

OFFICE

FLOOR DRAIN

FORMER CHROMATE PROCESS ROOM

BUILDING 3

MW03

SUMP

FORMER RESIDENCES

ELEVATOR

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

BURKE AVENUE NORTH

MW05

FORMER PAINT SPRAY BOOTH

PAINT SPRAY BOOTH

MW15

Sample ID	Sample Date	TCE
MW05	01/17/12	3.3
	05/01/12	1.9
	01/11/13	3.3
	04/24/13	3.0
	07/10/13	1.9

Sample ID	Sample Date	TCE
MW15	04/30/12	<1
	01/14/13	<1
	04/24/13	<1

RETAIL FISHERS SUPPLY

PARKING LOT

108" DIAMETER METRO SEWER MAIN

VACANT RETAIL

CONDOMINIUMS

LEGEND

- APPROXIMATE EXTENT OF TCE AT ABOVE MTCA CLEANUP LEVELS (5 µg/L)
- COMPRESSOR OIL SAMPLE
- MW05 — MONITORING WELL
- CATCH BASIN
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SS — SEWER LINE (APPROXIMATE)
- INFERRED GROUNDWATER FLOW DIRECTION
- GPR — GROUND-PENETRATING RADAR
- MTCA — WASHINGTON STATE MODEL TOXICS CONTROL ACT
- TCE — TRICHLOROETHENE
- UST — UNDERGROUND STORAGE TANK
- µg/L — MICROGRAMS PER LITER
- 170 — EXCEEDS MTCA METHOD A CLEANUP LEVEL
- < — RESULT BELOW LABORATORY REPORTING LIMIT

ALL RESULTS SHOWN IN µg/L

	TCE (µg/L)
MTCA Method A Cleanup level	5

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CITY, STATE: SEATTLE, WASHINGTON

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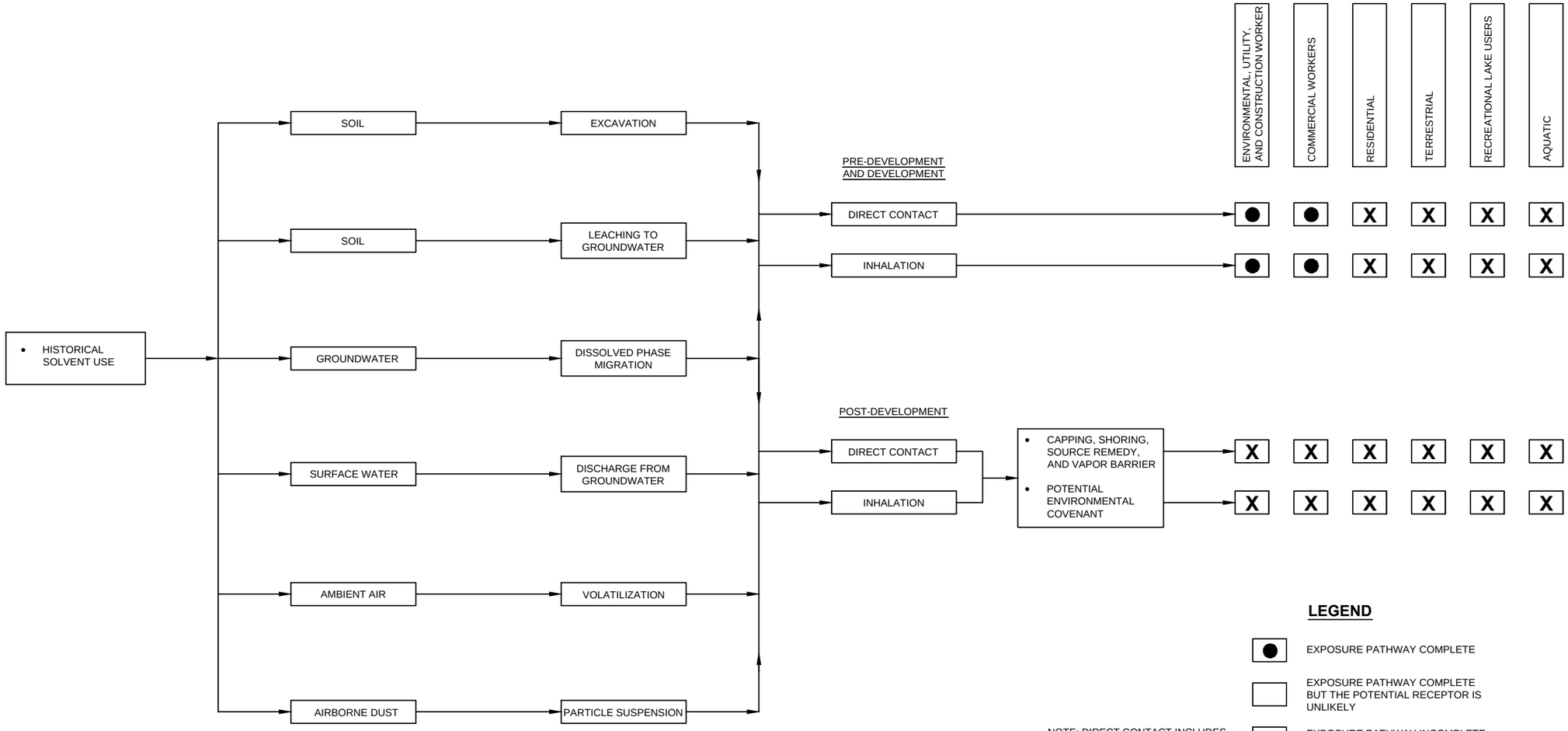
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APPROXIMATE SCALE IN FEET

FIGURE 8
GROUNDWATER TCE RESULTS

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PRIMARY SOURCES	SECONDARY SOURCES	PRIMARY RELEASE MECHANISMS	EXPOSURE PATHWAYS	INSTITUTIONAL CONROLS/ ENGINEERING CONTROLS	POTENTIAL RECEPTORS



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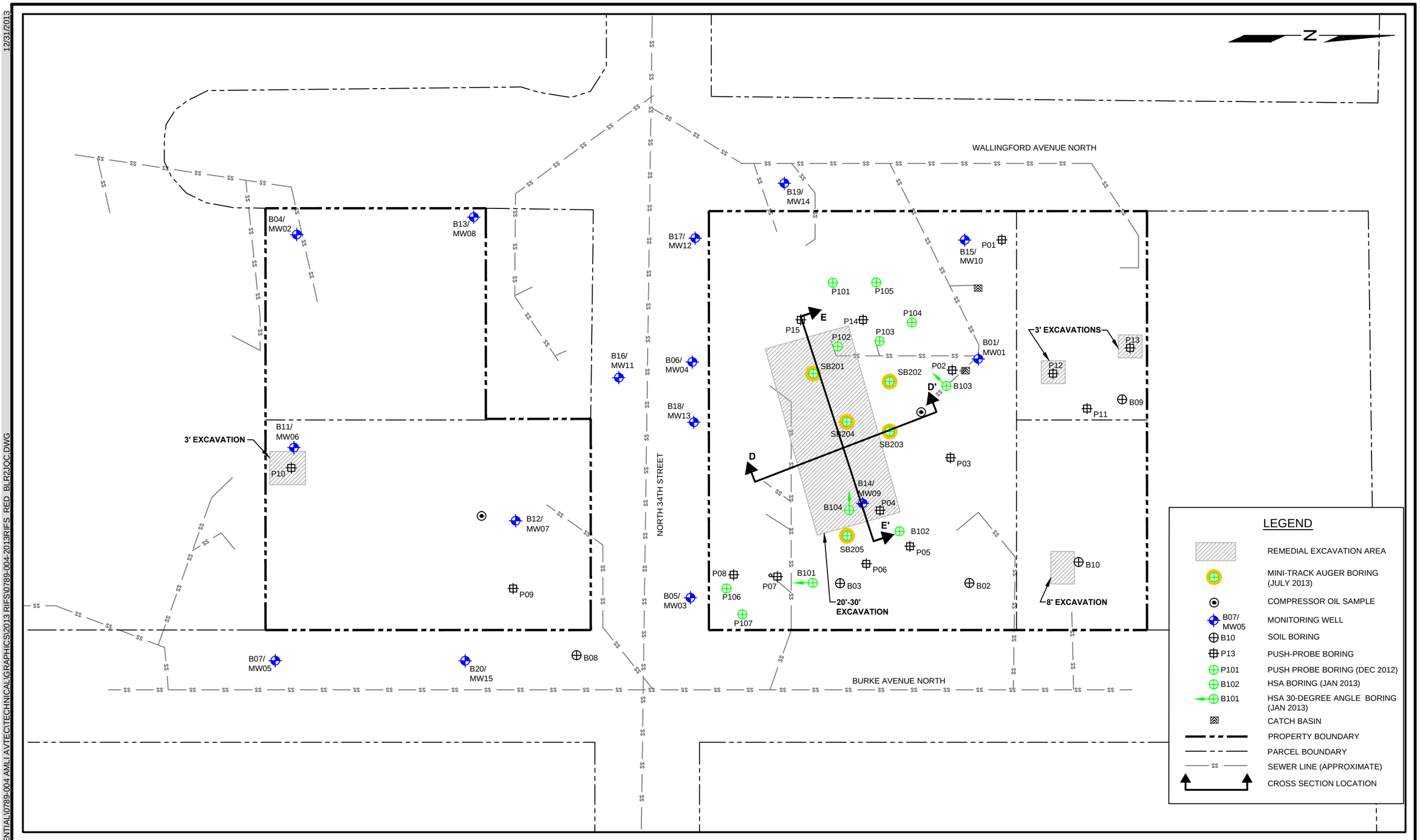
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FIGURE 9
PRELIMINARY CONCEPTUAL SITE MODEL

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DATE:	12/05/13
DRAWN BY:	BLR
CHECKED BY:	CER
CAD FILE:	0789-004_2013RIFS_RED

PROJECT NAME:	AVTECH PROPERTY
PROJECT NUMBER:	0789-004
STREET ADDRESS:	3400 WALLINGFORD AVENUE NORTH
CITY, STATE:	SEATTLE, WASHINGTON

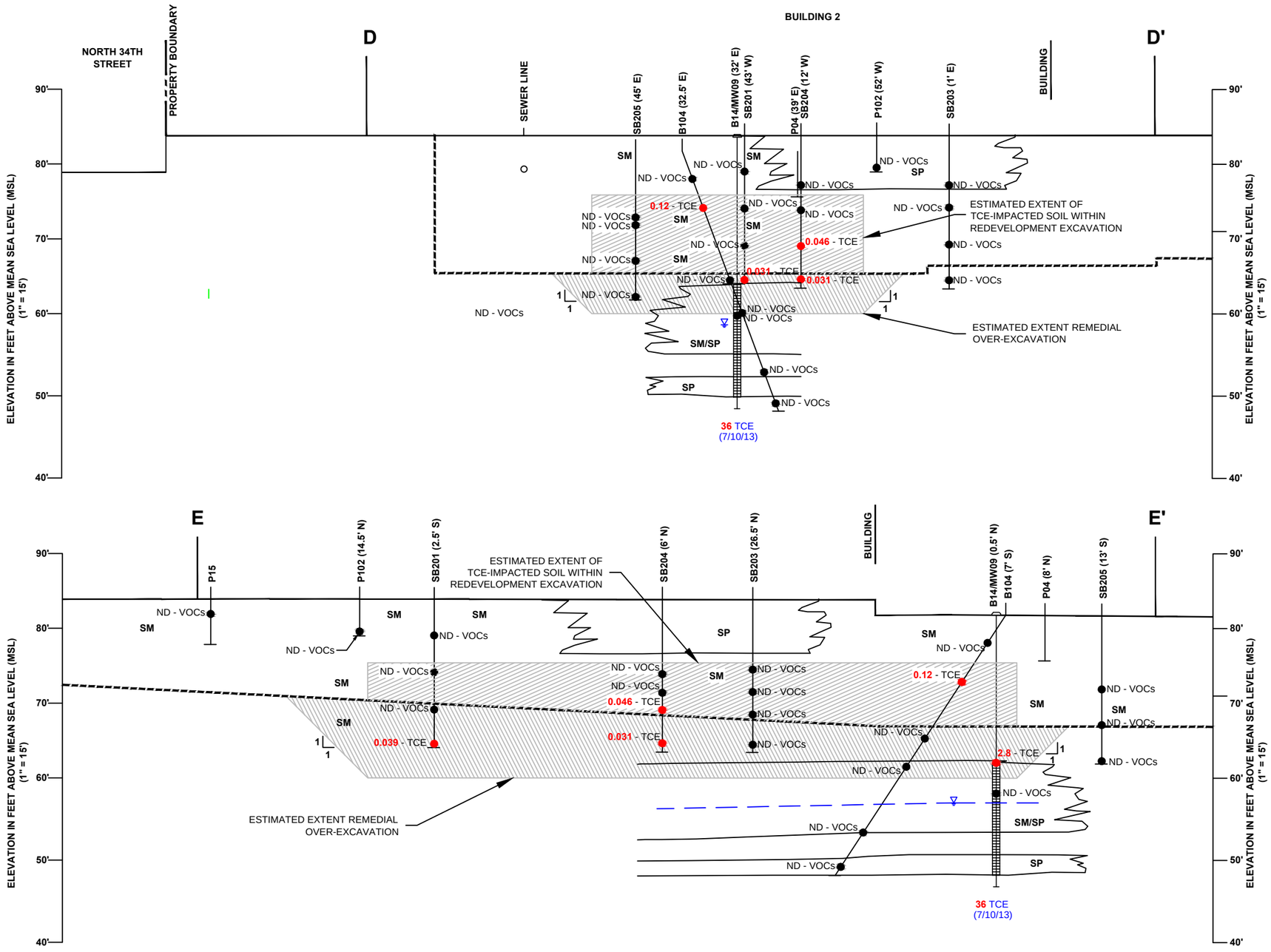
REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET

FIGURE 10
ESTIMATED REMEDIAL EXCAVATION AREAS

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECH\TECHNICAL\GRAPHICS\2013 RIFS\0789-004-2013RIFS_RED_BLR2.DWG 12/31/2013

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CAD FILE:	0789-004_2013RIFS_XDD_XEE

PROJECT NAME:	AVTECH PROPERTY
PROJECT NUMBER:	0789-004
STREET ADDRESS:	3400 WALLINGFORD AVENUE NORTH
CITY, STATE:	SEATTLE, WASHINGTON

REGION:

0 15 30
APPROXIMATE HORIZONTAL SCALE IN FEET
NOT FOR CONSTRUCTION OR ENGINEERING PURPOSES

FIGURE 11
GEOLOGIC CROSS SECTIONS D-D' AND E-E'
TCE SOURCE AREA REMEDIAL EXCAVATION

12/31/2013
P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECT\TECHNICAL\GRAPHICS\2013 RIFS\0789-004-2013RIFS_XDD_XEETGO.DWG
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12/31/2013

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECH\TECHNICAL\GRAPHICS\2013 RIFS\0789-004-2013RIFS_CA1TGOBLRTGO.DWG

N

WALLINGFORD AVENUE NORTH

MW14

MW08

MW02

MW12

MW10

MW04

MW11

MW01

3' EXCAVATIONS

3' EXCAVATION

MW06

MW13

NORTH 34TH STREET

MW09

MW07

MW03

20'-30' EXCAVATION

8' EXCAVATION

MW05

MW15

BURKE AVENUE NORTH

LEGEND

- REMEDIAL EXCAVATION AREA
- APPROXIMATE EXTENT OF TCE AT ABOVE MTCA CLEANUP LEVEL (5 µg/L)
- µg/L — MICROGRAMS PER LITER
- MW05 — MONITORING WELL
- CATCH BASIN
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SS — SEWER LINE (APPROXIMATE)
- INFERRED GROUNDWATER FLOW DIRECTION
- INJECTION POINT

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CAD FILE:	0789-004_2013RIFS_CA1

PROJECT NAME:	AVTECH PROPERTY
PROJECT NUMBER:	0789-004
STREET ADDRESS:	3400 WALLINGFORD AVENUE NORTH
CITY, STATE:	SEATTLE, WASHINGTON

REGION:

0 25 50 100

APPROXIMATE SCALE IN FEET

FIGURE 12

CONCEPTUAL SITE LAYOUT
CLEANUP ALTERNATIVE 1,
EXCAVATION OF SOIL WITH GROUNDWATER TREATMENT BY PERMANGANATE

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12/31/2013

P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECT\TECHNICAL\GRAPHICS\2013 RIFS\0789-004-2013RIFS_CA2TGOBLR.DWG

N

WALLINGFORD AVENUE NORTH

NORTH 34TH STREET

BURKE AVENUE NORTH

MW01
MW02
MW03
MW04
MW05
MW06
MW07
MW08
MW09
MW10
MW11
MW12
MW13
MW14
MW15

3' EXCAVATIONS

3' EXCAVATION

20'-30' EXCAVATION

8' EXCAVATION

LEGEND

- REMEDIAL EXCAVATION AREA
- APPROXIMATE EXTENT OF TCE AT ABOVE MTCA CLEANUP LEVEL (5 µg/L)
- µg/L — MICROGRAMS PER LITER
- MW05 — MONITORING WELL
- CATCH BASIN
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SS — SEWER LINE (APPROXIMATE)
- INFERRED GROUNDWATER FLOW DIRECTION
- LARGE DIAMETER AUGER BORING WITH ZVI BACKFILL
- ZVI — ZERO VALENT IRON
- TCE — TRICHLOROETHENE

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DATE:	12/05/13
DRAWN BY:	BLR
CHECKED BY:	TGO/CER
CAD FILE:	0789-004_2013RIFS_CA1

PROJECT NAME:	AVTECH PROPERTY
PROJECT NUMBER:	0789-004
STREET ADDRESS:	3400 WALLINGFORD AVENUE NORTH
CITY, STATE:	SEATTLE, WASHINGTON

REGION:

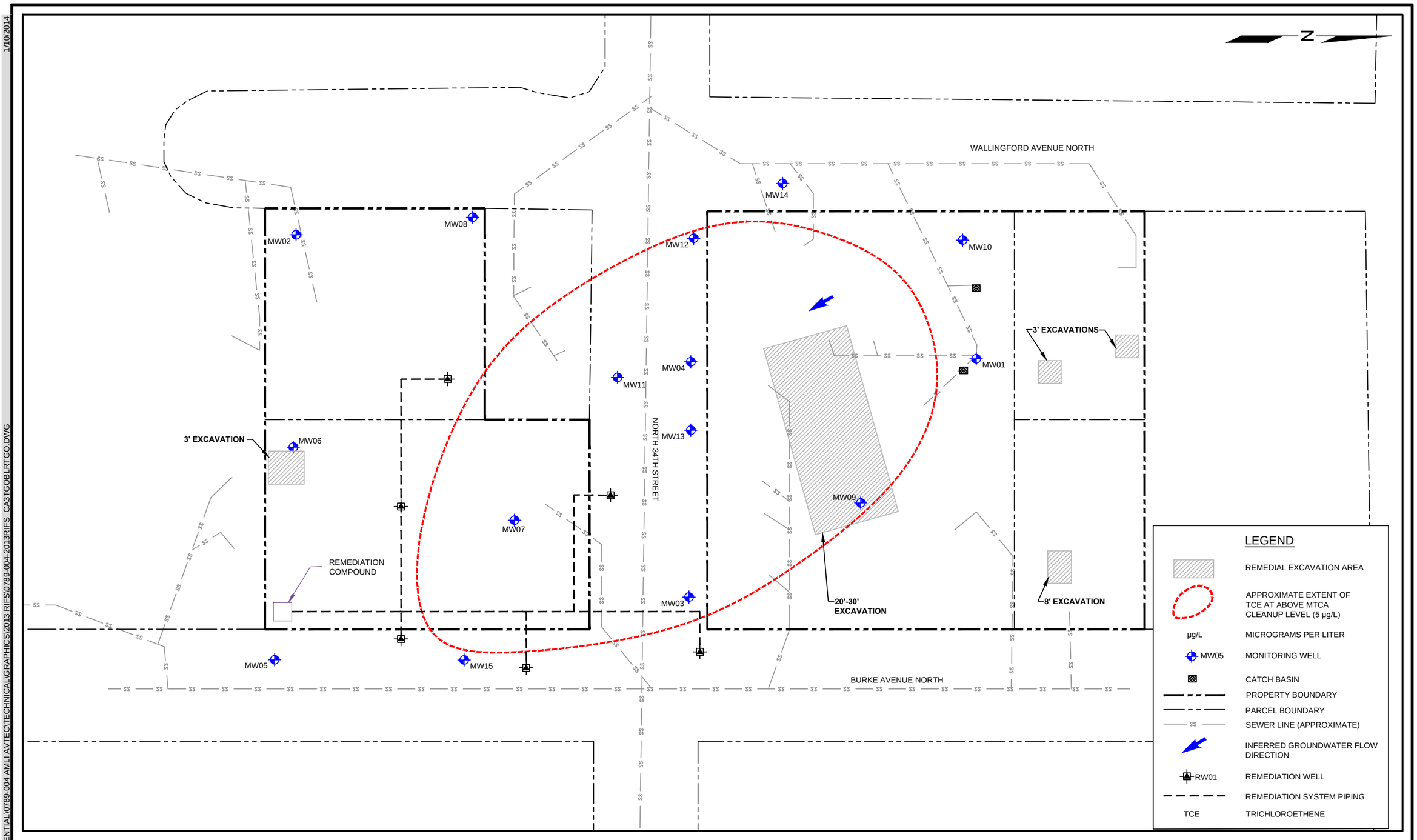
0 25 50 100

APPROXIMATE SCALE IN FEET

FIGURE 13

CONCEPTUAL SITE LAYOUT
CLEANUP ALTERNATIVE 2,
EXCAVATION OF SOIL WITH GROUNDWATER TREATMENT BY PERMEABLE REACTIVE BARRIER

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CAD FILE: 0789-004_2013RIFS_CA3

PROJECT NAME: AVTECH PROPERTY
PROJECT NUMBER: 0789-004
STREET ADDRESS: 3400 WALLINGFORD AVENUE NORTH
CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET

FIGURE 14
CONCEPTUAL SITE LAYOUT
CLEANUP ALTERNATIVE 3,
EXCAVATION OF SOIL WITH GROUNDWATER PUMP AND TREAT SYSTEM

1/10/2014
P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECT\TECHNICAL\GRAPHICS\2013 RIFS\0789-004-2013RIFS_CA3TGOBLRTGO.DWG
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TABLES

DRAFT

Table 1
Summary of Soil Analytical Results for VOCs
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

Sample Location	Sample ID	Sample Date	Sampled By	Sample Depth (feet bgs)	Analytical Results (mg/kg)										
					Vinyl Chloride[1]	1,1-Dichloroethene[1]	trans-1,2-Dichloroethene[1]	cis-1,2-Dichloroethene[1]	Carbon tetrachloride[1]	Benzene[1]	Trichloroethene[1]	Toluene[1]	Tetrachloroethene[1]	Ethylbenzene[1]	Total Xylenes[1]
P01	P01-04	01/04/12	SoundEarth	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P02	P02-1.5	01/04/12	SoundEarth	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P04	P04-08	01/04/12	SoundEarth	8	--	--	--	--	--	<0.02	--	<0.02	--	<0.02	<0.06
	P04-15	01/04/12	SoundEarth	15	--	--	--	--	--	<0.02	--	<0.02	--	<0.02	<0.06
P05	P05-08	01/04/12	SoundEarth	8	--	--	--	--	--	<0.02	--	<0.02	--	<0.02	<0.06
P06	P06-08	01/04/12	SoundEarth	8	--	--	--	--	--	<0.02	--	<0.02	--	<0.02	<0.06
P07	P07-02	01/05/12	SoundEarth	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05[1]	<0.2
P09	P09-02	01/05/12	SoundEarth	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P10	P10-04	01/05/12	SoundEarth	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P11	P11-04	01/05/12	SoundEarth	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P13	P13-02	01/05/12	SoundEarth	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P14	P14-06	04/26/12	SoundEarth	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
P15	P15-02	04/26/12	SoundEarth	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B01	B01-13	01/10/12	SoundEarth	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B03	B03-10	01/10/12	SoundEarth	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B06	B06-20	01/11/12	SoundEarth	20	<0.05[ht]	<0.05[ht]	<0.05[ht]	<0.05[ht]	<0.05[ht]	<0.03	<0.05[ht]	<0.05[ht]	<0.025	<0.05[ht]	<0.2[ht]
B06	B06-35	01/11/12	SoundEarth	35	<0.05[ht]	<0.05[ht]	<0.05[ht]	<0.05[ht]	<0.05[ht]	<0.03	**0.046**	<0.05	<0.025	<0.05[ht]	<0.2[ht]
B12	B12-35	04/23/12	SoundEarth	35	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B14	B14-20	04/24/12	SoundEarth	20	<0.05	<0.05	<0.05	0.47	<0.05	<0.03	**2.8**	<0.05	**0.83**	<0.05	<0.2
B14	B14-25	04/24/12	SoundEarth	25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B16	B16-30	04/25/12	SoundEarth	30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B18	B18-30	04/26/12	SoundEarth	30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B18	B18-35	04/26/12	SoundEarth	35	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	**0.032**	<0.05	<0.025	<0.05	<0.2
B18	B18-45	04/26/12	SoundEarth	45	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B19	B19-35	04/27/12	SoundEarth	35	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.03	<0.05	<0.025	<0.05	<0.2
B101	B101-07	12/21/12	SoundEarth	7	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B101-15	12/21/12	SoundEarth	15	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B101-23	12/21/12	SoundEarth	23	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B101-28	12/21/12	SoundEarth	28	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B101-34	12/21/12	SoundEarth	34	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
B102	B102-10	12/21/12	SoundEarth	10	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B102-15	12/21/12	SoundEarth	15	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B102-20	12/21/12	SoundEarth	20	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B102-25	12/21/12	SoundEarth	25	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B102-30	12/21/12	SoundEarth	30	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B102-35	12/21/12	SoundEarth	35	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
B103	B103-07	01/02/13	SoundEarth	7	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B103-11	01/02/13	SoundEarth	11	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B103-16	01/02/13	SoundEarth	16	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B103-24	01/02/13	SoundEarth	24	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B103-35	01/02/13	SoundEarth	35	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
B104	B104-04	01/02/13	SoundEarth	4	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B104-09	01/02/13	SoundEarth	9	<0.05	<0.05	<0.05	<0.05	--	--	**0.12**	--	<0.025	--	--
	B104-17	01/02/13	SoundEarth	17	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B104-22	01/02/13	SoundEarth	22	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B104-30	01/02/13	SoundEarth	30	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
	B104-35	01/02/13	SoundEarth	35	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
MTCA Method A Cleanup Level for Soil[2]					**NE**	**NE**	**NE**	**NE**	**NE**	**0.1**	**0.03**	**7**	**0.05**	**6**	**9**

DRAFT

Table 1
Summary of Soil Analytical Results for VOCs
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

Sample Location	Sample ID	Sample Date	Sampled By	Sample Depth (feet bgs)	Analytical Results (mg/kg)										
					Vinyl Chloride[1]	1,1-Dichloroethene[1]	trans-1,2-Dichloroethene[1]	cis-1,2-Dichloroethene[1]	Carbon tetrachloride[1]	Benzene[1]	Trichloroethene[1]	Toluene[1]	Tetrachloroethene[1]	Ethylbenzene[1]	Total Xylenes[1]
P101	P101-02	12/20/12	SoundEarth	2	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
P102	P102-05	12/20/12	SoundEarth	5	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
P103	P103-06	12/20/12	SoundEarth	6	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
P104	P104-04	12/20/12	SoundEarth	4	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
P105	P105-06	12/20/12	SoundEarth	6	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
P106	P106-01	12/20/12	SoundEarth	1	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
P107	P107-01	12/20/12	SoundEarth	1	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB201	SB201-05	07/09/13	SoundEarth	5	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB201	SB201-10	07/09/13	SoundEarth	10	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB201	SB201-15	07/09/13	SoundEarth	15	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB201	SB201-20	07/09/13	SoundEarth	20	<0.05	<0.05	<0.05	<0.05	--	--	**0.039**	--	<0.025	--	--
SB204	SB204-05	07/09/13	SoundEarth	5	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB204	SB204-10	07/09/13	SoundEarth	10	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB204	SB204-15	07/09/13	SoundEarth	15	<0.05	<0.05	<0.05	<0.05	--	--	**0.046**	--	<0.025	--	--
SB204	SB204-20	07/09/13	SoundEarth	20	<0.05	<0.05	<0.05	<0.05	--	--	**0.031**	--	<0.025	--	--
SB203	SB203-05	07/09/13	SoundEarth	5	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB203	SB203-10	07/09/13	SoundEarth	10	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB203	SB203-15	07/09/13	SoundEarth	15	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB203	SB203-20	07/09/13	SoundEarth	20	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB202	SB202-05	07/09/13	SoundEarth	5	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB202	SB202-08	07/09/13	SoundEarth	8	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB205	SB205-10	07/09/13	SoundEarth	10	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB205	SB205-15	07/09/13	SoundEarth	15	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
SB205	SB205-20	07/09/13	SoundEarth	20	<0.05	<0.05	<0.05	<0.05	--	--	<0.03	--	<0.025	--	--
MTCA Method A Cleanup Level for Soil[2]					**NE**	**NE**	**NE**	**NE**	**NE**	**0.1**	**0.03**	**7**	**0.05**	**6**	**9**

NOTES:

Red denotes concentrations exceeding MTCA cleanup level for soil.

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

[1]Analyzed by EPA Method 8260B or 8260C.

[2]MTCA Cleanup Regulation, Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the WAC, revised November 2007.

Laboratory Notes:

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

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

-- = not analyzed
< = not detected at a concentration exceeding the laboratory reporting limit
bgs = below ground surface
EPA = U.S. Environmental Protection Agency
mg/kg = milligrams per kilogram
MTCA = Washington State Model Toxics Control Act
NE = no MTCA Method A cleanup level established for this chemical
SoundEarth = SoundEarth Strategies, Inc.
VOCs = Volatile organic compounds
WAC = Washington Administrative Code

SoundEarth Strategies

Table 2
Summary of Soil Analytical Results for Petroleum Hydrocarbons
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

Sample Location	Sample ID	Sample Date	Sampled By	Sample Depth (feet bgs)	Analytical Results (mg/kg)						
					GRPH[1]	DRPH[2]	ORPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]
P02	P02-1.5	01/04/12	SoundEarth	1.5	--	<50	<250	--	--	--	--
P03	P03-04	01/04/12	SoundEarth	4	--	<50	<250	--	--	--	--
P04	P04-08	01/04/12	SoundEarth	8	<2	--	--	<0.02	<0.02	<0.02	<0.06
	P04-15	01/04/12	SoundEarth	15	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
P05	P05-08	01/04/12	SoundEarth	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
P06	P06-08	01/04/12	SoundEarth	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
P07	P07-02	01/05/12	SoundEarth	2	--	<50	<250	--	--	--	--
P08	P08-02	01/05/12	SoundEarth	2	--	<50	<250	--	--	--	--
B01	B01-03	01/10/12	SoundEarth	3	--	<50	<250	--	--	--	--
B02	B02-03	01/10/12	SoundEarth	3	--	<50	<250	--	--	--	--
B03	B03-03	01/10/12	SoundEarth	3	--	<50	<250	--	--	--	--
	B03-10	01/10/12	SoundEarth	10	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
B04	B04-05	01/11/12	SoundEarth	5	--	<50	<250	--	--	--	--
B08	B08-08	01/12/12	SoundEarth	8	--	<50	<250	--	--	--	--
B10	B10-0.5	01/13/12	SoundEarth	0.5	--	<50	<250	--	--	--	--
MTCA Method A Cleanup Level for Soil[4]					**100/30[5]**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

NOTES:

Red denotes concentrations exceeding MTCA Method A cleanup level for soil.

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

[1]Analyzed by Method NWTPH-Gx.

[2]Analyzed by Method NWTPH-Dx.

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

[4]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.

[5]30 mg/kg when benzene is present and 100 mg/kg when benzene is not present.

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

-- = not analyzed

bgs = below ground surface

DRPH = diesel-range petroleum hydrocarbon

GRPH = gasoline-range hydrocarbon

mg/kg = milligrams per kilogram

MTCA = Washington State Model Toxics Control Act

NWPTH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbon

SoundEarth = SoundEarth Strategies, Inc.

DRAFT

Table 3
Summary of Soil Analytical Results for RCRA Metals and Cyanide
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

Sample Location	Sample ID	Sample Date	Sampled By	Sample Depth (feet bgs)	Analytical Results (mg/kg)								
					Chromium[1]	Arsenic[1]	Selenium[1]	Silver[1]	Cadmium[1]	Barium[1]	Lead[1]	Cyanide[2]	Mercury[3]
P01	P01-04	01/04/12	SoundEarth	4	10.6	1.31	<1	<1	<1	29.7	1.41	--	<0.1
P02	P02-1.5	01/04/12	SoundEarth	1.5	5.08	1.52	<1	<1	<1	13.5	1.20	--	<0.1
P07	P07-02	01/05/12	SoundEarth	2	18.6	1.47	<1	<1	<1	44.3	172	--	<0.1
P08	P08-02	01/05/12	SoundEarth	2	8.75	1.36	<1	<1	<1	30.1	1.51	<0.054	<0.1
P09	P09-02	01/05/12	SoundEarth	2	15.0	3.11	<1	<1	<1	79.4	4.48	<0.053	<0.1
P10	P10-0.5	01/05/12	SoundEarth	0.5	16.7	7.90	<1	<1	<1	191	71.0	--	0.28
	P10-02	01/05/12	SoundEarth	2	--	--	--	--	--	--	--	--	<0.1
P12	P12-02	01/05/12	SoundEarth	2	12.3	12.2	<1	<1	<1	161	193	--	0.12
P13	P13-02	01/05/12	SoundEarth	2	12.4	16.0	<1	<1	1.37	163	**296**	--	0.18
B01	B01-03	01/10/12	SoundEarth	3	9.68	<1	<1	<1	<1	43.3	1.59	--	<0.1
B02	B02-03	01/10/12	SoundEarth	3	6.54	<1	<1	<1	<1	28.6	1.18	--	<0.1
B03	B03-10	01/10/12	SoundEarth	10	10.6	1.55	<1	<1	<1	29.2	1.61	--	<0.1
B04	B04-05	01/11/12	SoundEarth	5	8.66	1.25	<1	<1	<1	42.3	2.02	--	<0.1
B07	B07-08	01/12/12	SoundEarth	8	8.10	<1	<1	<1	<1	16.4	1.31	--	<0.1
B08	B08-08	01/12/12	SoundEarth	8	11.0	<1	<1	<1	<1	29.7	2.90	--	<0.1
MTCA Method A Cleanup Level for Soil[4]					**2,000**	**20**	**400**	**400**	**2**	**16,000**	**250**	**NE**	**2**

NOTES:

Red denotes concentrations exceeding the MTCA Method A cleanup level for soil.

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

[1]Analyzed by EPA Method 200.8.

[2]Analyzed by Method SW846 9012m.

[3]Analyzed by EPA Method 1631E.

[4]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.

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

-- = not analyzed

bgs = below ground surface

EPA = U.S. Environmental Protection Agency

mg/kg = milligrams per kilogram

MTCA = Washington State Model Toxics Control Act

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

RCRA = Resource Conservation and Recovery Act

SoundEarth = SoundEarth Strategies, Inc.

SoundEarth Strategies

Table 4
Summary of Soil Analytical Results for PCBs
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

Sample Location	Sample ID	Sample Date	Sampled By	Sample Depth (feet bgs)	Analytical Results[1] (mg/kg)						
					Aroclor 1221	Aroclor 1232	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
P03	P03-04	01/04/12	SoundEarth	4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
P10	P10-0.5	01/05/12	SoundEarth	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
B02	B02-03	01/10/12	SoundEarth	3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MTCA Method A Cleanup Level for Soil[2]					**1**						

NOTES:

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

[1]Analyzed by U.S. Environmental Protection Agency Method 8082A.

[2]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.

< = 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
PCBs = polychlorinated biphenyls
SoundEarth = SoundEarth Strategies, Inc.

SoundEarth Strategies

Table 5
Summary of Soil Analytical Results for PAHs
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

Sample Location	Sample ID	Date Sampled	Sample Depth (feet bgs)	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene
P07	P07-02	01/05/12	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
P10	P10-0.5	01/05/12	0.5	0.027	0.079	<0.012	0.032	0.37	0.059	0.30	0.41	0.15	0.22	0.25	0.082	**0.24**	0.21	0.044	0.22
	P10-02	01/05/12	2	<0.01	<0.01	<0.01	<0.01	0.019	<0.01	0.023	0.028	0.013	0.015	0.016	<0.01	0.015	0.015	<0.01	0.013
P12	P12-02	01/05/12	2	0.012	0.016	<0.01	<0.01	0.064	0.013	0.15	0.18	0.070	0.11	0.13	0.046	**0.13**	0.12	0.018	0.14
MTCA Method A Cleanup Level for Soil[(1)]				**5**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NC**	**NC**	**NC**	**NC**	**0.1**	**NC**	**NC**	**NE**

NOTES:

Sample results reported in mg/kg.

Red denotes concentration exceeding MTCA Method A Cleanup Level.

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

Analyzed by U.S. Environmental Protection Agency Method 8270D SIM.

All measurements are micrograms per kilogram.

[(1)]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.

< = 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

NC = toxicity equivalency factor not calculated

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

PAH = polycyclic aromatic hydrocarbon

SoundEarth Strategies

Table 6
Summary of Groundwater Data
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

Sample ID and TOC Elevation	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (µg/L)																				
				DRPH[3]	ORPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	Vinyl Chloride[4]	cis-1,2-DCE[4]	TCE[4]	PCE[4]	MTBE[4]	Naphthalene[4]	Dissolved Chromium[5]	Dissolved Arsenic[5]	Dissolved Selenium[5]	Dissolved Silver[5]	Dissolved Cadmium[5]	Dissolved Barium[5]	Dissolved Lead[5]	Dissolved Mercury[6]
MW01	01/17/12	27.59	56.85	<50	<250	<0.35	<1	<1	<3	<0.2[pr]	<1	<1	<1	<1	<1	1.58	1.43	<1	<1	<1	3.94	<1	<0.1
84.44	05/01/12	25.02	59.42	--	--	--	--	--	--	<0.2	<1	<1	<1	--	--	--	--	--	--	--	--	--	--
	01/11/13	26.25	58.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/25/13	24.75	59.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/10/13	25.55	58.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW02	01/17/12	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
69.73	04/27/12	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	01/11/13	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/25/13	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/10/13	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW03	01/17/12	DRY	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
75.48	04/27/12	31.18	44.30	--	--	--	--	--	--	<0.2	2.2	83	<1	--	--	--	--	--	--	--	--	--	--
	05/08/12	31.06	44.42	--	--	--	--	--	--	<0.2	1.9	64	<1	--	--	1.69	1.44	<1	<1	<1	11.9	<1	<0.1
	01/14/13	31.78	43.70	--	--	--	--	--	--	<0.2	1.7	71	<1	--	--	--	--	--	--	--	--	--	--
	04/24/13	30.96	44.52	--	--	--	--	--	--	<0.2	1.8	76	<1	--	--	--	--	--	--	--	--	--	--
	07/10/13	Inaccessible																					
MW04	01/17/12	36.70	42.77	--	--	<0.35	<1	<1	<3	<0.2[pr]	<1	110	<1	<1	<1	18.6	<1	<1	<1	<1	4.33	<1	<0.1
79.47	04/27/12	36.09	43.38	--	--	--	--	--	--	<0.2	<1	170	<1	--	--	--	--	--	--	--	--	--	--
	01/11/13	36.44	43.03	--	--	--	--	--	--	<0.2	<1	85	<1	--	--	--	--	--	--	--	--	--	--
	04/24/13	35.93	43.54	--	--	--	--	--	--	<0.2	<1	290	<1	--	--	--	--	--	--	--	--	--	--
	07/10/13	36.15	43.32	--	--	--	--	--	--	<0.2	<1	150	<1	--	--	--	--	--	--	--	--	--	--
MW04 (Field Dup)	01/17/12	36.70	42.77	--	--	<0.35	<1	<1	<3	<0.2[pr]	<1	120	<1	<1	<1	18.6	<1	<1	<1	<1	4.65	<1	<0.1
79.47	04/27/12	36.09	43.38	--	--	--	--	--	--	<0.2	<1	170	<1	--	--	--	--	--	--	--	--	--	--
MW05	01/17/12	24.90	30.71	--	--	<0.35	<1	<1	<3	<0.2[pr]	<1	3.3	<1	<1	<1	<1	5.31	3.55	<1	<1	22.6	<1	<0.1
55.61	05/01/12	23.40	32.21	--	--	--	--	--	--	<0.2	<1	1.9	<1	--	--	--	--	--	--	--	--	--	--
	01/14/13	24.34	31.27	--	--	--	--	--	--	<0.2	<1	3.3	<1	--	--	--	--	--	--	--	--	--	--
	04/24/13	22.86	32.75	--	--	--	--	--	--	<0.2	<1	3.0	<1	--	--	--	--	--	--	--	--	--	--
	07/10/13	23.71	31.90	--	--	--	--	--	--	<0.2	<1	1.9	<1	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Level for Groundwater[7]				**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.2**	**NE**	**5**	**5**	**20**	**160**	**50**	**5**	**NE**	**NE**	**5**	**NE**	**15**	**2**

SoundEarth Strategies

Table 6
Summary of Groundwater Data
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

Sample ID and TOC Elevation	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (µg/L)																					
				DRPH[3]	ORPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	Vinyl Chloride[4]	cis-1,2-DCE[4]	TCE[4]	PCE[4]	MTBE[4]	Naphthalene[4]	Dissolved Chromium[5]	Dissolved Arsenic[5]	Dissolved Selenium[5]	Dissolved Silver[5]	Dissolved Cadmium[5]	Dissolved Barium[5]	Dissolved Lead[5]	Dissolved Mercury[6]
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	Inaccessible																					
	07/10/13	Inaccessible																					
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	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--
MW12	04/27/12	32.81	49.02	--	--	--	--	--	--	<0.2	<1	**14**	<1	--	--	--	--	--	--	--	--	--	--
81.83	01/14/13	33.30	48.53	--	--	--	--	--	--	<0.2	<1	5.0	<1	--	--	--	--	--	--	--	--	--	--
	04/25/13	32.76	49.07	--	--	--	--	--	--	<0.2	<1	**5.7**	<1	--	--	--	--	--	--	--	--	--	--
	07/10/13	33.08	48.75	--	--	--	--	--	--	<0.2	<1	**10**	<1	--	--	--	--	--	--	--	--	--	--
MW13	04/27/12	34.97	43.97	--	--	--	--	--	--	<0.2	<1	1.0	<1	--	--	--	--	--	--	--	--	--	--
78.94	05/07/12	34.94	44.00	--	--	--	--	--	--	<0.2	<1	2.0	<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	--	--	--	--	--	--	--	--	--	--
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	Inaccessible																					
	07/10/13	30.56	54.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Level for Groundwater[7]				**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.2**	**NE**	**5**	**5**	**20**	**160**	**50**	**5**	**NE**	**NE**	**5**	**NE**	**15**	**2**

SoundEarth Strategies

Table 6
Summary of Groundwater Data
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

Sample ID and TOC Elevation	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation[2] (feet)	Analytical Results (µg/L)																				
				DRPH[3]	ORPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	Vinyl Chloride[4]	cis-1,2-DCE[4]	TCE[4]	PCE[4]	MTBE[4]	Naphthalene[4]	Dissolved Chromium[5]	Dissolved Arsenic[5]	Dissolved Selenium[5]	Dissolved Silver[5]	Dissolved Cadmium[5]	Dissolved Barium[5]	Dissolved Lead[5]	Dissolved Mercury[6]
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	--	--	--	--	--	--	<0.2	<1	<1	<1	--	--	--	--	--	--	--	--	--	--	--
	07/10/13	Inaccessible																						
MTCA Method A Cleanup Level for Groundwater[7]				**500**	**500**	**5**	**1,000**	**700**	**1,000**	**0.2**	**NE**	**5**	**5**	**20**	**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.

[1]Measured in feet below a fixed spot on the top of the well casing rim.

[2]Elevation datum NAVD 88, Seattle BM#2609CC 58A at 60.344' and BM#2609CC 55A at 32.066'.

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

[4]Analyzed by EPA Method 8260C. All other 8260C analytes were not detected above the laboratory reporting limit.

[5]Analyzed by EPA Method 6020 or 200.8.

[6]Analyzed by EPA Method 1631E.

[7]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.

Laboratory Note:

[pr]Sample received with incorrect preservation. Results should be considered an estimate.

-- = not analyzed/not measured

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

µg/L = micrograms per liter

cis-1,2-DCE = cis-1,2-dichloroethene

DRPH = diesel-range petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency

MTBE = methyl tertiary-butyl ether

MTCA = Washington State Model Toxics Control Act

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

ORPH = oil-range petroleum hydrocarbons

PCE = tetrachloroethene

TCE = trichloroethene

TOC = top of casing elevation

Table 7
Remedial Component Screening Matrix
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

Component Group	Component Options	Retained for Inclusion in Cleanup Action Alternatives?	Rationale for Inclusion or Exclusion
Passive Remediation			
	No Further Action	No	Excluded because it is not protective of human health or the environment.
	Monitored Natural Attenuation	Yes	Retained as a component of all cleanup action alternatives.
	Passive Vapor Barrier	Yes	Retained as a component of cleanup action alternatives that do not immediately destroy COCs in groundwater.
	Active Vapor Barrier	No	Not considered necessary if source removal is accomplished and passive vapor barrier is implemented.
	Containment Cap	No	Not compatible with Property redevelopment plans and schedule.
	Environmental Covenant	No	Not compatible with Property redevelopment plans and schedule.
	Permeable Reactive Barrier	Yes	Retained as technology is effective for COCs in groundwater.
In Situ Physical Treatment			
	SVE	No	Implemented alone, this component will not address groundwater contamination.
	Air Sparging	No	Not retained because this technology does not treat chlorinated solvents.
	Biosparging	No	Not retained because this technology does not treat chlorinated solvents.
	Surfactant Washing	No	Not retained because this technology has the potential to mobilize contaminants from the saturated zone beyond the site boundary.
	Cosolvent Washing	No	Not retained because this technology has the potential to mobilize contaminants from the saturated zone beyond the site boundary.
	Pump and Treat	Yes	Retained for treatment of groundwater.
	DPE	No	Not retained as soil contamination is limited to the source area. And other technologies are more effective for groundwater treatment.
In Situ Thermal			
	Resistive Thermal with SVE	No	Although these in situ thermal technologies generally satisfy the MTCA threshold and modifying evaluation criteria, none are retained because they are difficult to implement and not cost-competitive with other technologies when implemented at this scale. These technologies also present an increased short-term risk of injury during their installation and operation.
	Conductive Thermal with SVE	No	
	Radio Frequency/Electromagnetic Thermal with SVE	No	
	Steam Injection with SVE and Groundwater Extraction	No	
	Hot Air Injection with SVE	No	
	Hot Water Injection with SVE and Groundwater Extraction	No	
Source Removal			
	Excavation without Shoring	Yes	Retained as a component of all cleanup action alternatives.
	Excavation with Shoring	No	Not retained because the over-excavation is not anticipated to require shoring.
	Excavation Dewatering	No	Not retained because the excavation depth will not extend into the saturated zone.
Ex Situ Source Treatment			
	Surfactant Washing	No	Not retained because these components are not cost-competitive with other technologies at this scale.
	Cosolvent Washing	No	
	Chemical Oxidation	No	
	Thermal Desorption	No	
	Landfill Disposal	Yes	This technology was retained because the excavated soil will be sent to a Subtitle D landfill.

Table 7
Remedial Component Screening Matrix
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

Component Group	Component Options	Retained for Inclusion in Cleanup Action Alternatives?	Rationale for Inclusion or Exclusion
In Situ Chemical Oxidation			
	Activated Sodium Persulfate	No	These technologies are not retained because the engineer's preferred chemical oxidant for chlorinated solvent contaminated groundwater is permanganate.
	Hydrogen Peroxide	No	
	Fenton's Reagent	No	
	RegenOx (Catalyzed Sodium Percarbonate)	No	
	Permanganate	Yes	Retained for treatment of groundwater.
Containment/Immobilization			
	Bituminization	No	Not retained because these technologies reduce the mobility of hazardous substances but not their toxicity or volume. The technologies are typically implemented ex situ.
	Emulsified Asphalt	No	
	Modified Sulfur Cement	No	
	Polyethylene Extrusion	No	Not retained because this technology is not well developed.
	Pozzolan/Portland Cement	No	Not retained because the technology reduces the mobility of hazardous substances but not the toxicity or volume. The technology is typically implemented ex situ.
	Vitrification/Molten Glass	No	Not retained because it is not cost-competitive with our technologies in this group and is difficult to implement. This technology also presents an increased short-term risk of injury during installation and operation.
	Slurry Wall Containment	No	Not retained because these technologies reduce the mobility of hazardous substances but not their toxicity or volume.
	Sheet Pile Wall Containment	No	
	Pump and Treat for Hydraulic Containment	No	
Phytoremediation			
	Hydraulic Control	No	Not retained because implementation of these technologies are not compatible with the future land use at the site, nor do these components result in a reasonable restoration time frame.
	Phyto-Degradation	No	
	Phyto-Volatilization	No	
	Phyto-Accumulation	No	
	Phyto-Stabilization	No	
	Enhanced Rhizosphere Biodegradation	No	
In Situ Bioremediation			
	Aerobic Bioremediation	No	Not retained because COCs undergo bioremediation under anaerobic conditions.
	Anaerobic Bioremediation	No	Not retained because conditions at the site are not favorable to anaerobic bioremediation.

NOTES:
COC = chemical of concern
DPE = dual-phase extraction
MTCA = Washington State Model Toxics Control Act
SVE = soil vapor extraction

Table 8
Feasibility Level Cost Estimate
Cleanup Action Alternative 1
Excavation of Soil with In Situ Chemical Oxidation of Groundwater by Permanganate
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

CAPITAL COSTs	QTY	UNIT	UNIT PRICE	COST	TOTALS
Cleanup Action Construction					
Redevelopment					
Handling and Transport of TCE-impacted Soil	1,300	ton	$ 50	$65,000	
Disposal of TCE-impacted Soil (assumes contained-out, Subtitle D Landfill)	1,300	ton	$ 35	$45,500	
Subtotal				*$ 110,500*	
Remedial Excavation					
Monitoring Well Decommissioning	7	each	$ 500	$ 3,500	
Remedial Excavation to Elevation 60 feet msl	2,500	ton	$ 45	$ 112,500	
Handling and Transport of TCE-impacted Soil	2,500	ton	$ 50	$ 125,000	
Disposal of TCE-impacted Soil (assumes contained-out, Subtitle D Landfill)	2,500	ton	$ 35	$ 87,500	
Backfill to Elevation 66 feet msl with CDF	1,200	cubic yards	$ 100	$ 120,000	
Subtotal				*$ 448,500*	
Groundwater Treatment					
Utility Clearing	1	each	$ 4,000	$ 4,000	
Injection Wells (Install Daily Rate = 3 wells per day, 59 wells)	12	days	$ 10,000	$ 120,000	
Handling and Transport of TCE-impacted Drill Cuttings	50	tons	$ 50	$ 2,500	
Disposal of TCE-impacted Soil (assumes contained-out; Subtitle D Landfill)	50	tons	$ 35	$ 1,750	
Potassium Permanganate Chemicals	1	lump sum	$ 80,000	$ 80,000	
Temporary Injection System	1	lump sum	$ 50,000	$ 50,000	
Injection Well Decommissioning	59	each	$ 500	$ 29,500	
Pre and Post Injection Manganese and pH Compliance Samples	1	lump sum	$ 1,200	$ 1,200	
Second Contingency Injection	1	lump sum	$ 50,000	$ 50,000	
Subtotal				*$ 338,950*	
CONSTRUCTION SUBTOTAL					$ 897,950
Consulting/Engineering Support Services (Percentage of Construction)					
Engineering Design, Permitting and Work Plan (6%)				$ 53,900	
Mobilization (1%)				$ 9,000	
Professional Labor for Construction (10%)				$ 89,800	
Field Equipment and Supplies (1%)				$ 9,000	
Laboratory Testing (Field Verification and Waste Profiling; 3%)				$ 26,900	
Demobilization (1%)				$ 9,000	
Regulatory Reporting (8%)				$ 71,800	
Subtotal				*$ 269,400*	
CONSULTING/ENGINEERING SUPPORT SERVICES SUBTOTAL					$ 269,400
TOTAL CAPITAL COST					**$ 1,167,350**

COMPLIANCE MONTORING	ANNUAL COST[1]	Present Worth Cost of Annual Monitoring Real Discount Rate = 0.0%	
		n = 3 years	
Quarterly Groundwater Monitoring and Reporting (3 years)	$ 20,000	$ 60,000	
Well Decommissioning (13 wells)		$ 10,000	
TOTAL PRESENT WORTH MONITORING COST			**$ 70,000**
TOTAL PRESENT WORTH COST OF CLEANUP ACTION ALTERNATIVE 1			**$ 1,237,350**

NOTES:
[1]Annual cost is 2013 year cost.

% = percent
CDF = control density fill
cy = cubic yard
msl = mean sea level
n = number of years of operation and maintenance
QTY = quantity
TCE = trichloroethene
yd = yards

Table 9
Feasibility Level Cost Estimate
Cleanup Action Alternative 2
Excavation of Soil with Groundwater Treatment by a Zero Valent Iron Permeable Reactive Barrier
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

CAPITAL COST ITEM	QTY	UNIT	UNIT PRICE	COST	TOTALS
Cleanup Action Construction					
Redevelopment					
Handling and Transport of TCE-impacted Soil	1,300	ton	$ 50	$65,000	
Disposal of TCE-impacted Soil (assumes contained-out, Subtitle D Landfill)	1,300	ton	$ 35	$45,500	
Vapor Barrier	88,000	square feet	$ 3	$264,000	
Subtotal				*$ 374,500*	
Remedial Excavation					
Monitoring Well Decommissioning	7	each	$ 500	$ 3,500	
Remedial Excavation to Elevation 60 feet msl	2,500	ton	$ 45	$ 112,500	
Handling and Transport of TCE-impacted Soil	2,500	ton	$ 50	$ 125,000	
Disposal of TCE-impacted Soil (assumes contained-out, Subtitle D Landfill)	2,500	ton	$ 35	$ 87,500	
Backfill to Elevation 66 feet msl with CDF	1,200	cubic yards	$ 100	$ 120,000	
Subtotal				*$ 448,500*	
Groundwater Treatment					
Utility Clearing	1	each	$ 4,000	$ 4,000	
Mobilization for 48" Ø caisson rig	1	lump sum	$ 5,000	$ 5,000	
Drilling Services (approximately fifty 4-foot Ø borings to 60')	3,000	vlf	$ 110	$ 330,000	
Handling and Transport of TCE-impacted Drill Cuttings	2,500	tons	$ 50	$ 125,000	
Disposal of TCE-impacted Soil (assumes contained-out; Subtitle D Landfill)	2,500	tons	$ 35	$ 87,500	
Clean structural fill for drilled caissons	765	ton	$ 40	$ 30,600	
Pea Gravel	80	ton	$ 65	$ 5,200	
Sand	260	ton	$ 20	$ 5,200	
Zero-Valent Iron Fill	370	ton	$ 1,050	$ 388,500	
Pea Gravel Hauling	180	lcy	$ 10	$ 1,800	
Sand Hauling	800	lcy	$ 10	$ 8,000	
Iron Shipping	370	ton	$ 150	$ 55,500	
Subtotal				*$ 1,046,300*	
CLEANUP ACTION SUBTOTAL					$ 1,869,300
Consulting/Engineering Support Services (Percentage of Construction)					
Engineering Design, Permitting and Work Plan (6%)				$ 112,200	
Mobilization (1%)				$ 18,700	
Professional Labor for Construction (10%)				$ 186,900	
Field Equipment and Supplies (1%)				$ 18,700	
Laboratory Testing (Field Verification and Waste Profiling; 3%)				$ 56,100	
Demobilization (1%)				$ 18,700	
Regulatory Reporting (8%)				$ 149,500	
Subtotal				*$ 560,800*	
CONSULTING/ENGINEERING SUPPORT SERVICES SUBTOTAL					$ 560,800
TOTAL CAPITAL COST					**$ 2,430,100**

COMPLIANCE MONTORING	ANNUAL COST[1]	Present Worth Cost of Annual Monitoring Real Discount Rate = 0.6%	
		n = 6 years	
Quarterly Groundwater Monitoring and Reporting (6 years)	$ 30,000	$ 176,300	
Well Decommissioning (13 wells)		$ 10,000	
TOTAL PRESENT WORTH MONITORING COST			**$ 186,300**
TOTAL PRESENT WORTH COST OF CLEANUP ACTION ALTERNATIVE 2			**$ 2,616,400**

NOTES:
[1]Annual cost is 2013 year cost.
% = percent
CDF = control density fill
lcy = loose cubic yards
msl = mean sea level
n = number of years of operation and maintenance
QTY = quantity
TCE = trichloroethene
vlf = vertical linear feet

Table 10
Feasibility Level Cost Estimate
Cleanup Action Alternative 3
Excavation of Soil with Groundwater Pump and Treat System
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

CAPITAL COST ITEM	QTY	UNIT	UNIT PRICE	COST	TOTALS
Cleanup Action Construction					
Redevelopment					
Handling and Transport of TCE-impacted Soil	1,300	ton	$ 50	$65,000	
Disposal of TCE-impacted Soil (assumes contained-out, Subtitle D Landfill)	1,300	ton	$ 35	$45,500	
Vapor Barrier	88,000	square feet	$ 3	$264,000	
Subtotal				*$ 374,500*	
Remedial Excavation					
Monitoring Well Decommissioning	7	each	$ 500	$ 3,500	
Remedial Excavation to Elevation 60 ft msl	2,500	ton	$ 45	$ 112,500	
Handling and Transport of TCE-impacted Soil	2,500	ton	$ 50	$ 125,000	
Disposal of TCE-impacted Soil (assumes contained-out; Subtitle D Landfill)	2,500	ton	$ 35	$ 87,500	
Backfill to Elevation 66 feet msl with CDF	1,200	cubic yards	$ 100	$ 120,000	
Subtotal				*$ 448,500*	
Groundwater Treatment					
Utility Clearing	1	each	$ 4,000	$ 4,000	
Groundwater Extraction Wells	8	each	$ 3,000	$ 24,000	
Trenching and Piping	2,000	linear feet	$ 100	$ 200,000	
Handling and Transport of TCE-impacted Drill Cuttings	6	tons	$ 50	$ 300	
Disposal of TCE-impacted Soil (assumes contained-out, Subtitle D Landfill)	6	tons	$ 35	$ 210	
Remediation Equipment and Controls	1	lump sum	$ 175,000	$ 175,000	
Well Vaults and Fittings	8	each	$ 2,000	$ 16,000	
Electrical Installation	1	lump sum	$ 25,000	$ 25,000	
System Decommissioning (after year 10)	1	lump sum	$ 35,000	$ 35,000	
Subtotal				*$ 479,510*	
CLEANUP ACTION SUBTOTAL					$ 1,302,510
Consulting/Engineering Support Services (Percentage of Construction)					
Engineering Design, Permitting and Work Plan (6%)				$ 78,200	
Mobilization (1%)				$ 13,000	
Professional Labor for Construction (10%)				$ 130,300	
Field Equipment and Supplies (1%)				$ 13,000	
Laboratory Testing (Field Verification and Waste Profiling; 3%)				$ 39,100	
Demobilization (1%)				$ 13,000	
Regulatory Reporting (8%)				$ 104,200	
Subtotal				*$ 390,800*	
CONSULTING/ENGINEERING SUPPORT SERVICES SUBTOTAL					$ 390,800
TOTAL CAPITAL COST					**$ 1,693,310**

COMPLIANCE MONTORING	ANNUAL COST[1]	Present Worth Cost of Annual Monitoring Real Discount Rate = 1.1% n = 10 years	
Quarterly Groundwater Monitoring and Reporting (10 years)	$ 30,000	$ 282,600	
Monthly Operation and Maintenance and Reporting (10 years)	$ 65,000	$ 612,300	
Well Decommissioning (21 wells)		$ 20,000	
TOTAL PRESENT WORTH MONITORING COST			**$ 914,900**
TOTAL PRESENT WORTH COST OF CLEANUP ACTION ALTERNATIVE 3			**$ 2,608,210**

NOTES:
[1] Annual cost is 2013 year cost.
% = percent
CDF = control density fill
n = number of years of operation and maintenance
QTY = quantity
TCE = trichloroethene

SoundEarth Strategies

Table 11
Cleanup Action Alternatives Screening Summary
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

Cleanup Action Alternatives	Remedial Details	Washington State Department of Ecology Evaluation Criteria/Relative Ranking (1 = Low 10 = High)						Ranking Score[1]
		Weighting Factors for Evaluation Criteria						
		15%	20%	15%	20%	20%	10%	
		Protectiveness	Permanence	Effectiveness over the Long Term	Management of Short-Term Risks	Technical and Administrative Implementability	Consideration of Public Concerns	
1. Excavation of Soil with In Situ Chemical Oxidation of Groundwater by Permanganate	Excavation of source area soil and permanganate injections to chemically oxidize dissolved COCs.	9	8	8	6	8	N/A	**7.0**
2. Excavation of Soil with Groundwater Treatment by a Zero Valent Iron Permeable Reactive Barrier	Excavation of source area soil and installation of a zero valent iron permeable reactive barrier to chemically reduce dissolved COCs.	7	8	7	6	6	N/A	**6.1**
3. Excavation of Soil with Groundwater Pump and Treat System	Excavation of source area soil and treatment of dissolved COCs with groundwater pump and treat system.	6	8	6	6	4	N/A	**5.4**

NOTES:

Monitored natural attenuation of COCs is retained for all cleanup action alternatives.

[1]The ranking score for each alternative is the average of the weighted score for five of the six evaluation criteria. Consideration of Public Concerns are not included in the ranking score.

COCs = chemicals of concern

N/A = not available

CHARTS

SoundEarth Strategies

Chart 1
Cost and Relative Ranking of Cleanup Action Alternatives
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington

DRAFT

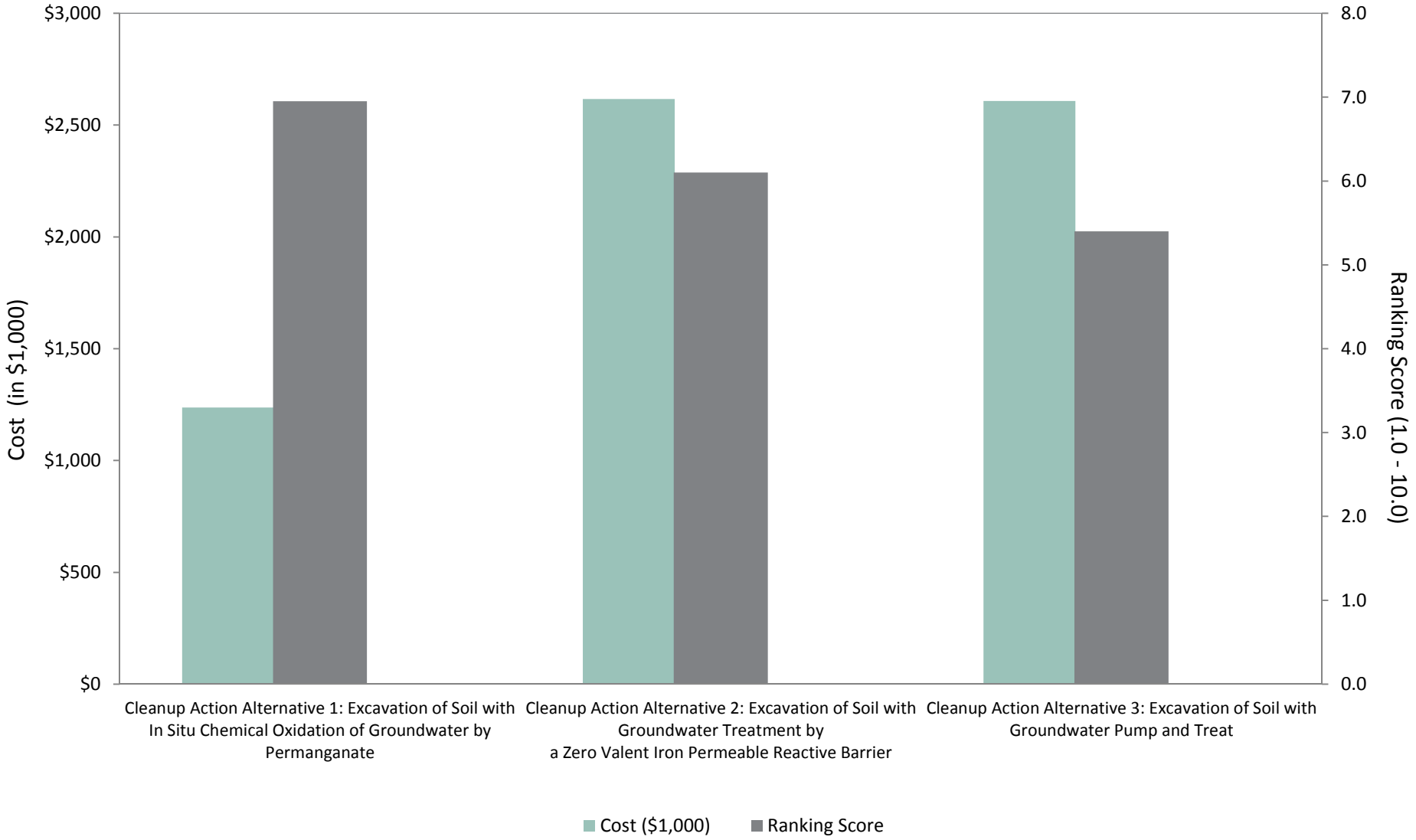
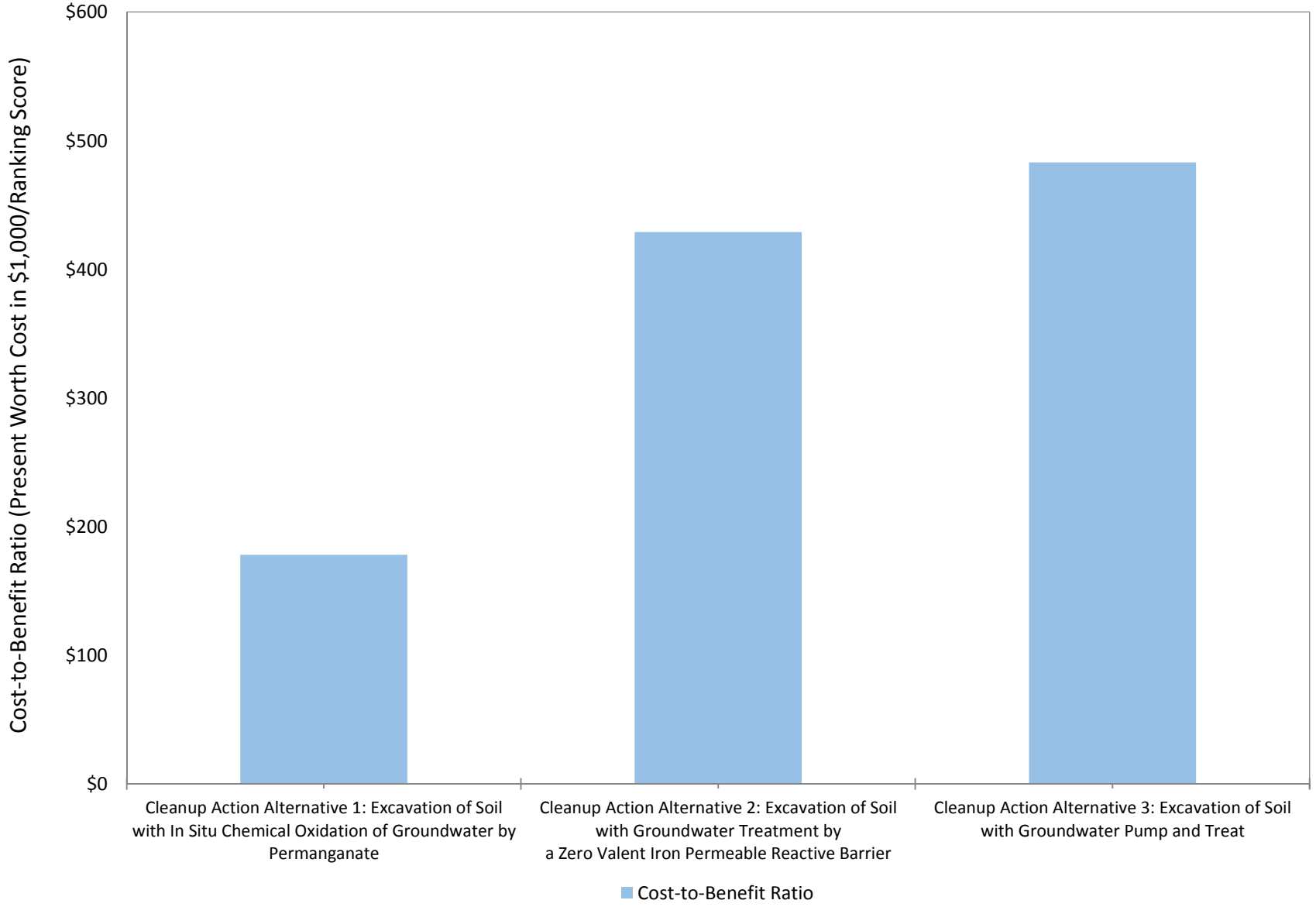


Chart 2
Cost-to-Benefit Ratio for Cleanup Action Alternatives
Avtech Property
3400 Wallingford Avenue North
Seattle, Washington



APPENDIX A
HISTORICAL REFERENCES

King County Assessor Records

New Search | Property Tax Bill | Map This Property | Glossary of Terms | Area Report | Print Property Detail

PARCEL DATA

Parcel	408330-6695	Jurisdiction	SEATTLE
Name	AVTECH CORPORATION	Levy Code	0010
Site Address	3422 WALLINGFORD AVE N 98103	Property Type	C
Geo Area	17-10	Plat Block / Building Number	68
Spec Area	0-0	Plat Lot / Unit Number	10
Property Name	Derelict Residence	Quarter-Section-Township-Range	SE-18-25-4

Legal Description

LAKE UNION ADD

LAND DATA

Highest & Best Use As If Vacant	MULTI-FAMILY DWELLING	Percentage Unusable	0
Highest & Best Use As Improved	OTHER	Unbuildable	NO
Present Use	Shell Structure	Restrictive Size Shape	NO
Base Land Value SqFt	100	Zoning	LR2
Base Land Value	684,000	Water	WATER DISTRICT
% Base Land Value Impacted	100	Sewer/Septic	PUBLIC
Base Land Valued Date	12/8/2010	Road Access	PUBLIC
Base Land Value Tax Year	2012	Parking	ADEQUATE
Land SqFt	6,840	Street Surface	PAVED
Acres	0.16		

Views

Rainier	
Territorial	
Olympics	
Cascades	
Seattle Skyline	
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	
Lot Depth Factor	
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	
Proximity Influence	NO

Designations

Historic Site	
Current Use	
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

Nuisances

Topography	NO
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

BUILDING

Accessory

Accessory Type	Picture	Description	Qty	Unit Of Measure	Size	Grade	Eff Yr	%	Value	Date Valued

Reference Links:

- King County Tax Links
- Property Tax Advisor
- Washington State Department of Revenue (External link)
- Washington State Board of Tax Appeals (External link)
- Board of Appeals/Equalization
- Districts Report
- iMap
- Recorder's Office

  Scanned images of surveys and other map documents

  Scanned images of plats

Flat-Valued SFR			1	Square Feet	3120			1000	6/12/2000	

TAX ROLL HISTORY

Account	Valued Year	Tax Year	Omit Year	Levy Code	Appraised Land Value	Appraised Imps Value	Appraised Total Value	New Dollars	Taxable Land Value	Taxable Imps Value	Taxable Total Value	Tax Value Reason
408330669503	2011	2012		0010	$684,000	$1,000	$685,000	$0	$684,000	$1,000	$685,000	
408330669503	2010	2011		0010	$684,000	$1,000	$685,000	$0	$684,000	$1,000	$685,000	
408330669503	2009	2010		0010	$684,000	$1,000	$685,000	$0	$684,000	$1,000	$685,000	
408330669503	2008	2009		0010	$649,800	$1,000	$650,800	$0	$649,800	$1,000	$650,800	
408330669503	2007	2008		0010	$492,400	$1,000	$493,400	$0	$492,400	$1,000	$493,400	
408330669503	2006	2007		0010	$410,400	$1,000	$411,400	$0	$410,400	$1,000	$411,400	
408330669503	2005	2006		0010	$376,200	$1,000	$377,200	$0	$376,200	$1,000	$377,200	
408330669503	2004	2005		0010	$342,000	$1,000	$343,000	$0	$342,000	$1,000	$343,000	
408330669503	2003	2004		0010	$342,000	$1,000	$343,000	$0	$342,000	$1,000	$343,000	
408330669503	2002	2003		0010	$342,000	$1,000	$343,000	$0	$342,000	$1,000	$343,000	
408330669503	2001	2002		0010	$342,000	$1,000	$343,000	$0	$342,000	$1,000	$343,000	
408330669503	2000	2001		0010	$273,600	$1,000	$274,600	$0	$273,600	$1,000	$274,600	
408330669503	1999	2000		0010	$114,000	$47,000	$161,000	$0	$114,000	$47,000	$161,000	
408330669503	1998	1999		0010	$102,600	$30,000	$132,600	$0	$102,600	$30,000	$132,600	
408330669503	1997	1998		0010	$0	$0	$0	$0	$113,000	$51,000	$164,000	
408330669503	1996	1997		0010	$0	$0	$0	$0	$113,000	$51,000	$164,000	
408330669503	1994	1995		0010	$0	$0	$0	$0	$113,000	$51,000	$164,000	
408330669503	1992	1993		0010	$0	$0	$0	$0	$113,000	$50,800	$163,800	
408330669503	1990	1991		0010	$0	$0	$0	$0	$101,800	$45,800	$147,600	
408330669503	1988	1989		0010	$0	$0	$0	$0	$73,900	$7,100	$81,000	
408330669503	1986	1987		0010	$0	$0	$0	$0	$67,000	$16,200	$83,200	
408330669503	1984	1985		0010	$0	$0	$0	$0	$38,000	$44,200	$82,200	
408330669503	1982	1983		0010	$0	$0	$0	$0	$38,000	$44,200	$82,200	

SALES HISTORY

Excise Number	Recording Number	Document Date	Sale Price	Seller Name	Buyer Name	Instrument	Sale Reason
1477884	199604031530	4/2/1996	$164,000.00	AVTECH CORPORATION EMPLOYEE PROFIT SHARING TRUST	AVTECH CORPORATION	Quit Claim Deed	None

REVIEW HISTORY

PERMIT HISTORY

HOME IMPROVEMENT EXEMPTION

Updated: Sept. 7, 2011

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New Search | Property Tax Bill | Map This Property | Glossary of Terms | Area Report | Print Property Detail

PARCEL DATA

Parcel	408330-6660	Jurisdiction	SEATTLE
Name	AVTECH CORPORATION	Levy Code	0010
Site Address	3421 BURKE AVE N 98103	Property Type	C
Geo Area	17-10	Plat Block / Building Number	68
Spec Area	0-0	Plat Lot / Unit Number	3
Property Name	vacant land	Quarter-Section-Township-Range	SE-18-25-4

Legal Description

LAKE UNION ADD

LAND DATA

Highest & Best Use As If Vacant	MULTI-FAMILY DWELLING	Percentage Unusable	0
Highest & Best Use As Improved	(unknown)	Unbuildable	NO
Present Use	Vacant(Multi-family)	Restrictive Size Shape	NO
Base Land Value SqFt	100	Zoning	LR2
Base Land Value	684,000	Water	WATER DISTRICT
% Base Land Value Impacted	100	Sewer/Septic	PUBLIC
Base Land Valued Date	12/8/2010	Road Access	PUBLIC
Base Land Value Tax Year	2012	Parking	
Land SqFt	6,840	Street Surface	
Acres	0.16		

Views

Rainier	
Territorial	
Olympics	
Cascades	
Seattle Skyline	
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	
Lot Depth Factor	
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	
Proximity Influence	NO

Designations

Historic Site	
Current Use	
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

Nuisances

Topography	NO
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

BUILDING

Reference Links:

- King County Tax Links
- Property Tax Advisor
- Washington State Department of Revenue (External link)
- Washington State Board of Tax Appeals (External link)
- Board of Appeals/Equalization
- Districts Report
- iMap
- Recorder's Office

  Scanned images of surveys and other map documents

  Scanned images of plats

TAX ROLL HISTORY

Account	Valued Year	Tax Year	Omit Year	Levy Code	Appraised Land Value	Appraised Imps Value	Appraised Total Value	New Dollars	Taxable Land Value	Taxable Imps Value	Taxable Total Value	Tax Value Reason
408330666004	2011	2012		0010	$684,000	$0	$684,000	$0	$684,000	$0	$684,000	
408330666004	2010	2011		0010	$684,000	$0	$684,000	$0	$684,000	$0	$684,000	
408330666004	2009	2010		0010	$684,000	$0	$684,000	$0	$684,000	$0	$684,000	
408330666004	2008	2009		0010	$649,800	$0	$649,800	$0	$649,800	$0	$649,800	
408330666004	2007	2008		0010	$492,400	$0	$492,400	$0	$492,400	$0	$492,400	
408330666004	2006	2007		0010	$410,400	$0	$410,400	$0	$410,400	$0	$410,400	
408330666004	2005	2006		0010	$376,200	$0	$376,200	$0	$376,200	$0	$376,200	
408330666004	2004	2005		0010	$342,000	$0	$342,000	$0	$342,000	$0	$342,000	
408330666004	2003	2004		0010	$342,000	$0	$342,000	$0	$342,000	$0	$342,000	
408330666004	2002	2003		0010	$342,000	$0	$342,000	$0	$342,000	$0	$342,000	
408330666004	2001	2002		0010	$342,000	$0	$342,000	$0	$342,000	$0	$342,000	
408330666004	2000	2001		0010	$273,600	$0	$273,600	$0	$273,600	$0	$273,600	
408330666004	1999	2000		0010	$273,600	$0	$273,600	$0	$273,600	$0	$273,600	
408330666004	1998	1999		0010	$171,000	$0	$171,000	$0	$171,000	$0	$171,000	
408330666004	1997	1998		0010	$0	$0	$0	$0	$171,000	$0	$171,000	
408330666004	1996	1997		0010	$0	$0	$0	$0	$171,000	$0	$171,000	
408330666004	1994	1995		0010	$0	$0	$0	$0	$171,000	$0	$171,000	
408330666004	1992	1993		0010	$0	$0	$0	$0	$171,000	$0	$171,000	
408330666004	1990	1991		0010	$0	$0	$0	$0	$82,000	$0	$82,000	
408330666004	1988	1989		0010	$0	$0	$0	$0	$82,000	$0	$82,000	
408330666004	1986	1987		0010	$0	$0	$0	$0	$68,400	$0	$68,400	
408330666004	1984	1985		0010	$0	$0	$0	$0	$61,500	$0	$61,500	
408330666004	1982	1983		0010	$0	$0	$0	$0	$61,500	$0	$61,500	

SALES HISTORY

Excise Number	Recording Number	Document Date	Sale Price	Seller Name	Buyer Name	Instrument	Sale Reason
1450988	199510041389	10/3/1995	$171,000.00	AVTECH CORPORATION EMPLOYEES	AVTECH CORPORATION	Quit Claim Deed	Trust

REVIEW HISTORY

PERMIT HISTORY

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PARCEL DATA

Parcel	408330-6670	Jurisdiction	SEATTLE
Name	AUTECH INC	Levy Code	0010
Site Address	3400 WALLINGFORD AVE N 98103	Property Type	C
Geo Area	17-10	Plat Block / Building Number	68
Spec Area	0-0	Plat Lot / Unit Number	4 THRU 9
Property Name	AVTECH CORP	Quarter-Section-Township-Range	SE-18-25-4

Legal Description

LAKE UNION ADD

LAND DATA

Highest & Best Use As If Vacant	MANUFACTURING	Percentage Unusable	0
Highest & Best Use As Improved	PRESENT USE	Unbuildable	NO
Present Use	Industrial(Heavy)	Restrictive Size Shape	NO
Base Land Value SqFt	100	Zoning	C2-40
Base Land Value	4,104,000	Water	WATER DISTRICT
% Base Land Value Impacted	100	Sewer/Septic	PUBLIC
Base Land Valued Date	12/8/2010	Road Access	PUBLIC
Base Land Value Tax Year	2012	Parking	
Land SqFt	41,040	Street Surface	PAVED
Acres	0.94		

Views

Rainier	
Territorial	
Olympics	
Cascades	
Seattle Skyline	
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	
Lot Depth Factor	
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	
Proximity Influence	NO

Designations

Historic Site	
Current Use	
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

Nuisances

Topography	NO
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

BUILDING

Building Number	1
Building Description	OFFICE & MFG
Number Of Buildings Aggregated	1
Predominant Use	INDUSTRIAL LIGHT MANUFACTURING (494)

Reference Links:

- King County Tax Links
- Property Tax Advisor
- Washington State Department of Revenue (External link)
- Washington State Board of Tax Appeals (External link)
- Board of Appeals/Equalization
- Districts Report
- iMap
- Recorder's Office

  Scanned images of surveys and other map documents

  Scanned images of plats

Shape	Rect or Slight Irreg
Construction Class	MASONRY
Building Quality	AVERAGE
Stories	2
Building Gross Sq Ft	31,360
Building Net Sq Ft	31,360
Year Built	1912
Eff. Year	1969
Percentage Complete	100
Heating System	HEAT PUMP
Sprinklers	No
Elevators	

1 2

Section(s) Of Building Number: 1

Section Number	Section Use	Description	Stories	Height	Floor Number	Gross Sq Ft	Net Sq Ft
1	INDUSTRIAL LIGHT MANUFACTURING (494)		2	12		31,360	31,360

TAX ROLL HISTORY

Account	Valued Year	Tax Year	Omit Year	Levy Code	Appraised Land Value	Appraised Imps Value	Appraised Total Value	New Dollars	Taxable Land Value	Taxable Imps Value	Taxable Total Value	Tax Value Reason
408330667002	2011	2012		0010	$4,104,000	$790,700	$4,894,700	$0	$4,104,000	$790,700	$4,894,700	
408330667002	2010	2011		0010	$4,104,000	$98,400	$4,202,400	$0	$4,104,000	$98,400	$4,202,400	
408330667002	2009	2010		0010	$4,104,000	$98,500	$4,202,500	$0	$4,104,000	$98,500	$4,202,500	
408330667002	2008	2009		0010	$3,693,600	$508,900	$4,202,500	$0	$3,693,600	$508,900	$4,202,500	
408330667002	2007	2008		0010	$3,078,000	$861,800	$3,939,800	$0	$3,078,000	$861,800	$3,939,800	
408330667002	2006	2007		0010	$2,667,600	$1,040,400	$3,708,000	$0	$2,667,600	$1,040,400	$3,708,000	
408330667002	2005	2006		0010	$2,257,200	$1,019,600	$3,276,800	$0	$2,257,200	$1,019,600	$3,276,800	
408330667002	2004	2005		0010	$2,052,000	$1,224,800	$3,276,800	$0	$2,052,000	$1,224,800	$3,276,800	
408330667002	2003	2004		0010	$2,052,000	$1,224,800	$3,276,800	$0	$2,052,000	$1,224,800	$3,276,800	
408330667002	2002	2003		0010	$2,052,000	$1,226,400	$3,278,400	$0	$2,052,000	$1,226,400	$3,278,400	
408330667002	2001	2002		0010	$2,052,000	$1,020,000	$3,072,000	$0	$2,052,000	$1,020,000	$3,072,000	
408330667002	2000	2001		0010	$1,641,600	$1,430,400	$3,072,000	$0	$1,641,600	$1,430,400	$3,072,000	
408330667002	1999	2000		0010	$1,641,600	$213,700	$1,855,300	$0	$1,641,600	$213,700	$1,855,300	
408330667002	1998	1999		0010	$1,231,200	$624,100	$1,855,300	$0	$1,231,200	$624,100	$1,855,300	
408330667002	1997	1998		0010	$0	$0	$0	$0	$1,026,000	$424,000	$1,450,000	
408330667002	1996	1997		0010	$0	$0	$0	$0	$1,026,000	$424,000	$1,450,000	
408330667002	1994	1995		0010	$0	$0	$0	$0	$1,026,000	$424,000	$1,450,000	
408330667002	1992	1993		0010	$0	$0	$0	$0	$1,026,000	$424,000	$1,450,000	
408330667002	1990	1991		0010	$0	$0	$0	$0	$820,800	$477,000	$1,297,800	
408330667002	1988	1989		0010	$0	$0	$0	$0	$820,800	$477,000	$1,297,800	
408330667002	1987	1988		0010	$0	$0	$0	$0	$451,400	$585,100	$1,036,500	
408330667002	1986	1987		0010	$0	$0	$0	$0	$451,400	$283,800	$735,200	
408330667002	1984	1985		0010	$0	$0	$0	$0	$430,900	$259,100	$690,000	
408330667002	1982	1983		0010	$0	$0	$0	$0	$430,900	$259,100	$690,000	

SALES HISTORY

REVIEW HISTORY

PERMIT HISTORY

Permit Number	Permit Description	Type	Issue Date	Permit Value	Permit Status	Issuing Jurisdiction	Reviewed Date
707151	None	Building, New	6/29/1999	$534,240	Complete	SEATTLE	7/5/2000

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PARCEL DATA

Parcel	408330-7105	Jurisdiction	SEATTLE
Name	HANCOCK BOB	Levy Code	0010
Site Address	1815 N 34TH ST 98103	Property Type	C
Geo Area	17-10	Plat Block / Building Number	76
Spec Area	0-0	Plat Lot / Unit Number	1-2-3
Property Name	AV TECH	Quarter-Section-Township-Range	SE-18-25-4

Legal Description

LAKE UNION ADD

LAND DATA

Highest & Best Use As If Vacant	MULTI-FAMILY DWELLING	Percentage Unusable	0
Highest & Best Use As Improved	OTHER	Unbuildable	NO
Present Use	Warehouse	Restrictive Size Shape	NO
Base Land Value SqFt	100	Zoning	C2-40
Base Land Value	2,052,000	Water	WATER DISTRICT
% Base Land Value Impacted	100	Sewer/Septic	PUBLIC
Base Land Valued Date	12/8/2010	Road Access	PUBLIC
Base Land Value Tax Year	2012	Parking	
Land SqFt	20,520	Street Surface	PAVED
Acres	0.47		

Views

Rainier	
Territorial	GOOD
Olympics	
Cascades	
Seattle Skyline	AVERAGE
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	
Lot Depth Factor	
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	
Proximity Influence	NO

Designations

Historic Site	
Current Use	
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

Nuisances

Topography	NO
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

BUILDING

Building Number	1
Building Description	WHSE
Number Of Buildings Aggregated	1
Predominant Use	STORAGE WAREHOUSE (406)

Reference Links:

- King County Tax Links
- Property Tax Advisor
- Washington State Department of Revenue (External link)
- Washington State Board of Tax Appeals (External link)
- Board of Appeals/Equalization
- Districts Report
- iMap
- Recorder's Office

  Scanned images of surveys and other map documents

  Scanned images of plats

Shape	Rect or Slight Irreg
Construction Class	WOOD FRAME
Building Quality	AVERAGE
Stories	1
Building Gross Sq Ft	10,390
Building Net Sq Ft	10,390
Year Built	1934
Eff. Year	1985
Percentage Complete	100
Heating System	SPACE HEATERS
Sprinklers	No
Elevators	

1 2

Section(s) Of Building Number: 1

Section Number	Section Use	Description	Stories	Height	Floor Number	Gross Sq Ft	Net Sq Ft
1	STORAGE WAREHOUSE (406)		1	14		9,760	9,760
2	BASEMENT, UNFINISHED (703)		1	8		630	630

TAX ROLL HISTORY

Account	Valued Year	Tax Year	Omit Year	Levy Code	Appraised Land Value	Appraised Imps Value	Appraised Total Value	New Dollars	Taxable Land Value	Taxable Imps Value	Taxable Total Value	Tax Value Reason
408330710505	2011	2012		0010	$2,052,000	$1,000	$2,053,000	$0	$2,052,000	$1,000	$2,053,000	
408330710505	2010	2011		0010	$2,052,000	$1,000	$2,053,000	$0	$2,052,000	$1,000	$2,053,000	
408330710505	2009	2010		0010	$2,052,000	$1,000	$2,053,000	$0	$2,052,000	$1,000	$2,053,000	
408330710505	2008	2009		0010	$1,846,800	$1,000	$1,847,800	$0	$1,846,800	$1,000	$1,847,800	
408330710505	2007	2008		0010	$1,539,000	$24,800	$1,563,800	$0	$1,539,000	$24,800	$1,563,800	
408330710505	2006	2007		0010	$1,333,800	$138,100	$1,471,900	$0	$1,333,800	$138,100	$1,471,900	
408330710505	2005	2006		0010	$1,231,200	$232,000	$1,463,200	$0	$1,231,200	$232,000	$1,463,200	
408330710505	2004	2005		0010	$1,231,200	$218,800	$1,450,000	$0	$1,231,200	$218,800	$1,450,000	
408330710505	2003	2004		0010	$1,231,200	$218,800	$1,450,000	$0	$1,231,200	$218,800	$1,450,000	
408330710505	2002	2003		0010	$1,231,200	$232,000	$1,463,200	$0	$1,231,200	$232,000	$1,463,200	
408330710505	2001	2002		0010	$1,231,200	$232,000	$1,463,200	$0	$1,231,200	$232,000	$1,463,200	
408330710505	2000	2001		0010	$1,026,000	$437,200	$1,463,200	$0	$1,026,000	$437,200	$1,463,200	
408330710505	1999	2000		0010	$1,026,000	$437,200	$1,463,200	$0	$1,026,000	$437,200	$1,463,200	
408330710505	1998	1999		0010	$615,600	$8,700	$624,300	$0	$615,600	$8,700	$624,300	
408330710505	1997	1998		0010	$0	$0	$0	$0	$513,000	$1,000	$514,000	
408330710505	1996	1997		0010	$0	$0	$0	$0	$513,000	$1,000	$514,000	
408330710505	1994	1995		0010	$0	$0	$0	$0	$513,000	$1,000	$514,000	
408330710505	1992	1993		0010	$0	$0	$0	$0	$513,000	$1,000	$514,000	
408330710505	1990	1991		0010	$0	$0	$0	$0	$410,400	$84,100	$494,500	
408330710505	1988	1989		0010	$0	$0	$0	$0	$410,400	$84,100	$494,500	
408330710505	1986	1987		0010	$0	$0	$0	$0	$225,700	$164,500	$390,200	
408330710505	1984	1985		0010	$0	$0	$0	$0	$215,400	$69,600	$285,000	
408330710505	1982	1983		0010	$0	$0	$0	$0	$215,400	$69,600	$285,000	

SALES HISTORY

REVIEW HISTORY

PERMIT HISTORY

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PARCEL DATA

Parcel	408330-7160	Jurisdiction	SEATTLE
Name	AVTECH CORP	Levy Code	0010
Site Address	3326 WALLINGFORD AVE N 98103	Property Type	C
Geo Area	17-10	Plat Block / Building Number	76
Spec Area	0-0	Plat Lot / Unit Number	10-11
Property Name	AVTECH	Quarter-Section-Township-Range	SE-18-25-4

Legal Description

LAKE UNION ADD N 30 FT OF 10 & ALL 11

LAND DATA

Highest & Best Use As If Vacant	MULTI-FAMILY DWELLING	Percentage Unusable	0
Highest & Best Use As Improved	OTHER	Unbuildable	NO
Present Use	Industrial(Lignt)	Restrictive Size Shape	NO
Base Land Value SqFt	100	Zoning	C2-40
Base Land Value	1,026,000	Water	WATER DISTRICT
% Base Land Value Impacted	100	Sewer/Septic	PUBLIC
Base Land Valued Date	12/8/2010	Road Access	PUBLIC
Base Land Value Tax Year	2012	Parking	
Land SqFt	10,260	Street Surface	PAVED
Acres	0.24		

Views

Rainier	
Territorial	GOOD
Olympics	
Cascades	
Seattle Skyline	AVERAGE
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	
Lot Depth Factor	
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	
Proximity Influence	NO

Designations

Historic Site	
Current Use	
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

Nuisances

Topography	NO
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

BUILDING

Building Number	1
Building Description	WHSE
Number Of Buildings Aggregated	1
Predominant Use	STORAGE WAREHOUSE (406)

Reference Links:

- King County Tax Links
- Property Tax Advisor
- Washington State Department of Revenue (External link)
- Washington State Board of Tax Appeals (External link)
- Board of Appeals/Equalization
- Districts Report
- iMap
- Recorder's Office

  Scanned images of surveys and other map documents

  Scanned images of plats

Shape	Rect or Slight Irreg
Construction Class	MASONRY
Building Quality	AVERAGE
Stories	1
Building Gross Sq Ft	12,080
Building Net Sq Ft	12,080
Year Built	1961
Eff. Year	1980
Percentage Complete	100
Heating System	FORCED AIR UNIT
Sprinklers	No
Elevators	

Section(s) Of Building Number: 1

Section Number	Section Use	Description	Stories	Height	Floor Number	Gross Sq Ft	Net Sq Ft
1	STORAGE WAREHOUSE (406)		1	16		12,080	12,080

TAX ROLL HISTORY

Account	Valued Year	Tax Year	Omit Year	Levy Code	Appraised Land Value	Appraised Imps Value	Appraised Total Value	New Dollars	Taxable Land Value	Taxable Imps Value	Taxable Total Value	Tax Value Reason
408330716007	2011	2012		0010	$1,026,000	$52,500	$1,078,500	$0	$1,026,000	$52,500	$1,078,500	
408330716007	2010	2011		0010	$1,026,000	$52,500	$1,078,500	$0	$1,026,000	$52,500	$1,078,500	
408330716007	2009	2010		0010	$1,026,000	$6,800	$1,032,800	$0	$1,026,000	$6,800	$1,032,800	
408330716007	2008	2009		0010	$923,400	$132,400	$1,055,800	$0	$923,400	$132,400	$1,055,800	
408330716007	2007	2008		0010	$769,500	$220,300	$989,800	$0	$769,500	$220,300	$989,800	
408330716007	2006	2007		0010	$666,900	$298,800	$965,700	$0	$666,900	$298,800	$965,700	
408330716007	2005	2006		0010	$615,600	$302,500	$918,100	$0	$615,600	$302,500	$918,100	
408330716007	2004	2005		0010	$615,600	$302,500	$918,100	$0	$615,600	$302,500	$918,100	
408330716007	2003	2004		0010	$615,600	$302,500	$918,100	$0	$615,600	$302,500	$918,100	
408330716007	2002	2003		0010	$615,600	$290,400	$906,000	$0	$615,600	$290,400	$906,000	
408330716007	2001	2002		0010	$615,600	$290,400	$906,000	$0	$615,600	$290,400	$906,000	
408330716007	2000	2001		0010	$513,000	$393,000	$906,000	$0	$513,000	$393,000	$906,000	
408330716007	1999	2000		0010	$513,000	$1,000	$514,000	$0	$513,000	$1,000	$514,000	
408330716007	1998	1999		0010	$307,800	$163,300	$471,100	$0	$307,800	$163,300	$471,100	
408330716007	1997	1998		0010	$0	$0	$0	$0	$256,500	$218,500	$475,000	
408330716007	1996	1997		0010	$0	$0	$0	$0	$256,500	$218,500	$475,000	
408330716007	1994	1995		0010	$0	$0	$0	$0	$256,500	$218,500	$475,000	
408330716007	1992	1993		0010	$0	$0	$0	$0	$256,500	$218,500	$475,000	
408330716007	1990	1991		0010	$0	$0	$0	$0	$205,200	$269,800	$475,000	
408330716007	1988	1989		0010	$0	$0	$0	$0	$205,200	$162,300	$367,500	
408330716007	1986	1987		0010	$0	$0	$0	$0	$211,800	$49,100	$260,900	
408330716007	1984	1985		0010	$0	$0	$0	$0	$102,600	$97,400	$200,000	
408330716007	1982	1983		0010	$0	$0	$0	$0	$102,600	$97,400	$200,000	

SALES HISTORY

REVIEW HISTORY

PERMIT HISTORY

HOME IMPROVEMENT EXEMPTION

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New Search | Property Tax Bill | Map This Property | Glossary of Terms | Area Report | Print Property Detail

PARCEL DATA

Parcel	408330-7155	Jurisdiction	SEATTLE
Name	AVTEC CORPORATION	Levy Code	0010
Site Address	3320 WALLINGFORD AVE N 98103	Property Type	C
Geo Area	17-10	Plat Block / Building Number	76
Spec Area	0-0	Plat Lot / Unit Number	10
Property Name	TOP DRAWER	Quarter-Section-Township-Range	SE-18-25-4

Legal Description

LAKE UNION ADD S 30 FT

LAND DATA

Highest & Best Use As If Vacant	MULTI-FAMILY DWELLING	Percentage Unusable	0
Highest & Best Use As Improved	OTHER	Unbuildable	NO
Present Use	Industrial(Lignt)	Restrictive Size Shape	NO
Base Land Value SqFt	100	Zoning	C2-40
Base Land Value	342,000	Water	WATER DISTRICT
% Base Land Value Impacted	100	Sewer/Septic	PUBLIC
Base Land Valued Date	12/8/2010	Road Access	PUBLIC
Base Land Value Tax Year	2012	Parking	
Land SqFt	3,420	Street Surface	PAVED
Acres	0.08		

Views

Rainier	
Territorial	
Olympics	
Cascades	
Seattle Skyline	
Puget Sound	
Lake Washington	
Lake Sammamish	
Lake/River/Creek	
Other View	

Waterfront

Waterfront Location	
Waterfront Footage	
Lot Depth Factor	
Waterfront Bank	
Tide/Shore	
Waterfront Restricted Access	
Waterfront Access Rights	NO
Poor Quality	
Proximity Influence	NO

Designations

Historic Site	
Current Use	
Nbr Bldg Sites	
Adjacent to Golf Fairway	NO
Adjacent to Greenbelt	NO
Other Designation	NO
Deed Restrictions	NO
Development Rights Purchased	NO
Easements	NO
Native Growth Protection Easement	NO
DNR Lease	NO

Nuisances

Topography	NO
Traffic Noise	
Airport Noise	
Power Lines	NO
Other Nuisances	NO

Problems

Water Problems	NO
Transportation Concurrency	NO
Other Problems	NO

Environmental

Environmental	NO

BUILDING

Building Number	1
Building Description	WHSE AND OFFICE
Number Of Buildings Aggregated	1
Predominant Use	STORAGE WAREHOUSE (406)

Reference Links:

- King County Tax Links
- Property Tax Advisor
- Washington State Department of Revenue (External link)
- Washington State Board of Tax Appeals (External link)
- Board of Appeals/Equalization
- Districts Report
- iMap
- Recorder's Office

  Scanned images of surveys and other map documents

  Scanned images of plats

Shape	Rect or Slight Irreg
Construction Class	WOOD FRAME
Building Quality	AVERAGE
Stories	1
Building Gross Sq Ft	2,880
Building Net Sq Ft	2,880
Year Built	1978
Eff. Year	1985
Percentage Complete	100
Heating System	WARMED AND COOLED AIR
Sprinklers	No
Elevators	

Section(s) Of Building Number: 1

Section Number	Section Use	Description	Stories	Height	Floor Number	Gross Sq Ft	Net Sq Ft
1	STORAGE WAREHOUSE (406)		1	21		2,280	2,280

Section Feature(s) Of Section Number: 1

Feature Type	Gross Sq Ft	Net Sq Ft
MEZZANINES-OFFICE (761)	600	600

TAX ROLL HISTORY

Account	Valued Year	Tax Year	Omit Year	Levy Code	Appraised Land Value	Appraised Imps Value	Appraised Total Value	New Dollars	Taxable Land Value	Taxable Imps Value	Taxable Total Value	Tax Value Reason
408330715504	2011	2012		0010	$342,000	$1,000	$343,000	$0	$342,000	$1,000	$343,000	
408330715504	2010	2011		0010	$342,000	$1,000	$343,000	$1,000	$342,000	$1,000	$343,000	
408330715504	2009	2010		0010	$342,000	$0	$342,000	$0	$342,000	$0	$342,000	
408330715504	2008	2009		0010	$307,800	$1,000	$308,800	$0	$307,800	$1,000	$308,800	
408330715504	2007	2008		0010	$256,500	$3,200	$259,700	$0	$256,500	$3,200	$259,700	
408330715504	2006	2007		0010	$222,300	$22,100	$244,400	$0	$222,300	$22,100	$244,400	
408330715504	2005	2006		0010	$205,200	$25,200	$230,400	$0	$205,200	$25,200	$230,400	
408330715504	2004	2005		0010	$205,200	$25,200	$230,400	$0	$205,200	$25,200	$230,400	
408330715504	2003	2004		0010	$205,200	$25,200	$230,400	$0	$205,200	$25,200	$230,400	
408330715504	2002	2003		0010	$205,200	$23,900	$229,100	$0	$205,200	$23,900	$229,100	
408330715504	2001	2002		0010	$205,200	$10,800	$216,000	$0	$205,200	$10,800	$216,000	
408330715504	2000	2001		0010	$171,000	$45,000	$216,000	$0	$171,000	$45,000	$216,000	
408330715504	1999	2000		0010	$171,000	$1,000	$172,000	$0	$171,000	$1,000	$172,000	
408330715504	1998	1999		0010	$102,600	$41,400	$144,000	$0	$102,600	$41,400	$144,000	
408330715504	1997	1998		0010	$0	$0	$0	$0	$68,400	$76,600	$145,000	
408330715504	1996	1997		0010	$0	$0	$0	$0	$68,400	$76,600	$145,000	
408330715504	1994	1995		0010	$0	$0	$0	$0	$68,400	$76,600	$145,000	
408330715504	1992	1993		0010	$0	$0	$0	$0	$68,400	$81,600	$150,000	
408330715504	1990	1991		0010	$0	$0	$0	$0	$68,400	$81,600	$150,000	
408330715504	1988	1989		0010	$0	$0	$0	$0	$68,400	$44,000	$112,400	
408330715504	1986	1987		0010	$0	$0	$0	$0	$37,600	$38,700	$76,300	
408330715504	1984	1985		0010	$0	$0	$0	$0	$34,200	$62,000	$96,200	
408330715504	1982	1983		0010	$0	$0	$0	$0	$34,200	$62,000	$96,200	

SALES HISTORY

Excise Number	Recording Number	Document Date	Sale Price	Seller Name	Buyer Name	Instrument	Sale Reason
957467	198708051242	7/28/1987	$153,000.00	JONES LARRY DEAN+BARBARA L	AVTEC CORPORATION	Warranty Deed	None

REVIEW HISTORY

PERMIT HISTORY

HOME IMPROVEMENT EXEMPTION

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DATE 7-26-57

Address 3400 WALLINGFORD AVE Bldg B

Fee Owner GRANDMA COOKIE BKg Co. Architect F.M. Smith, Jr.

Condition of Exterior G Interior G Foundation G Floor Plan: Good X

USE WAREHOUSE

1 No. Stories
No. Stores
2 No. Rooms
Basement
No. Offices
No. Apartments
1 rm. 2 rm. 3 rm.
4 rm. 5 rm. 6 rm.

TYPE OF CONSTRUCTION

Frame
Single Double
X Ordinary Masonry
Mill Construction
Class A Rein. Con.
Stru. Steel and Con.
Tile Brick
X Con. + Rein. Con.
Good X Med. Cheap

FOUNDATION

Mud Sills
Post and Pier
Brick
X Concrete
Pile

BASEMENT

No. Full %
Sub-Basement
Size
Garage No. Cars
Floors
Plastered
Living Rooms
Service Rooms

EXTERIOR WALL CONST.

Single Double
2" x 4" Stud Walls
2" x 6" Stud Walls
Brick Walls
Brick with Pilasters
X Concrete Walls + BIK
X Con. with Pilasters
Tile Walls
Rein. Con. Skel.
Filler Walls
Laminated Walls

EXTERIOR FACING

Siding Shingles
Shakes Stucco
Brick Veneer
X CONC + CONC BIK Kind
Stone Cast S.
Terra Cotta
Struc. Glass
Trim

FLOOR CONSTRUCTION

Joist Con. Size x
O.C. In Bridg.
Mill Construction
X

ROOF CONSTRUCTION

X Frame Lam.
X Mill Construction 2XLTG 4X12-5'OC
Rein. Concrete
3 No. Trusses, CLEARS 2-9"x32½" 1-7"x32½"
Wood Steel

ROOFING MATERIAL

Tar and Gravel
Or BUILT UP

FLOOR FINISHES

Fir Maple
Oak 2"x6" T&G
Lino. 3"x6" T&G
X Cement
Terrazzo
Racecolith
Tile
Or

Tile Lino.
Baths Fl. Walls
Tile Total Sq. Ft. Floors
Sq. Ft. Walls
Lin. Ft. Dr. Bds.
Lino. Total Sq. Ft. Floors
Sq. Ft. Walls
Lin. Ft. Dr. Bds.
Kit's Fl. Walls

PLUMBING

NO No. Fixtures
Toilets
Tub, Leg or Pem.
Basins, Ped.
Sinks
Urinals
Showers (Tub) (Stall)
Laundry Trays
H. W. Tank Fl. Drains
Sprink. Sys. No. Hds.

HEATING

Stove
Pipeless Furnace
Gravity H. A.
Air Cond., Fan
2 Suspended Gas. ~~Hot Water~~
Steam Heat
Hot Water
Oil Burner

Date Built 1957 X Finished Unfinished Remodeled
Effective Age Years Future Life Years
Dep. for Cond. Dep. for Ob. Dep. for Es. Total 3½ sec

Year	Assessed Value
1958	2500 Supp 47
1959	10,200 - 52 61
	11000 ST Tot
71	22000
72	20190



Auto. Elec. Unit Heaters Flex. Cable
Man. Hyd. Treated Piles only X Conduit
Man. Average Length Power Wiring
Paved Range Wiring
Hoists: Elec. Hyd. No. Outlets

INTERIOR WALLS

Stud and Plaster
Lam. Plastered
Plywood
Ceiled
Plaster Board
X Painted
Stain Varnish
Kalsomine
Whitewashed
Unfinished

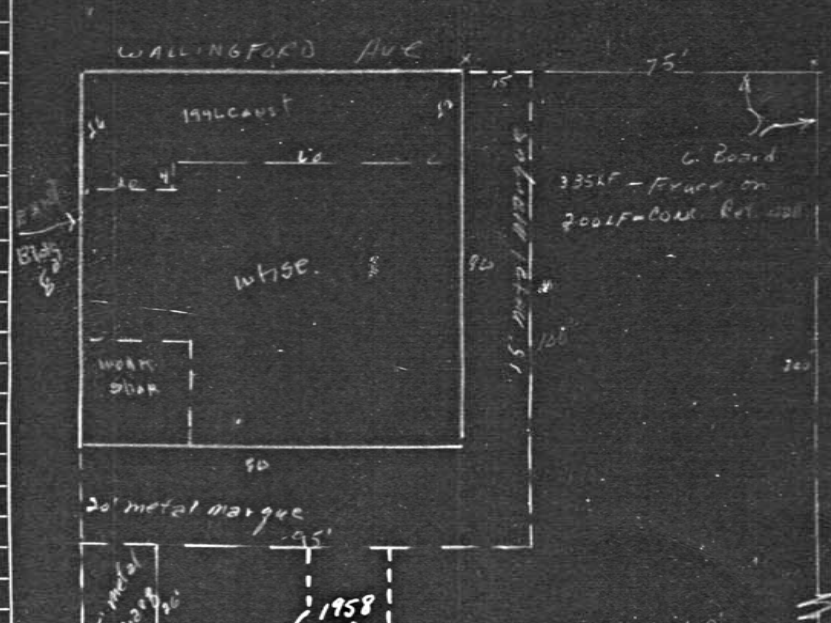
INTERIOR TRIM

Fir
Mah. Oak
Metal
WOOD Doors
METAL Windows
Stained
Varnished
X Painted
Unfinished

C. H.	
B	
1	18
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GROUND FLOOR AREA 6400

TOTAL FLOOR AREA



Fee Owner GRANDMA BAKING CO. INC. Ad

Condition of Exterior 9 Interior 9 Foundation 9 Fl

USE Garage

- 1 No. Stories
- No. Stores
- 2 No. Rooms
- Basement
- No. Offices
- No. Apartments
- 1 rm. ☐ 2 rm. ☐ 3 rm.
- 4 rm. ☐ 5 rm. ☐ 6 rm.

TYPE OF CONSTRUCTION

- Frame
- Single ☐ Double
- Ordinary Masonry
- X Mill Construction
- Class A Rein. Con.
- Stru. Steel and Con.
- Tile ☐ Brick
- Con. ☐ Rein. Con.

Good Med X Cheap

FOUNDATION

- Mud Sills
- Post and Pier
- Brick
- X Concrete
- Pile

BASEMENT

- Full ☐ %
- N Sub-Basement
- O Size x
- Garage ☐ No. Cars
- Floors
- Plastered
- Living Rooms
- Service Rooms

ROOF CONSTRUCTION

- Frame Lam ☐
- X Mill Construction 2x6 T+G
- Rein. Concrete & 10x15 - 8'oc
- No. Trusses
- Wood ☐ Steel

ROOFING MATERIAL

- Tar and Gravel
- Or. X Comp

FLOOR FINISHES

- Fir ☐ Maple
- Oak ☐ 2" x 6" T&G
- Lino. ☐ 3" x 6" T&G
- X Cement
- Terrazzo
- Raecolith
- Tile
- Or.

Tile ☐ Lino.

Tile Total

- Baths ☐ Fl. ☐ Walls
- Sq. Ft. Floors
- Sq. Ft. Walls
- Lin. Ft. Dr. Bds.

Lino. Total

- Sq. Ft. Floors
- Sq. Ft. Walls
- Lin. Ft. Dr. Bds.

Kit's. ☐ Fl. ☐ Walls

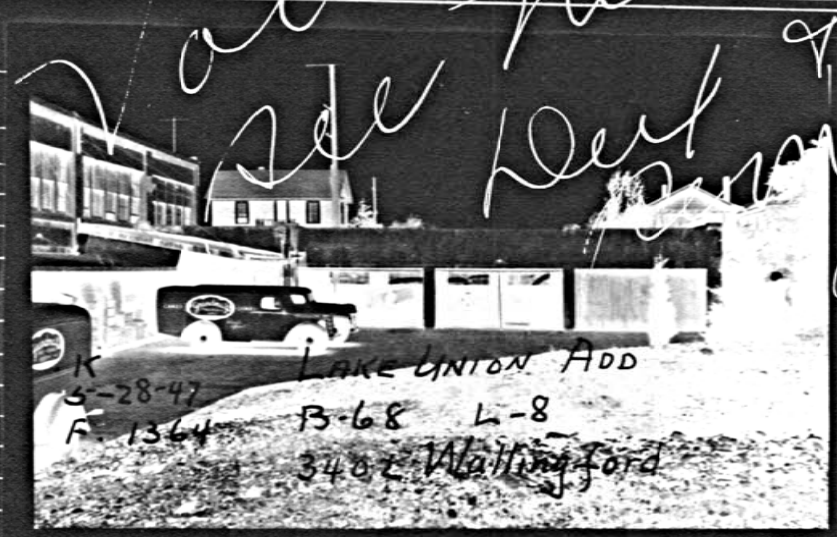
PLUMBING

- No. Fixtures
- No Toilets
- Tubs, Leg or Pem.
- Basins, Ped.
- Sinks
- Urinals
- Showers (Tub) (Stall)
- Laundry Trays
- H.W.Tank Fl. Drains ☐
- Sprink. Sys. No. Hds.

Date Built 1946 ☒ Finished ☐ Unfinished ☐ Remodeled

Effective Age Years Future Life Years

Dep. for Cond. Dep. for Obs. Dep. for Rs. Total



Other Buildings $

Total $

Assessed Value 50% $

Sup. Building A. V. $

Total $

HEATING

- No Stove
- Pipeless Furnace
- Gravity H. A.
- Air Cond., Fan
- Arcola
- 1-Pipe Steam
- 2-Pipe St. or Vapor
- Hot Water
- Oil Burner
- Coal Stoker

WIRING

- Knobe & Tube
- Flex Cable
- X Conduit
- Power Wiring
- Range Wiring
- No. Outlets

ELEVATORS

- Pass. ☐ Freight
- Auto. ☐ Elec.
- Man. ☐ Hyd.
- 2 X 02 ☐ Man.

EXTERIOR WALL CONSTR.

- Single ☐ Double
- 2" x 4" Stud Walls
- 2" x 6" Stud Walls
- Brick Walls
- Brick With Pilasters
- X Concrete Walls 11" all
- Con. With Pilasters
- Tile Walls
- Rein. Con. Skel.
- Filler Walls
- Laminated Walls

EXTERIOR FACING

- Siding ☐ Shingles
- Shakes ☐ Stucco
- Brick Veneer
- X Cement Kind
- Stone ☐ Cast S.
- Terra Cotta
- Struct. Glass
- Trim

FLOOR CONSTRUCTION

Joist Con. Size x

O. C. In Bridg. ☐

- Mill Construction
- X Rein. Con.

INTERIOR WALLS

- Stud and Plaster
- Lam. ☐ Plastered
- Ply Wood
- Ceiled
- Plaster Board
- Painted
- Stain ☐ Varnish
- Kalsomine
- Whitewashed
- X Unfinished

INTERIOR TRIM

- Fir
- Mah. ☐ Oak
- Metal
- X Wood Doors
- X Wood Windows
- Stained
- Varnished
- Painted
- X Unfinished

GAS STATIONS

- Frame
- Metal
- Masonry
- Plastered or Ceiled
- Floors

SERVICE BUILDING

- Frame
- Metal
- Masonry
- Plastered or Ceiled
- Floors

TANKS, ETC., LIST

1 550 gal.

Hoists: Elect. Hyd.

DOCKS AND PIERS

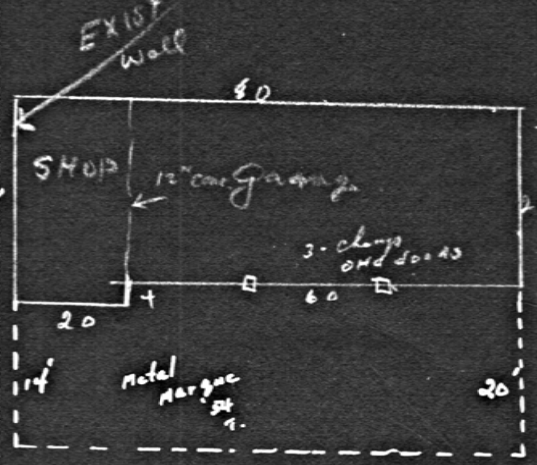
- Treated Piles and Timbers
- Untreated
- Treated Piles only
- Average Length
- Paved

C. H.

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GROUND FLOOR AREA 1840

TOTAL FLOOR AREA



Fee Owner GRANDMA BAKING CO. INC. Ad

Condition of Exterior 9 Interior 9 Foundation 9 Fl

USE Garage

- 1 No. Stories
- No. Stores
- 2 No. Rooms
- Basement
- No. Offices
- No. Apartments
- 1 rm. ☐ 2 rm. ☐ 3 rm.
- 4 rm. ☐ 5 rm. ☐ 6 rm.

TYPE OF CONSTRUCTION

- Frame
- Single ☐ Double
- Ordinary Masonry
- X Mill Construction
- Class A Rein. Con.
- Stru. Steel and Con.
- Tile ☐ Brick
- Con. ☐ Rein. Con.

Good Med. X Cheap

FOUNDATION

- Mud Sills
- Post and Pier
- Brick
- X Concrete
- Pile

BASEMENT

- Full ☐ %
- N Sub-Basement
- 0 Size x
- Garage ☐ No. Cars
- Floors
- Plastered
- Living Rooms
- Service Rooms

ROOF CONSTRUCTION

- Frame Lam ☐
- X Mill Construction 2x6 T&G
- Rein. Concrete
- No. Trusses @ 10'x18'-8" OC
- Wood ☐ Steel

ROOFING MATERIAL

- Tar and Gravel
- Or. X Comp

FLOOR FINISHES

- Fir ☐ Maple
- Oak ☐ 2" x 6" T&G
- Lino. ☐ 3" x 6" T&G
- X Cement
- Terrazzo
- Raecolith
- Tile
- Or.

Tile ☐ Lino.

Tile Total: Baths ☐ Fl. ☐ Walls; Sq. Ft. Floors; Sq. Ft. Walls; Lin. Ft. Dr. Bds.

Lino. Total: Sq. Ft. Floors; Sq. Ft. Walls; Lin. Ft. Dr. Bds.

Kit's. ☐ Fl. ☐ Walls

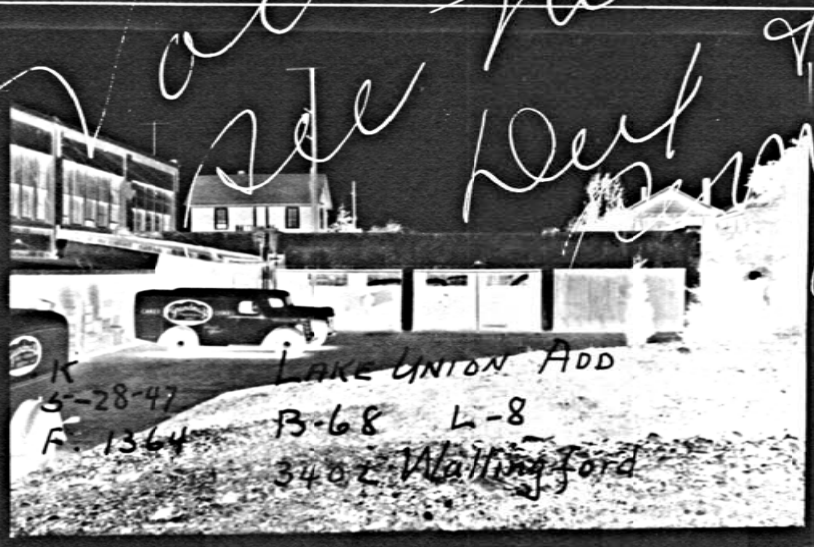
PLUMBING

- No. Fixtures
- No. Toilets
- Tubs, Leg or Pem.
- Basins, Ped.
- Sinks
- Urinals
- Showers (Tub) (Stall)
- Laundry Trays
- H.W.Tank Fl. Drains ☐
- Sprink. Sys. No. Hds.

Date Built 1946 ☒ Finished ☐ Unfinished ☐ Remodeled

Effective Age Years Future Life Years

Dep. for Cond. Dep. for Obs. Dep. for Fn. Total



Other Buildings $

Total $

Assessed Value 50% $

Sup. Building A. V. $

Total $

HEATING

- No Stove
- Pipeless Furnace
- Gravity H. A.
- Air Cond., Fan
- Arcola
- 1-Pipe Steam
- 2-Pipe Steam or Vapor
- Hot Water
- Oil Burner
- Coal Stoker

WIRING

- Knobe & Tube
- Flex Cable
- X Conduit
- Power Wiring
- Range Wiring
- No. Outlets

ELEVATORS

- Pass. ☐ Freight
- Auto. ☐ Elec.
- Man. ☐ Hyd.
- X 500 ☐ Man.

EXTERIOR WALL CONSTR.

- Single ☐ Double
- 2" x 4" Stud Walls
- 2" x 6" Stud Walls
- Brick Walls
- Brick With Pilasters
- X Concrete Walls 12" ave
- Con. With Pilasters
- Tile Walls
- Rein. Con. Skel.
- Filler Walls
- Laminated Walls

EXTERIOR FACING

- Siding ☐ Shingles
- Shakes ☐ Stucco
- Brick Veneer
- X Cement Kind
- Stone ☐ Cast S.
- Terra Cotta
- Struct. Glass
- Trim

FLOOR CONSTRUCTION

- Joist Con. Size x
- O. C. In Bridg ☐
- Mill Construction
- X

INTERIOR WALLS

- Stud and Plaster
- Lam. ☐ Plastered
- Ply Wood
- Ceiled
- Plaster Board
- Painted
- Stain ☐ Varnish
- Kalsomine
- Whitewashed
- X Unfinished

INTERIOR TRIM

- Fir
- Mah. ☐ Oak
- Metal
- X wood Doors
- X wood Windows
- Stained
- Varnished
- Painted
- X Unfinished

GAS STATIONS

- Frame
- Metal
- Masonry
- Plastered or Ceiled
- Floors

SERVICE BUILDING

- Frame
- Metal
- Masonry
- Plastered or Ceiled
- Floors

TANKS, ETC., LIST

1 350 gal.

Hoists: Elect. Hyd.

DOCKS AND PIERS

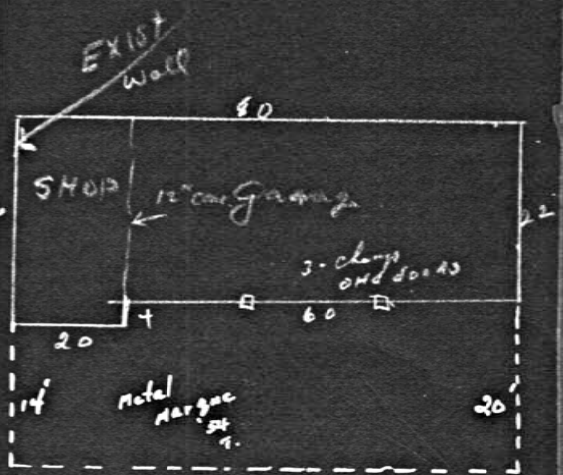
- Treated Piles and Timbers
- Untreated
- Treated Piles only
- Average Length
- Paved

C. H.

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GROUND FLOOR AREA 1840

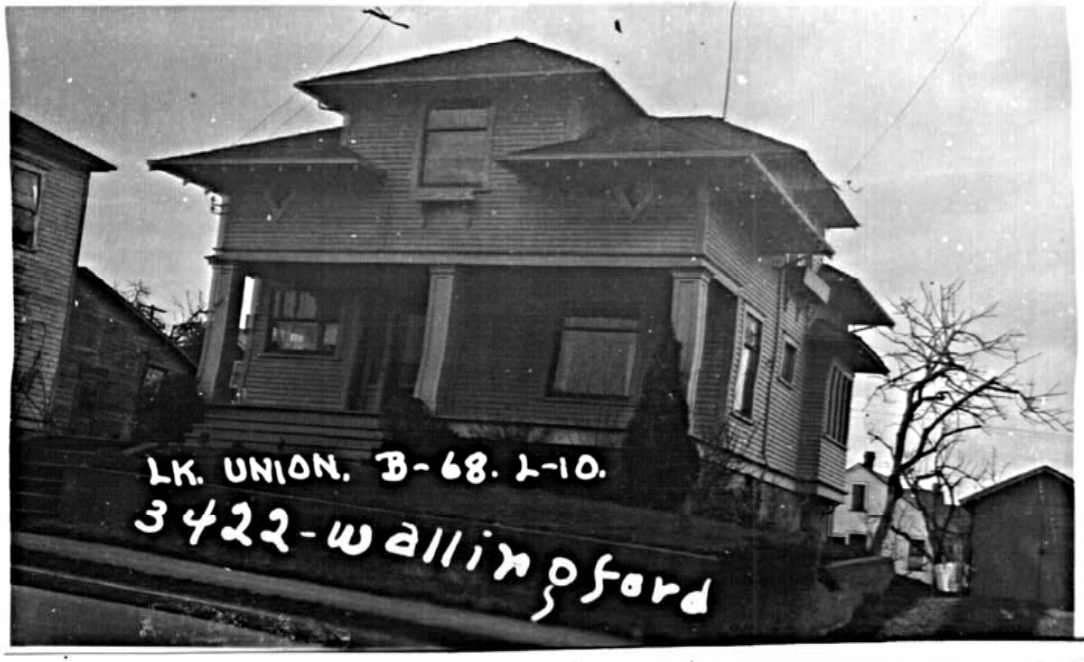
TOTAL FLOOR AREA



Bsmt. 7'
1st Fl. 9' 2"
2nd Fl. 8'

6. USE OF DISTRICT Res.
7. RESIDENTIAL Med-Old
REMARKS

VIEW Lake Union
ZONED Business.



MAIN BUILDING

	DIMENSION	SQ. FT. AR
	28 x 38	1064
+	16 x 16	25
	x	132
	x	
PCH.	x	
PCH.	x	

IMPROVEMENT VALUE

MAIN BUILDING	$	1012
OTHER BUILDINGS	$	
TOTAL	$	1064
ASSESSED VALUE 50%	$	532
DATE 5/20/37		

4210-72

FLOOR PLAN



28

DATE

Address 1815 N. 34th

Fee Owner L. L. Polk - Sound Furniture Mart Architect _____ Contractor _____

Zoning _____ Condition of Exterior E Interior E Foundation E Floor Plan: Good _____ Accept. _____ Poor _____

USE Mercantile

1	No. Stories
	No. Stores
	No. Rooms
	Basement Unit Sq. Ft.
	No. Offices
	No. Apartmts
	1 rm. ☐ 2 rm. ☐ 3 rm.
	4 rm. ☐ 5 rm. ☐ 6 rm.

ROOF CONSTRUCTION

	Frame-Joist
	Mill-Deck
	Rein. Conc. GLB
	Steel Fr. Metal Deck
100%	Trusses Span
✓	Wood Steel

FLOOR FINISHES

10%	Fir	☐ Maple	
	Oak	☐ 2x6TG	
	Lino	☐ 3x6TG	
	Cement	☐ Lgtwgt. Conc.	
	Terrazzo		
10%	Asphalt Tile	☐ Vinyl Tile	
	or		

☐ Tile ☐ Lino ☐ Form.

	Bath Floor
	Bath Walls
	Tub Recess
	Drain Bds.
	Vanities

PLUMBING

8	No. Fixtures
3	Toilets ___ Urinals
	Tubs Leg. or Pem.
3	Basins ___ Dr. Ftns.
1	Sinks
	Washers ___ Dryers
	Showers (tub) (stall)
1	H.W. Tanks ___ Ldy. Trays
	D. Washers Disposals
	160 x 15 bsmt
1M	Sprinkler Sys. DRY EXP

Date Built 1934 Date Add. Built _____ ☑ Finished ☐ Unfinished ☐ Remodeled

Effective Age _____ Years Future Life 34 yrs Years

Dep. for Cond. _____ Dep for Ob. _____ Dep. for Es. _____ Total _____

TYPE OF CONSTRUCTION

100%	Frame
	Metal-Prefab
	Ordinary Masonry
	Mill Construction
	Class A Rein. Conc.
	Stru. Steel and Conc.
	Struct. Steel, Frame

or

QUALITY-TYPE

Good Med. Cheap

FOUNDATION

	Mud Sill ☐ Post Pier
✓	Conc. ☐ Brick
	Load Hgt. ☐ Piling

BASEMENT under E

Full ✓ % Part.

Sub-Basement

Size 42 x 72-0

Garage ☐ No. Cars

Floors

Plastered ☐ Pl. Bd.

No. Apartments

Service Rooms

EXTERIOR WALL CONST.

	Single ☑ Double
100%	Stud Walls
	Brick ___ Pil. ☐
	Conc. ___ Pil. ☐
	Rein. Conc. Skeleton
	Str. Stl.-Frame
	Pre-Fab Metal
	Tilt-Up
	___ Filler Wall
	___ Curtain Wall

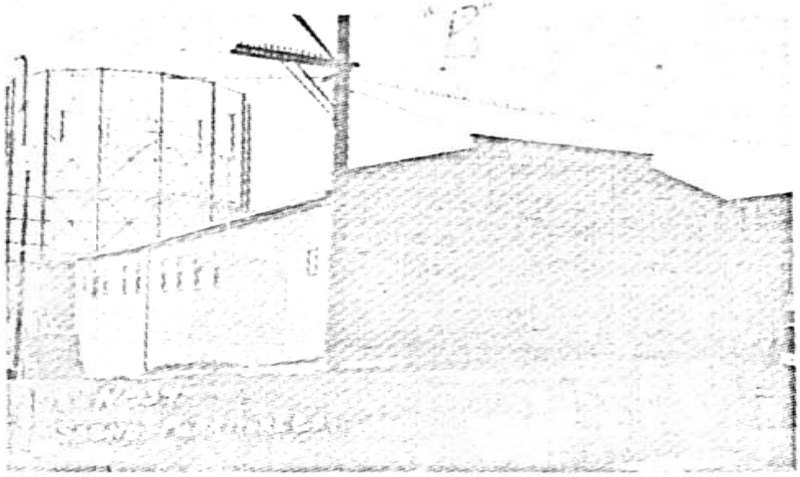
EXTERIOR FACING

100%	Siding
	Stucco ___ Shakes
	Marblecrete
	Brick ☐ Veneer
	Conc. ☐ Conc. Blk.

FLOOR CONSTRUCTION

Joist ___ x ___ x ___ O.C.

	Mill ___ Car Deck
	R.Conc. ___ Elev.
	Steel ___ GLB.



MISC. TANKS, ETC.

HOISTS: Elec. Hydr.

20' TEX 10,000# PARTS

60' x 12 SHERPAR 1-S

ELEVATORS NO

	Pass.	Frght.
	Auto. ✓	Elec.
	Man.	Hydr.

Doors-Auto Man.

☐ Escalators

Stops Speed

Cap. 4,000 LBS

DOCKS AND PIERS

	Hvy. Med. Lgt.
	Untrtd. Pile Tmbr.
	Conc. Piles & Bms.
	Trtd. Pile Tmbr.
	Paved
	Dolphins
	Deck

WIRING

	Knob & Tube
	Flex. Cable
	Conduit
	Pwr. Wiring
	Range Wiring
	Outlets

HEATING STEAM

	Elec. ___ Oil ___ Gas
	H.W. ___ St. ___ H.A.
	B.Bd. ___ Suspended
	FHA ___ Pipeless
	A. Cond. ___ Wall Unit
	Comb. Unit ___ Custom
	Refrig. ___ Convector
	Heat Pump ___ Fireplace

YEAR	ASSESSED VALUE
32	17160

INTERIOR WALLS & CEILING

Stud	Wood	Metal
Plaster	✓ Dry Wall	
Acc. Tile		Celotex
Ceiled		Plywood
Solid		Block
Sound Proofed		Lamin.
✓ Finished	✓ Unfinished	
✓ Painted	✓ Varnished	

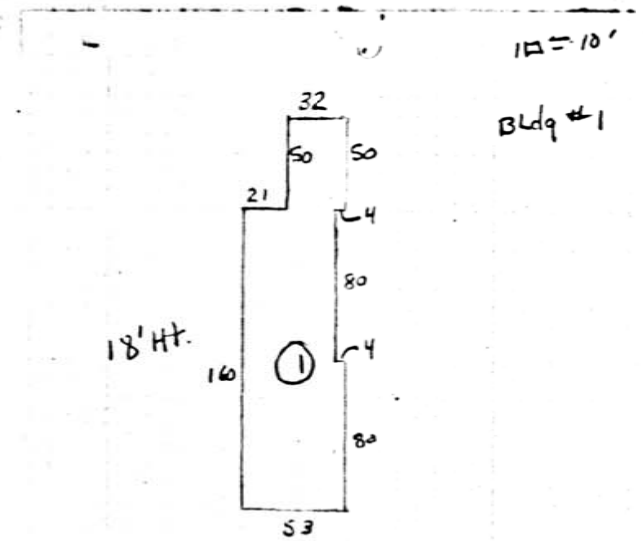
INSULATION

✓	Exter. ___ Partitions
	Roof ___ Floor

INTERIOR TRIM

✓	Fir ___ Birch
	Mah. ___ Oak

	C. Hgt.	
SB		GROUND FLOOR AREA
B		TOTAL FLOOR AREA
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		



PERMIT NO. 1362

DATE

Section 18 Twp 2S Range 4 EWM. Block 76 Lot or [illegible]

Tax Lot _____ Tract _____

Address 1815 N 34th 100% OWNOCC OVER 5 2 of 2

Fee Owner [illegible] Architect _____ Contractor _____

Zoning _____ Condition of Exterior F Interior _____ Foundation _____ Floor Plan: Good _____ Accept. _____ Poor _____

USE MISC STOR/MFG

1 No. Stories
No. Stores
No. Rooms
Basement Unit Sq. Ft.
No. Offices
No. Apartmts
1 rm. ☐ 2 rm. ☐ 3 rm.
4 rm. ☐ 5 rm. ☐ 6 rm.

ROOF CONSTRUCTION

Frame-Joist
Mill-Deck
Rein. Conc. _____ GLB
Steel Fr. _____ Metal Deck
100% Trusses _____ Span
✓ Wood _____ Steel

FLOOR FINISHES

Fir ☐ Maple
Oak ☐ 2x6TG
Lino ☐ 3x6TG
Cement ☐ Lgtwgt. Conc.
Terrazzo
5% Asphalt Tile ☐ Vinyl Tile
or

☐ Tile ☐ Lino ☐ Form.

Bath Floor
Bath Walls
Tub Recess
Drain Bds.
Vanities

PLUMBING

2 No. Fixtures
1 Toilets ____ Urinals
Tubs Leg. or Pem.
Basins ____ Dr. Ftns.
1 Sinks
Washers ____ Dryers
Showers (tub) (stall)
H.W. Tanks ____ Ldy. Trays
D. Washers ____ Disposals

100% Sprinkler Sys. DRY EXP

Date Built 1936 Date Add. Built _____ ☑ Finished ☐ Unfinished ☐ Remodeled

Effective Age _____ Years Future Life _____ Years

Dep. for Cond. _____ Dep for Ob. _____ Dep. for Es. _____ Total _____

TYPE OF CONSTRUCTION

100% Frame
Metal-Prefab
Ordinary Masonry
Mill Construction
Class A Rein. Conc.
Stru. Steel and Conc.
Struct. Steel, Frame
or

QUALITY-TYPE

Good Med. Cheap

FOUNDATION

Mud Sill ☐ Post Pier
✓ Conc. ☐ Brick
Load Hgt. ☐ Piling

BASEMENT UNF

✓ Full ____ % Part.
Sub-Basement
Size _____
Garage ☐ No. Cars
Floors
Plastered ☐ Pl. Bd.
No. Apartments
Service Rooms

EXTERIOR WALL CONST.

Single ☑ Double
100% Stud Walls
Brick ____ Pil. ☐
Conc. ____ Pil. ☐
Rein. Conc. Skeleton
Str. Stl.-Frame
Pre-Fab Metal
Tilt-Up
_____ Filler Wall
_____ Curtain Wall

EXTERIOR FACING

100% Siding
Stucco ____ Shakes
Marblecrete
Brick ☐ Veneer
Conc. ☐ Conc. Blk.

FLOOR CONSTRUCTION

Joist ____ x ____ x ____ O.C.

FACTOR



MISC. TANKS, ETC.

HOISTS: Elec. Hydr.
10x12 OVHD WD MAN
36%x12 Plwd PART 1-S
49%x10 FR PART 1-S
76%x12 FR PART 1-S
760# Sus. MTL PAN
10x20 FR CANOPY
5x16 FR CANOPY
10x20 WD & W DK
OVER

ELEVATORS

NO Pass. ✓ Frght.
Auto. ✓ Elec.
Man. ____ Hydr.
Doors-Auto ____ Man. ____
Escalators
✓ Stops ____ Speed
Cap'y. 8,000#

DOCKS AND PIERS

Hvy. ____ Med. ____ Lgt.
Untrtd. Pile Tmbr.
Conc. Piles & Bms.
Trtd. Pile Tmbr.
Paved
Dolphins
Deck

WIRING

Knob & Tube
Flex. Cable
Conduit
Pwr. Wiring
Range Wiring
_____ Outlets

HEATING REM'D SUSPNDED

7205 Elec. ____ Oil STEAM Gas
E&S
H.W. ____ St. ____ H.A.
B.Bd. ____ Suspended
FHA ____ Pipeless
A. Cond. ____ Wall Unit
Comb. Unit ____ Custom
Refrig. ____ Convector
Heat Pump ____ Fireplace

YEAR	ASSESSED VALUE
72	17830

INTERIOR WALLS & CEILING

Stud	Wood	Metal
Plaster	DryWall	
Acc. Tile	Celotex	
Ceiled	Plywood	
Solid	Block	
Sound Proofed		Lamin.
Finished		Unfinished
Painted		Varnished

INSULATION

✓ Exter. ____ Partitions
Roof ____ Floor

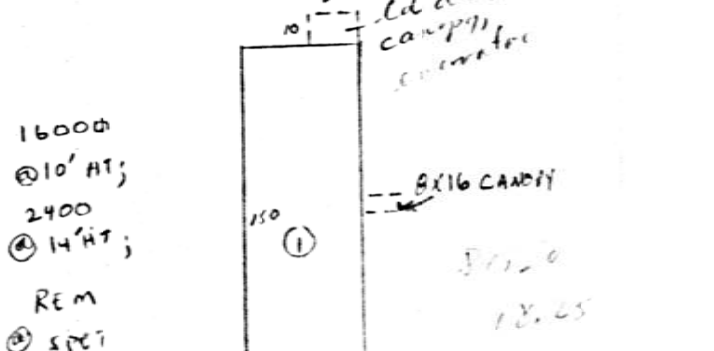
INTERIOR TRIM

	C. Hgt.
SB	
B	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

GROUND FLOOR AREA 72009

TOTAL FLOOR AREA

7105
1=8
#2



40833

DIST. A

LIMITS N.L.

PERMIT NO. B1C967 B1 03 17

ORIG. COST $

2 ADDITION LAKE UNION.

SECTION TWP. N. RANGE EWM: BLOCK 76 TRACT OR LOT. NO. 2

DESCRIPTION

3 ADDRESS-PROPERTY 1815 North 34th St

4 FEE OWNER A N Dalk (Sound Furn Mfg Co Inc.) (2-8-32) See O.C.D. 7-23-34)

5 ARCHITECT

CONTRACTOR

NAME

7105

Bldgs. C + D"

CONTRACT PURCHASER

6 BUILDING Boiler room

1 Story

(Heating Plant + Sawdust Hopper)

EXTERIOR Frame. Corr. Iron on frame.

EXTRA FEATURES None

CONSTRUCTION

MISCELLANEOUS

7 CONDITION: EXTERIOR Good INTERIOR Good FOUND. Good

8 MAIN SUPPORT COLUMN x FOOTINGS SPAN FT.

9 FIRST FL. JOIST INCH CENTERS BRIDGED

INTERIOR Post & beam

FLOORS Cement

FIRE PLACE None

PLUMBING None

TILE WORK None

WIRING 2 Outlets

HEATING None

ELEVATOR None

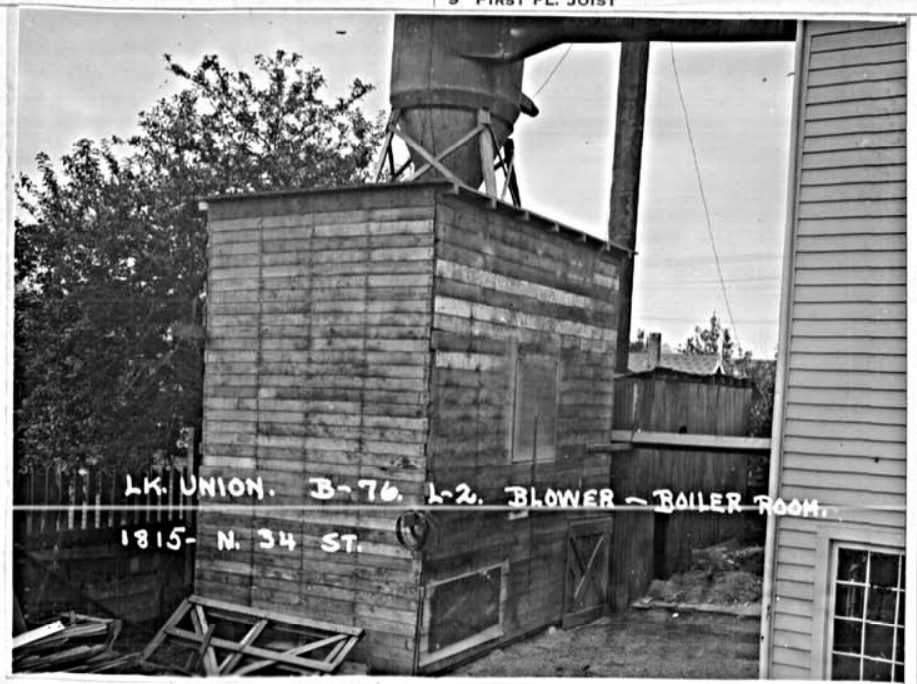
CEILING HGT. 1st Floor 10'

BASEMENT None

FOUNDATION Concrete

ROOF Corr. Iron

STORE FRONTS



10 BUILDING

11 GROSS INCOME $

EXP. $ NET INC. $

12 DEPRECIATION

COND. 24 % OBSLSE. %

ECON. SUIT. % TOTAL %

DATE BUILT 1924

REMODELED

EFFECTIVE AGE 12 YEARS

FUTURE LIFE 38 YEARS

DIMENSIONS 10 X 24

SQUARE FT. AREA CUBIC FT.

240

IMPROVEMENT VALUE

MAIN BUILDING $

OTHER BUILDINGS $

TOTAL $ X 80

ASSESSED VALUE 50% $ 320

DATE ~~800~~ 1600

New Sheet Made 11-2-70

SUPPLEMENTAL COMMERCIAL --- KING COUNTY ASSESSOR, SEATTLE, WASHINGTON

23


A
ND FURNITURE MFG. CO.
ET WORK
EVERGREEN 0255
1815
L.R. UNION
B. 76. L-3.
1815-N-34 ST
SOUTH. FUR. CO

H-OB

1 District 3A
Limits N.L.
Code No. 1
Permit No.

2 Addition LAKE UNION
Section Twp. N. Range E.W.M. Block 76 Tract or Lot No. 1 to 3 incl
Description
408330-7105 5760 10950 0010

3 Address — Property 1815 North 34th
4 Fee Owner A.N. DAIK (Sound Furn Mfg Co. Inc. (2-8-32) See P.C.D. 7-23-34)
5 Architect
Contractor

Name F 1363
Bldg. "A"
Cont. Purchaser

Orig. Cost $

6 Building
Factory Type.
1 Story
Basement
Furniture Mfg.

Basement 25%
48 X 39
Concrete
Plank Floor
Open studding

Foundation
Concrete

Roof
Tar

Store Fronts
None

Exterior
Frame, Siding kind.

Extra Features .- 188 sprinkler heads. 1941.
Power wiring
Construction Mill, P & B. Cheap
Refrigeration
7 Condition: Exterior Good Interior Good Found. Good
8 Main Support Column x Footing Span Ft.
9 First Floor Joist Inch Center Bridged
10 Building Finished
11 Gross Income $ Expense $ Net Income $
12 Depreciation: Cond. % Obslse. % Econ. Suit. % Total %
Year Built 1936 Remodeled
Effective Age Years Future Life Years
Dimensions 48 x 150 x Square Ft. Area Cubic Ft.
10 x 20 x

Interior
Post & beam
Open studding

Floors
Fir

Plumbing 2 Fixtures
1 Toilet, 1 Basin

Tile Work None

Wiring Tube & knob.

Heating Steam
2 O.H. Furn.

Elevators None

Entrance

Ceilings — Story Height
Basement 10'
1st Floor 10'

7400

Improvement Value
Main Building $ 9000 4500
Other Buildings $ X48
Total $ 7500 3750
Assessed Value 50% $ 3750
Date 9/22/37 ack

Land Information
1. Size 66' x 114 1760
Sloping, Below 10' 9680
2. Street — Road Graded, Gravel,
3. Sidewalk Concrete
Sewer,
4. Landscaping None
5. Trend Land Value $
Static
6. Use Industrial
7. District Medium-Old.

O
C

Owner or Contract Purchaser	Date	File No.	Price	Mtge
Albert Daik	9-22-37	1363	7500	

ZONED-COM'L.
Dwl Shed Note

TILE WORK None

WIRING Tube & knob.

HEATING Steam
2 P.H. Fans.

ELEVATORS None

ENTRANCE

CEILINGS -- STORY HEIGHT
Basement 10'
1st Floor 10'

ASSESSED VALUE 50% $ 3960

DATE 9/22/37

LAND INFORMATION

1. SIZE 66' x 114 9620
Sloping, Below 10'

2. STREET --- ROAD Graded, Gravel,

3. SIDEWALK Concrete

Sewer,

4. LANDSCAPING None

5. TREND LAND VALUE $
Static

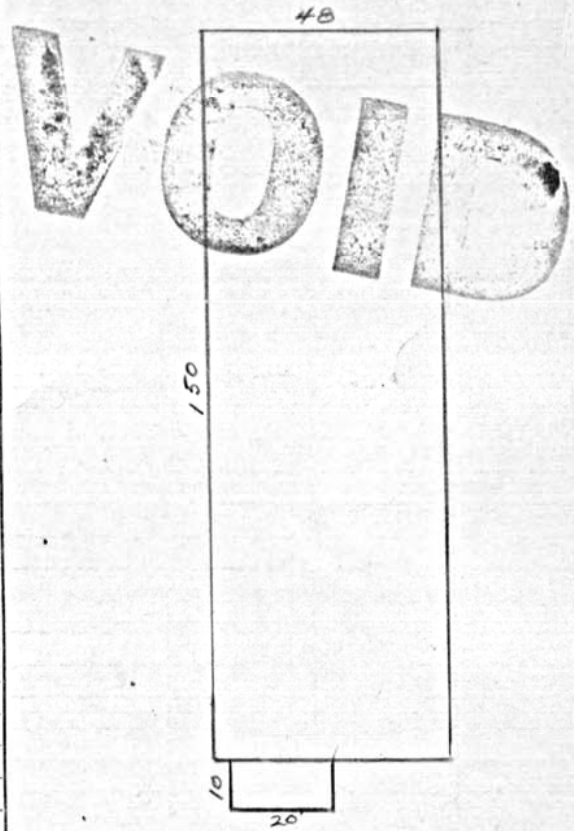
6. USE Industrial

7. DISTRICT Medium-Old.

ZONED - COM'L.

Dud Shed Made

11-2-70 FLOOR PLAN Sc-40'=1"



VOID

C	OWNER OR CONTRACT PURCHASER	DATE	FILE NO.	PRICE	MTGE.	STAMP
	Albert P Closs	7-2-43	#341061			#17.05
(C	C. D Bourdon Furn. Mfg Co. Inc.	12-1-58	E322027			
D	W.F. HUSTON (Lot)	1-28-59	E328955	#4,000		

REMARKS Permit # 329818 11-14-38 New add 32 x 48.
2in siding - P & R foundation - 2in floor -
Double constr. No heat or plumbing in new ad.

DATE 3-3-67

Address 3320 WALLINGFORD AVE N

Fee Owner _____ Architect _____ Contractor _____

Zoning N Condition of Exterior F Interior F Foundation F Floor Plan: Good _____ Accept. ✓ Poor _____

USE C/ [illegible] SFR

✓	No. Stories	
	No. Stores	
	No. Rooms	
	Basement	Unit Sq. Ft.
	No. Offices	
	No. Apartmts	
	1 rm. ☐ 2 rm. ☐ 3 rm.	
	4 rm. ☐ 5 rm. ☐ 6 rm.	

ROOF CONSTRUCTION

✓	Frame-Joist HIP-MID
	Mill-Deck
	Rein. Conc. _____ GLB
	Steel Fr. _____ Metal Deck
	Trusses _____ Span
	Wood _____ Steel

FLOOR FINISHES ☐ Tile ☐ Lino ☐ Form.

✓	Fir	☐ Maple	Bath Floor
✓	Oak	☐ 2x6TG	Bath Walls
✓	Lino	☐ 3x6TG	Tub Recess
	Cement	☐ Lgtwgt. Conc.	Drain Bds.
	Terrazzo		Vanities
	Asphalt Tile	☐ Vinyl Tile	

or

PLUMBING

3	No. Fixtures
1	Toilets ____ Urinals
1	Tubs Leg. or Rem. NOT Hooked up
1	Basins ____ Dr. Ftns.
	Sinks
	Washers ____ Dryers
	Showers (tub) (stall)
	H.W. Tanks ____ Ldy. Trays
	D-Washers ____ Disposals
	Sprinkler Sys.

1967 - altered

Date Built 1907 Date Add. Built _____ ✓ Finished ☐ Unfinished ✓ Remodeled

Effective Age _____ Years Future Life _____ Years

Dep. for Cond. _____ Dep for Ob. _____ Dep. for Es. _____ Total 70%

TYPE OF CONSTRUCTION

✓	Frame
	Metal-Prefab
	Ordinary Masonry
	Mill Construction
	Class A Rein. Conc.
	Stru. Steel and Conc.
	Struct. Steel, Frame

or

QUALITY-TYPE I

Good ____ Med. ____ Cheap ✓

FOUNDATION

	Mud Sill ☐ Post Pier
✓	Conc. ☐ Brick
	Load Hgt. ☐ Piling

BASEMENT

480	Full 50% % Part.
	Sub-Basement
	Size 20'6" x 24'
	Garage ☐ No. Cars
	Floors
	Plastered ☐ Pl. Bd.
	No. Apartments
	Service Rooms

EXTERIOR WALL CONST.

1064	Single ☐ Double
	Stud Walls
	Brick ____ Pil. ☐
	Conc. ____ Pil. ☐
	Rein. Conc. Skeleton
	Str. Stl.-Frame
	Pre-Fab Metal
	Tilt-Up
	____ Filler Wall
	____ Curtain Wall

EXTERIOR FACING

1064	Siding
	Stucco ____ Shakes
	Marblecrete
	Brick ☐ Veneer
	Conc. ☐ Conc. Blk.

FLOOR CONSTRUCTION

Joist 2 x 6 x 16 O.C.

	Mill ____ Car Deck
	R-Conc. ____ Elev.
	Steel ____ GLB.

FACTS



HEATING None

	Elec. ____ Oil ____ Gas
	H.W. ____ St. ____ H.A.
	B.Bd. ____ Suspended
	FHA ____ Pipeless
	A. Cond. ____ Wall Unit
	Comb. Unit ____ Custom
	Refrig. ____ Convector
	Heat Pump ____ Fireplace
✓	See Remarks

YEAR	ASSESSED VALUE
1963	Z-C40 - HS-63
1969	650 - RS-67
7/	1300
4/2	2576

MISC

HOISTS: Elec. Hydr.		Pass. ____ Frght		Hvy. ____ Med. ____ Lgt.	Knob & Tube
5 T 14 ft. Conveyor		Auto. ____ Elec.		Untrtd. Pile Tmbr.	Flex. Cable
6-3 ft.		Man. ____ Hydr.		Conc. Piles & Bms	Conduit
330 P Com. Pan		Doors-Auto ____ Man.		Trtd. Pile Tmbr.	✓ Pwr. Wiring
		Escalators		Paved	Range Wiring
		____ Stops ____ Speed		Dolphins	____ Outlets
		Cap'y. _____		Deck	

INTERIOR WALLS & CEILING

Stud	Wood	Metal
Plaster	✓ Dry Wall	
Acc. Tile	Celotex	
Ceiled	Plywood	
Solid	Block	
Sound Proofed		Lamin.
Finished	✓ Unfinished	
Painted		Varnished

INSULATION

✓	Exter.	____	Partitions
	Roof	____	Floor

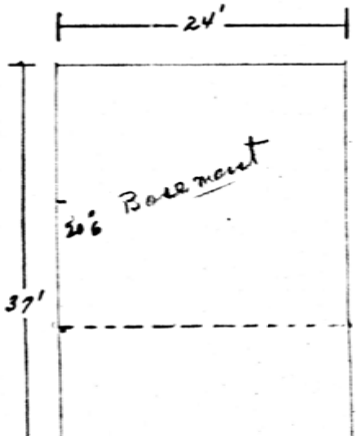
INTERIOR TRIM

	Fir	____	Birch
	Mah.	____	Oak

SB	C. Hgt.
B	8'
1	8'
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	

GROUND FLOOR AREA 1494 + Basement

TOTAL FLOOR AREA



1. DISTRICT 6A
LIMITS NL
CODE NO. 1
PERMIT NO.
DATE

2. ADDITION Lake Union
SECTION TWP. N. RANGE EWM. BLOCK 76 TRACT OR LOT NO. 10
DESCRIPTION S. 30' of Lot 10

1122

408330-7155 860 400 0010

3. ADDRESS OF PROPERTY 3320 Wallingford Ave.
4. FEE OWNER W.R. GRANSTON (5-12-37) CONTRACT PURCHASER
5. ARCHITECT
6. ORIG. BUILDING COST $ CONTRACTOR
7. CONDITION OF EXTERIOR Fair OCCUPIED BY Owner RENTAL PER MONTH $ ESTIMATED RENTAL PER MONTH $ 10.00
INTERIOR Fair FOUNDATION Poor FLOOR PLAN Acceptable

8. BUILDING
1 Fmly.Dwell
1 Story
5 Rooms
5 1st Fl.
No attic

INTERIOR WALLS
5 Plaster

FLOORS
5 Fir

FIRE PLACE
None

INTERIOR TRIM
5 Fir

PLUMBING
6 Fixtures
1 Tub-leg
1 Toilet
1 Basn.Br.
1 Sink
1 H.W.tank
Average
1 Laundry Trays

TILE WORK
None

ATTIC
None

HEATING
Stove wall Furnace

BASEMENT
50% Conc.
Fr. & Conc.
Fr. 3½' Conc. 4'
Cement floor
Drain

FOUNDATION
Concrete
1 Pch.Conc. P.B.

ROOF
Shingle Comp

EXTERIOR WALLS
Fir Siding

PORCHES
2 One story
1 roofed
½ Recessed

EXTRA FEATURES
None

BUILT-INS
Ordinary

CONSTRUCTION (4)
Single
Medium

CEILING HEIGHT
Bsmt. 7' 6"
1st Fl. 9' 3"

9. CORNER JOINTS Mitered DOWN SPOUTS SEWER CONNECTED No
10. FIRST FLOOR JOIST SIZE 2 x 8 AND 20 INCH CENTERS BRIDGED No
11. FIRST FLOOR JOIST SUPPORT COLUMN OR POST SIZE 6 x 6
12. CLASS OR GRADE NO. 2 SHAPE NO. 1
13. BUILDING FINISHED OR UNFINISHED Finished
14. DEPRECIATION: CONDITION 75 % OBSLSE. % ECON. SUIT 10 % TOTAL 160 %
DATE BUILT 1907 REMODELED No
EFFECTIVE AGE 30 50% YEARS FUTURE LIFE 10 YEARS

LAND INFORMATION
1. SIZE 30' x 114' TOPOGRAPHY Level GRADE Above 3 ft. FEET
2. STREET ROAD Graded SURFACE Gravel ALLEY No
3. SIDEWALK Conc. SEWERAGE Cesspool WELL ELECT. PUMP
4. LANDSCAPING Lawn flowers COND. Fair
5. TREND Static VALUE OF LAND
6. USE OF DISTRICT Residential VIEW Lake Union
7. RESIDENTIAL Medium- Old ZONED Mantg.

VOID

REMARKS Add Sheet Mar 1937 New Roof Rec'd



MAIN BUILDING

DIMENSION	SQ. FT. AREA
24 x 32	768
x	
x	
x	
PCH. 3 x 4	
PCH. 2 x 12	36

IMPROVEMENT VALUE
MAIN BUILDING $
OTHER BUILDINGS $
TOTAL 520 260 $ 260
ASSESSED VALUE 50% $ 130
DATE 5--19--36 '37

Z 400 350

OTHER BUILDINGS

GARAGE	CONSTRUCTION	FLOOR	ROOF	STY.	DIMENSION	AREA	VALUE
					x		$

HS '63 500
FLOOR PLAN

INTERIOR TRIM
5 Fir

PLUMBING
5 Fixtures
1 Tub-leg
1 Toilet
1 Basn.Br.
1 Sink
1 H.W.tank
Average
1 Laundry Tray

50% Conc?
Fr. & Conc.
Fr. 3½' Conc. 4'
Cement floor
Drain

FOUNDATION
Concrete
1 Pch. Conc. P.B.

ROOF
Shingle Comp

EXTERIOR WALLS
Fir Siding



MAIN BUILDING

DIMENSION	SQ. FT. AREA
24 x 32	768
x	
x	
x	
PCH. 3 x 4	
PCH. 2 x 12	36

IMPROVEMENT VALUE

MAIN BUILDING	$	
OTHER BUILDINGS	$	
TOTAL	$	260
ASSESSED VALUE 50%	$	130

DATE 5-19--36 '37

2400 350

HS '63 500

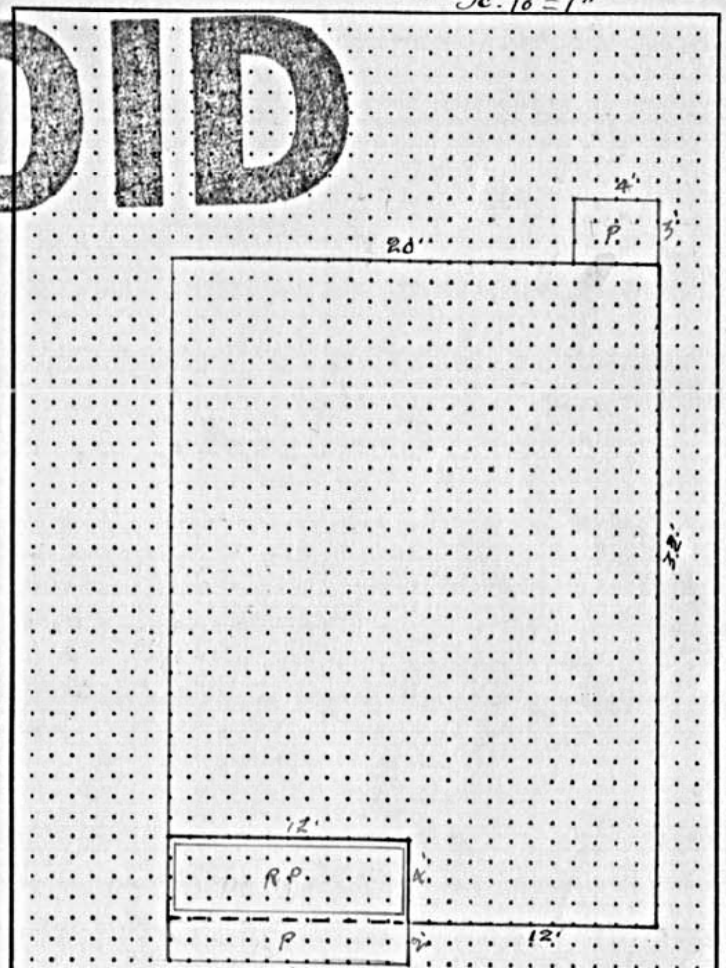
OTHER BUILDINGS GARAGE	CONSTRUCTION	FLOOR	ROOF	STY.	DIMENSION	AREA	VALUE
					x		$
					x		
					x		
					x		
					x		

O C C U P A N C Y	OWNER OR CONTRACT PURCHASER	DATE	FILE NO.	PRICE	MTGE.	STAMP
	Glenn R. Smith	5-21-51	E8625	2500.	SEE E9851	
	Bessie Anderson	7-6-51	E9719	400 00		
	w/o Merritt Spangler					

REMARKS Typical Old-Medium No. 3 House. Near gas plant. Tar fumes depreciate the property. Outside entrance to basement.

VOID

FLOOR PLAN Sc. 10 = 1"



Fee Owner W. F. Hurst Corp. Architect [illegible] & Pehle Contractor

Condition of Exterior C Interior C Foundation C Floor Plan: Good Accept Good

USE F2 Warehouse

1 No. Stories 1
No. Stores
No. Rooms
Basement
No. Offices
No. Apartments
1 rm. 2 rm. e rm.
4 rm. 5 rm. 6 rm.

ROOF CONSTRUCTION

Frame Lam ✓
Mill Construction
Rein. Concrete
No. Trusses
Wood ✓ Steel

ROOFING MATERIAL

Tar and Gravel
Or ✓ 3 Ply BU

FLOOR FINISHES

Fir Maple
Oak 2"x6" T&G
Lino. 3"x6" T&G
Cement
Terrazzo
Raecolith
Tile
Or

Tile Lino.
Tile Total: Baths Fl. Walls; Sq. Ft. Floors; Sq. Ft. Walls; Lin. Ft. Dr. Bds.
Lino. Total: Sq. Ft. Floors; Sq. Ft. Walls; Lin. Ft. Dr. Bds.
Kit's Fl. Walls

PLUMBING

5 No. Fixtures
1 Toilets
Tube, Leg or Pem.
1 Basins, Ped.
1 Sinks
Urinals
Showers (Tub) (Stall)
Laundry Trays
1 H. W. Tank Fl. Drains
Sprink. Sys. No. Hds.

TYPE OF CONSTRUCTION

Frame
✓ Single Double
Ordinary Masonry
Mill Construction
Class A Rein. Con.
Stru. Steel and Con
Tile Brick
Con. Rein. Con.
Good Med. Cheap

Date Built 1965 ✓ Finished Unfinished Remodeled
Effective Age Years Future Life Years
Dep. for Cond. Dep. for Ob. Dep. for Es. Total

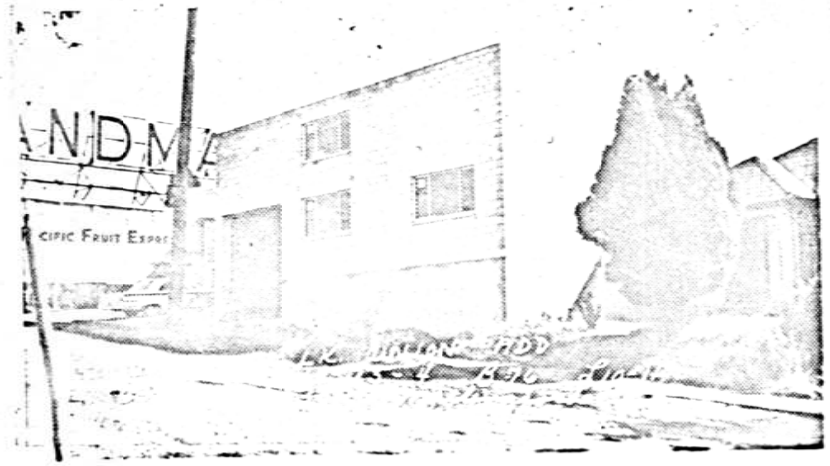
HEATING No Heat

Stove
Pipeless Furnace
Gravity H. A.
Air Cond., Fan
Suspended Gas, Hot Water
Steam Heat
Hot Water
Oil Burner

Year	Assessed Value
1967	12066 ECS 7-67
1965	~~12500~~ - EFF 67
71	2500
72	28050

FOUNDATION

Mud Sills
Post and Pier
Brick
✓ Concrete
Pile



BASEMENT

Full %
Sub-Basement
Size
Garage No. Cars
Floors
Plastered
Living Rooms
Service Rooms

30 x 100 Conc. Blk
5600 Conc. Slab
20 x 30 Wood Frame
Conc. Block Partitions
80 Hoists: Elec. Hyd.

Pass. Freight
Auto. Elec.
Man. Hyd.
Man.

Treated Piles, Timb
Untreated
Treated Piles only
Average Length
Paved

Knobe & Tube
Flex. Cable
✓ Conduit
Power Wiring
Range Wiring
No. Outlets

EXTERIOR WALL CONST.

Single Double
2" x 4" Stud Walls
2" x 6" Stud Walls
Brick Walls
Brick with Pilasters
✓ Concrete Walls Block
Con. with Pilasters
Tile Walls
Rein. Con. Skel.
Filler Walls
Laminated Walls

INTERIOR WALLS

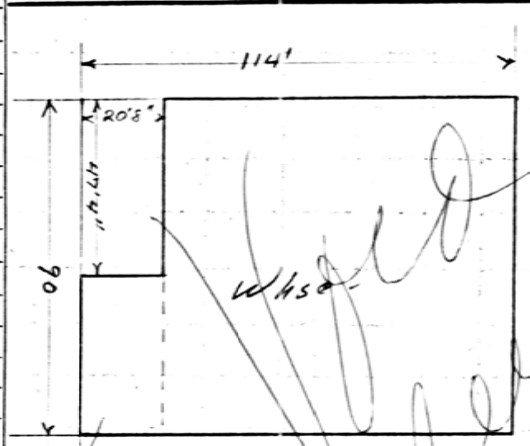
Stud and Plaster
Lam. Plastered
Plywood
Ceiled
Plaster Board
Painted
Stain Varnish
Kalsomine
Whitewashed
✓ Unfinished

C. H.

B
1 16
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

GROUND FLOOR AREA 9282

TOTAL FLOOR AREA 9282



EXTERIOR FACING

Siding Shingles
Shakes Stucco
Brick Veneer
Kind
Stone Cast S.
~~Terra Cotta~~ C B/K
Struct. Glass
Trim

INTERIOR TRIM

Fir
Mah. Oak
Metal
Doors
Windows
Stained
Varnished
Painted
✓ Unfinished

FLOOR CONSTRUCTION

Joist Con. Size x
O.C. In Bridg.
Mill Construction
Rein. Con.

Other Buildings	Construction	Floor	Roof	Stories	Dimensions	S. F. Area	Factor	Value	% Dep.	Deprec.	Net Value

LIMITS NL

CODE NO. 1

PERMIT NO.

DATE

SECTION TWP. N. RANGE EW/M. BLOCK 76 TRACT OR LOT NO. ~~10~~

DESCRIPTION No. 30' of Lot 10 + All of Lot 11

1123

408330-7160 2560 200 0010

3. ADDRESS OF PROPERTY 3322 Wallingford Ave.
4. FEE OWNER H.D. Moody (12-21-25) CONTRACT PURCHASER
5. ARCHITECT CONTRACTOR
6. ORIG. BUILDING COST $ OCCUPIED BY Owner RENTAL PER MONTH $ ESTIMATED RENTAL PER MONTH $ 10.00
7. CONDITION OF EXTERIOR Fair INTERIOR Fair FOUNDATION Fair FLOOR PLAN Accept

8. BUILDING
1 Frnly. Dwl
~~2~~ 1 Story (1½)
~~9~~ 5 Rooms
~~7~~ 5 1st Flr
2 2nd flr

INTERIOR WALLS
5 Pl.
~~2~~ Plywood
4 Sheetrock Bd

FLOORS
~~9~~ 5 Fir

FIRE PLACE
None

INTERIOR TRIM
~~9~~ 5 Fir

TILE WORK
None

ATTIC
None

HEATING Stove ~~at~~ 4 Rms
H.A. Furn
Stoker

BASEMENT Full
Frame & Conc
2' 5'
Conc. Flr

FOUNDATION
Conc.
2 Pch P.B.

ROOF
~~Shgl~~ Comp

EXTERIOR WALLS
Fir Sid.

PORCHES
2 1 Story
2 Rfd

EXTRA FEATURES
None

BUILT-INS
Usual

CONSTRUCTION
Sgle-Med

CEILING HEIGHT
Bamt. 7'
1st Flr 9'3"

9. CORNER JOINTS Mitered DOWN SPOUTS SEWER CONNECTED No
10. FIRST FLOOR JOIST SIZE 2 x 8 AND 18 INCH CENTERS BRIDGED No
11. FIRST FLOOR JOIST SUPPORT COLUMN OR POST SIZE 6 x 6
12. CLASS OR GRADE NO. 2 SHAPE NO.
13. BUILDING FINISHED OR UNFINISHED Finished
14. DEPRECIATION: CONDITION ~~20~~ 10 % OBSLSE. % ECON. SUIT. 10 % TOTAL 64 %
DATE BUILT 1906 REMODELED
EFFECTIVE AGE ~~30~~ 16 YEARS FUTURE LIFE 10 YEARS

LAND INFORMATION
1. SIZE 30' x 114' TOPOGRAPHY Level GRADE Above 2 FEET
2. STREET ROAD Graded SURFACE Gravel ALLEY No
3. SIDEWALK Conc. SEWERAGE Cesspool WATER ELECT. PUMP
4. LANDSCAPING Lawn & Flowers COND. Fair
5. TREND Static VALUE OF LAND
6. USE OF DISTRICT Residential VIEW Lake Union
7. RESIDENTIAL Medium-Old ZONED Manfg.

REMARKS

VOID



MAIN BUILDING

DIMENSION	SQ. FT. AREA
21 x 45	1428
3 x 35	1050
x	
x	
PCH. 5 x 7	35
PCH. 4 x 4	16

IMPROVEMENT VALUE

MAIN BUILDING	$
OTHER BUILDINGS	$
TOTAL 100%	$ 380
ASSESSED VALUE 50%	$ 190
DATE 5/19/37	150
2 880	550
63-115 2-200	700

OTHER BUILDINGS	CONSTRUCTION	FLOOR	ROOF	STY.	DIMENSION	AREA	VALUE
GARAGE	No. A.V.				x		$
					x		
					x		
					x		
					x		

FLOOR PLAN Sc. 20'=1"

6 Fir	Conc. Flr

PLUMBING	FOUNDATION
6 Fixtures	Conc.
1 Tub-leg	2 Pch P.B.
1 Toilet	ROOF
1 Basin	Shgl Comp
1 Sink	
1 H.W.Tank	EXTERIOR WALLS
1 Ldy.Try.	Fir Sid.
Average	



MAIN BUILDING

DIMENSION	SQ. FT. AREA
21 x 45	1478
3 x 35	1050
x	
x	
PCH. 5 x 7	35
PCH. 4 x 4	16

IMPROVEMENT VALUE

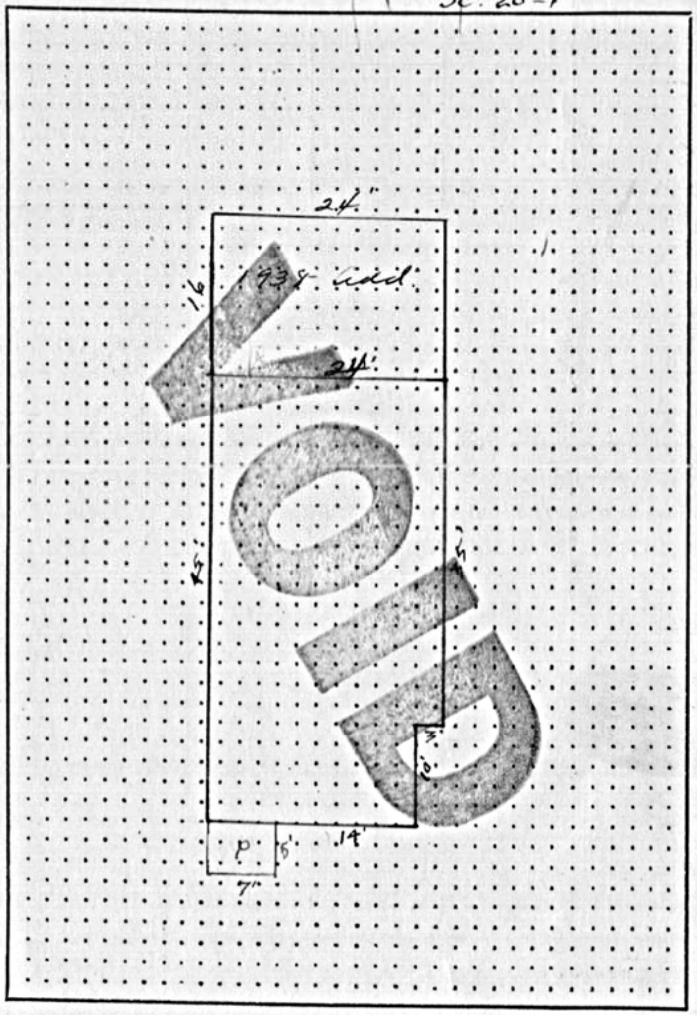
MAIN BUILDING	$
OTHER BUILDINGS	$
TOTAL 1000	$ 380
500	
ASSESSED VALUE 50%	$ 190
DATE 5/19/37	50
2000	580
63 x 45 2-200	700

OTHER BUILDINGS	CONSTRUCTION	FLOOR	ROOF	STY.	DIMENSION	AREA	VALUE
GARAGE	No. A.V.				x		$
					x		
					x		
					x		
					x		

OWNER OR CONTRACT PURCHASER	DATE	FILE NO.	PRICE	MTGE.	STAMP
Mrs. K.G. Hinton	6-9-64	560544	$2500		

FLOOR PLAN

Sc. 20'=1"



REMARKS Rest of block composed of fuel yard. Furniture factory and dwellings across street from laundry.

Permit # 326601 3-10-38 Cheap 16 x 24 2 story put in rear. Doubde construction, Shg. roof and fir floor. Figured this as Other buildings. L room plaster bd and other unfin.

FRONT

FRAYN PRINTING CO., SEATTLE

FIRE PLACE: None

BASEMENT: None

INTERIOR TRIM: 6 Fir

PLUMBING: 5.0 / 22.5
- 5 Fixtures
- 1 Tub-Leg
- 1 Toilet
- 1 Basin
- 1 Sink
- 1 H. W. Tank
- Average
- 1 Shower '45 1st Shaker '58
- 1 Laundry tray

FOUNDATION: Cement blks. 18
P. & B.
2 Pch P. & B.

ROOF: Shingle

EXTERIOR WALLS: Rustic '58

REMARKS



MAIN BUILDING

DIMENSION	SQ. FT. AREA
22x 34	748
6x 6 (36)	784
x	
x	
PCH. 5x 18	90
PCH. x	

IMPROVEMENT VALUE

MAIN BUILDING	$ 320 / 400
OTHER BUILDINGS	$ 40 / 80
TOTAL	$ 360 / 480
ASSESSED VALUE 50%	$ 180 / 240
DATE	5/20/37

550 / 800 97 (52)

OTHER BUILDINGS	CONSTRUCTION	FLOOR	ROOF	STY.	DIMENSION	AREA	VALUE
~~GARAGE~~	Single	Dirt	Paper	1	~~12 x 16~~	192	~~$ 24~~
~~Shed~~	"	"	"	1	15 x 18	270	59
Gar + Shed	Single	Conc	Comp		14 x 26		63
					x		
					x		

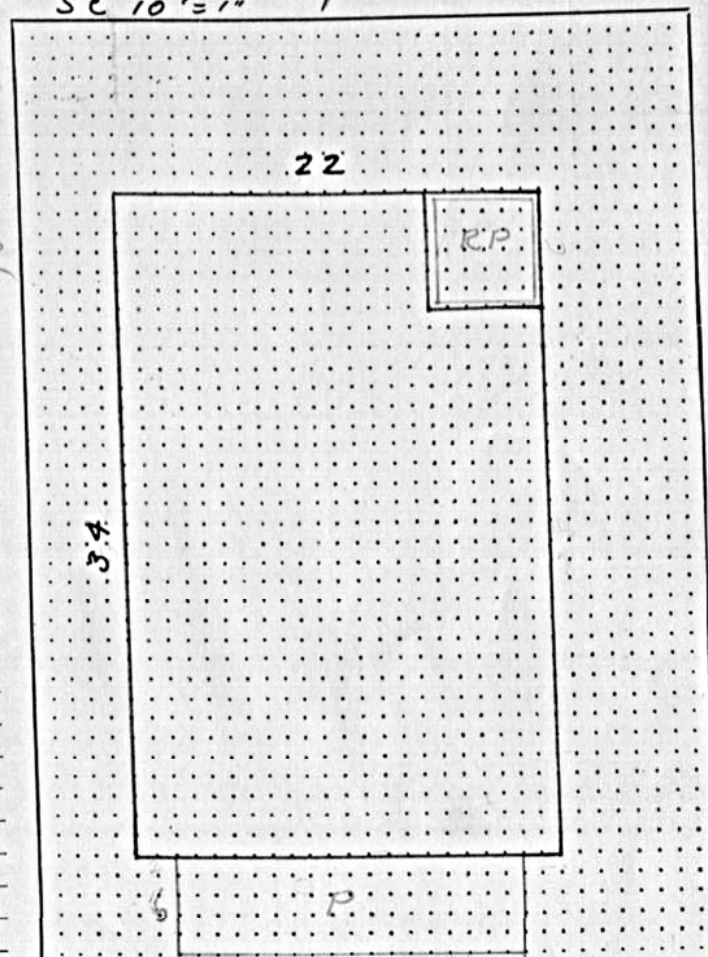
O C	OWNER OR CONTRACT PURCHASER	DATE	FILE NO.	PRICE	MTGE.	STAMP
A	Earl Stanford	2-5-57	E252118	$		0
A	Grandma Cookie Baking Co. Inc.	8/20/57	E271563	8400.	mtl.	84.00
B	Gordon R. Paulson	1-24-58	E286786	5,000		Pat

REMARKS: Rest of block composed of old houses, and shoe factory. Convenient to car line.

1967 - No AV - Reference only

FLOOR PLAN

SC 10' = 1"



Fee Owner Grandma Baking Co. Architect _____ Contractor _____

Zoning _____ Condition of Exterior F Interior F Foundation F Floor Plan: Good _____ Accept. _____ Poor _____

USE

- No. Stories
- No. Stores
- No. Rooms
- Basement — Unit Sq. Ft.
- No. Offices
- No. Apartmts.
- 1 rm. ☐ 2 rm. ☐ 3 rm.
- 4 rm. ☐ 5 rm. ☐ 6 rm.

TYPE OF CONSTRUCTION

- Frame
- Metal-Prefab
- Ordinary Masonry
- Mill Construction
- ✓ Class A Rein. Conc.
- Stru. Steel and Conc.
- Struct. Steel, Frame

or

QUALITY-TYPE

Good Med. Cheap

FOUNDATION

- Mud Sill ☐ Post Pier
- ✓ Conc. ☐ Brick
- Load Hgt. ☐ Piling

BASEMENT

- Full ___ % Part. ✓
- Sub-Basement
- Size _____
- Garage ☐ No. Cars
- Floors
- Plastered ☐ Pl. Bd.
- No. Apartments
- Service Rooms

EXTERIOR WALL CONST.

- Single ☐ Double
- Stud Walls
- Brick ___ Pil. ☐
- Conc. BLK Pil. ☐
- Rein. Conc. Skeleton
- Str. Stl. Frame REINF
- Pre-Fab Metal
- Tilt-Up
- ___ Filler Wall
- ___ Curtain Wall

EXTERIOR FACING

- Siding
- Stucco ___ Shakes
- Marblecrete
- Brick ☐ Veneer
- Conc. ☐ Conc. Blk.

FLOOR CONSTRUCTION

Joist ___ x ___ O.C.

- Mill ___ Car Deck
- R.Conc. ___ Elev.
- Steel ___ GLB.

or FRAME ✓

ROOF CONSTRUCTION

- ✓ Frame-Joist
- Mill-Deck
- Rein. Conc. ___ GLB
- Steel Fr. ___ Metal Deck
- Trusses ___ Span
- Wood ___ Steel

FLOOR FINISHES

	Fir	☐	Maple
	Oak	☐	2x6TG
	Lino	☐	3x6TG
	Cement	☐	Lgtwgt. Conc.
	Terrazzo		
✓	Asphalt Tile	☐	Vinyl Tile

or MAPLE 90%

☐ Tile ☐ Lino ☐ Form.

- Bath Floor
- Bath Walls
- Tub Recess
- Drain Bds.
- Vanities

PLUMBING

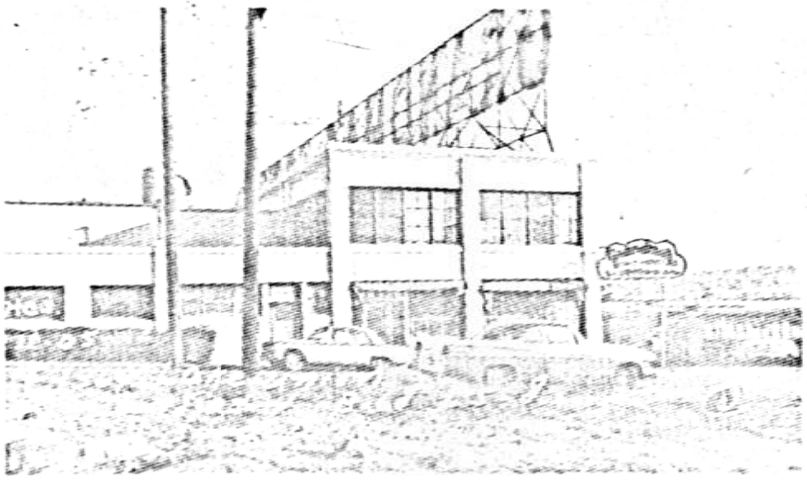
- No. Fixtures
- Toilets 1 Urinals
- Tubs Leg. or Pem.
- Basins ___ Dr. Ftns.
- Sinks
- Washers ___ Dryers
- Showers (tub) (stall)
- H.W. Tanks ___ Ldy.Trays
- D-Washers ___ Disposal
- Sprinkler Sys.

Date Built 1912 Date Add. Built _____ ☐ Finished ☐ Unfinished ☐ Remodeled

Effective Age 47 Years Future Life _____ Years

Dep. for Cond. _____ Dep for Ob. _____ Dep. for Es. _____ Total _____

FAC



HEATING FHC 1/2 F

- ✓ Elec. ___ Oil ___ Gas
- H.W. ___ St. ___ H.A.
- ✓ B.Bd. 4 Suspended
- FHA ___ Pipeless REFRI
- A. Cond. ___ Wall Unit
- Comb. Unit ___ Custom
- Refrig. ___ Convector
- Heat Pump ___ Fireplace

YEAR	ASSESSED VALUE
72	64020

MISC. TANKS, Etc.

HOISTS: Elec. Hydr.

1760 LBS THE CO

7X17X10 COOLER E

4HP FGL

8'0" X 2" CONVEY BR

4-EXS RO

3812 x 12" RISE

FRIG

ELEVATORS 1

- ___ Pass. ✓ Frght
- ___ Auto. ___ Elec.
- ___ Man. ✓ Hydr.

Doors-Auto ___ Man. ___

☐ Escalators

3 Stops ___ Speed

Cap'y. 3000

DOCKS AND PIERS

- ☐ Hvy. ___ Med. ___ Lgt.
- ☐ Untrtd. Pile Tmbr.
- ☐ Conc. Piles & Bms.
- ☐ Trtd. Pile Tmbr.
- ☐ Paved
- ☐ Dolphins

Deck

WIRING

- ☐ Knob & Tube
- ☐ Flex. Cable
- ☐ Conduit
- ☐ Pwr. Wiring
- ☐ Range Wiring
- ___ Outlets

INTERIOR WALLS & CEILING

Stud	Wood	Metal
✓ Plaster	Dry Wall	
Acc. Tile	Celotex	
Ceiled	Plywood	
Solid	Block	
Sound Proofed		Lamin.
Finished	✓ Unfinished	
Painted	Varnished	

INSULATION

- ___ Exter. ___ Partitions
- ___ Roof ___ Floor

INTERIOR TRIM

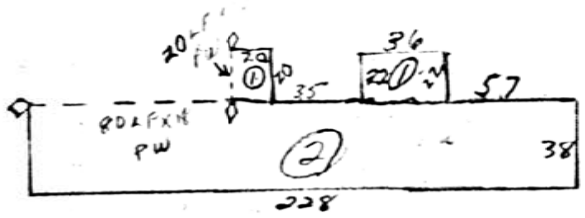
- Fir ___ Birch
- Mah. ___ Oak
- Metal
- Wood ___ Metal Doors

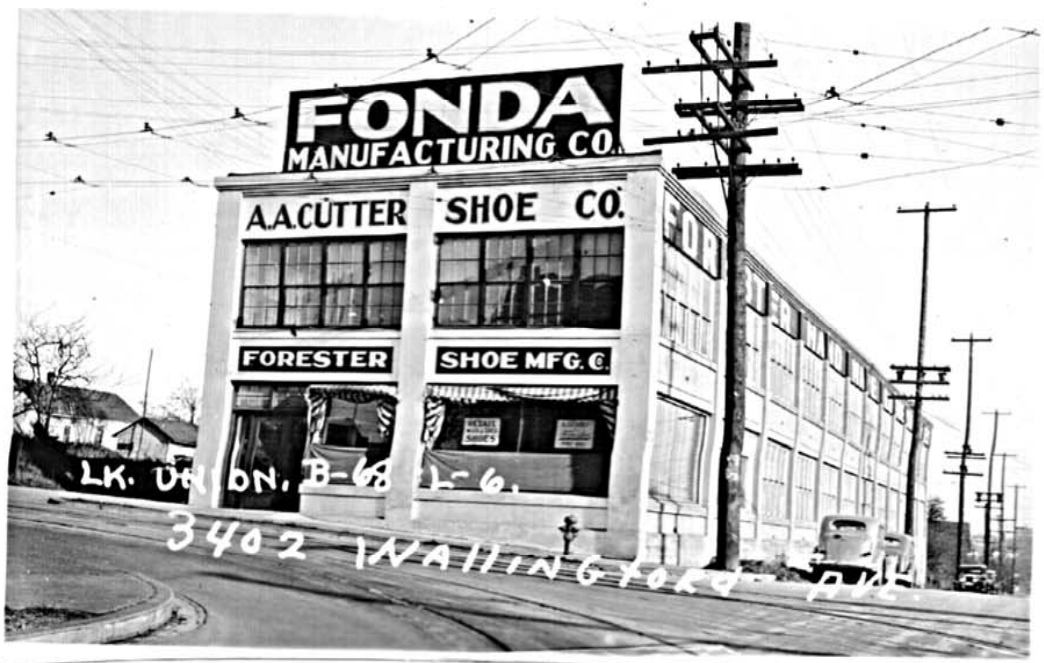
C.Hgt.	SB
	B
	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12
	13
	14
	15
	16
	17
	18
	19
	20
	21
	22

GROUND FLOOR AREA

TOTAL FLOOR AREA

1/10 = 8'







IMPROVEMENT VALUE

BUILDING	$
MAIN BUILDING	$
OTHER BUILDINGS	$
TOTAL	$ 1908
ASSESSED VALUE 50%	$ 654
DATE	20

LAND INFORMATION

1. SIZE 60'x 114' — Sloping On Grade
2. STREET—ROAD — Graded-Paved Alley-Dirt
3. SIDEWALK — Conc.
4. LANDSCAPING — None
5. TREND — Static
6. USE — Res.
7. DISTRICT — Med-Old

LAND VALUE $

ZONED- Com'l.

FLOOR PLAN 5¢ 20' = 1"

40'

ID

1 DISTRICT 207

LIMITS NL

CODE NO. 1

PERMIT NO.

2 ADDITION LAKE UNION NAME

SECTION TWP. N. RANGE EWM: BLOCK 68 TRACT OR LOT NO. ~~5 to 8 incl~~ Lots 5 to 9 incl

DESCRIPTION

408330-6670 9580 23500 0010

3 ADDRESS—PROPERTY 3402 Wallingford Ave. CONT. PURCHASER

4 FEE OWNER ~~Forester Shoe Mfg Co Inc.~~ Grandma Baking Co (1-7-26) (2-3-23)

5 ARCHITECT CONTRACTOR

ORIG. COST $

6 BUILDING Grandma Baking Co.
Factory Type
2 Stories
Basement
3 Rooms.
2 Offices

BASEMENT Part-20%

FOUNDATION Conc.

ROOF Tar & Gravel

STORE FRONTS Plate Glass
Large Sash
Wood Trim
Conc. under Glass

EXTERIOR Reinfcd. Conc.

INTERIOR
Post and Beam
4 Partitions
Painted Office Ceiled

FLOORS Fir Cem. Bsmt. ~~$750 1 ctr 22x32~~
New maple floors
1 Maple (Display Rm.) 1946

PLUMBING ~~16~~ 22 Fixtures
8 Toilets
8 Sinks

TILE WORK None

WIRING Open 165 Outlets

HEATING Steam
Oil Burner

ELEVATORS 3000# Rotary ~~None~~

ENTRANCE ~~None~~ none

CEILING—STORY HEIGHT
1 smt. 10' 1st Fl. 12'

EXTRA FEATURES

CONSTRUCTION Reinfcd. Conc.-Good

REFRIGERATION

7 CONDITION: EXTERIOR Good INTERIOR Good FOUND. Good

8 MAIN SUPPORT COLUMN x FOOTING SPAN FT.

9 FIRST FLOOR JOIST INCH CENTER BRIDGED

10 BUILDING Finished

11 GROSS INCOME $1680 EXPENSE $ NET INCOME $

12 DEPRECIATION: COND. 48% OBSLSE. % ECON. SUIT. % TOTAL %

YEAR BUILT 1912 REMODELED No

EFFECTIVE AGE 24 YEARS FUTURE LIFE 26 YEARS

DIMENSIONS 40 x 228 x SQUARE FT. AREA CUBIC FT.
x x 9120



IMPROVEMENT VALUE

BUILDING $
MAIN BUILDING $
OTHER BUILDINGS $
TOTAL $ 13080
ASSESSED VALUE 50% $ 6540

DATE 20,000. ~~20,000.~~

LAND INFORMATION

1. SIZE 60'x 114' 25000 ~~12,500~~ 7560
Sloping On Grade
2. STREET—ROAD
Graded-Paved-Alley-Dirt
3. SIDEWALK
Conc. 1,350
4. LANDSCAPING
None 450
5. TREND LAND VALUE $ 1,800
Static
6. USE
Res.
7. DISTRICT Med-Old

New Sheet Made 11-2-70

ZONED- COM'L.

OWNER OR CONTRACT PURCHASER	DATE	FILE NO.	PRICE	MTGE.	STAMP
					42.50

FLOOR PLAN 5¢ 20' = 1"

& Sinks

TILE WORK
None

WIRING
Open 165 Outlets

HEATING
Steam
Oil Burner

ELEVATORS
3000# ROTARY ~~None~~

ENTRANCE
~~None~~ none

CEILING—STORY HEIGHT
B smt. 10' 1st Fl. 12'



ASSESSED VALUE SOIL $ 6348

DATE

LAND INFORMATION

1. SIZE 60'X 114' 25000
Sloping On Grade 12~~50~~00
7848

2. STREET—ROAD
Graded-Paved-Alley-Dirt

3. SIDEWALK
Conc. 13,998

4. LANDSCAPING
None 4455

5. TREND LAND VALUE $ 17,800
Static

6. USE
Res.

7. DISTRICT Med-Old

ZONED- COM'L.

New Sheet Made 11-2-70

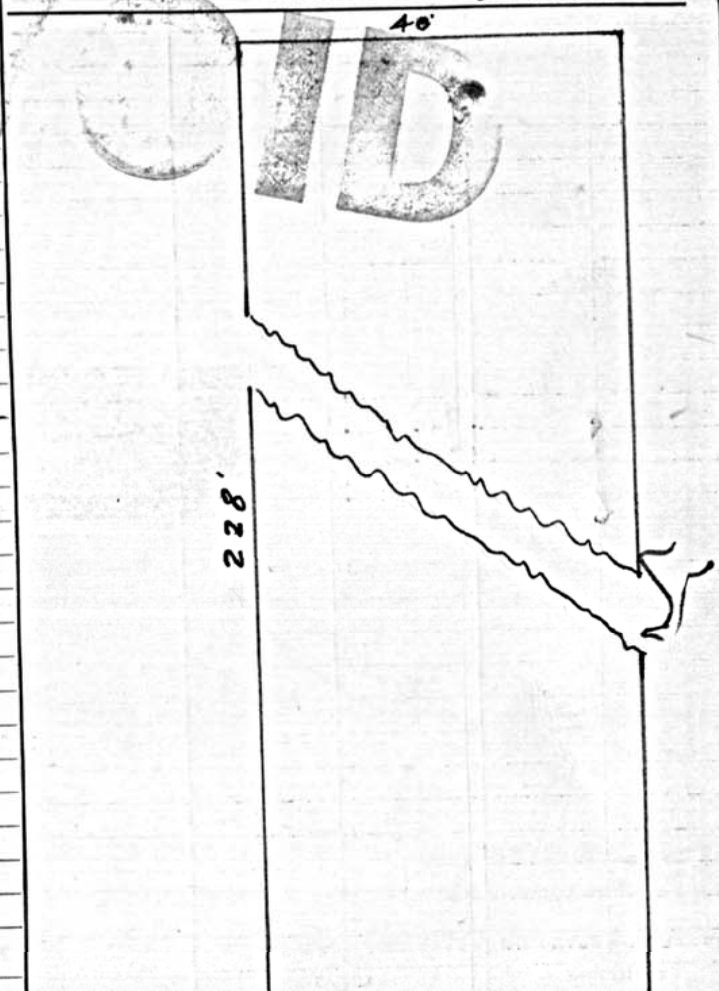
O C	OWNER OR CONTRACT PURCHASER	DATE	FILE NO.	PRICE	MTGE.	STAMP
	Grandma Baking Co Inc	12-5-45	3522921	45.000		49.50

REMARKS

Also 5-7+8 Lake Union Add
68 68 68

See Remark in folio no 1364 - 6-48

FLOOR PLAN 5¢ 20'=1"



Date Built 1957 ☒ Finished ☐ Unfinished ☐ Remodeled

Effective Age _____ Years Future Life _____ Years

Dep. for Cond. _____ Dep. for Ob. _____ Dep. for Es. _____ Total 2 2 Sec

PRODUCTION COST

Fa

$

M

2

+

+

+

TA

INT

Double
Masonry
truction
Rein. Con.
el and Con.
Brick
Rein. Con.
Cheap

s
Pier

%
gement

No. Cars
Floors
ed
Rooms
Rooms

WALL CONST.
Double
Stud Walls
Stud Walls
Walls
with Pilasters
ete Walls + BRK
with Pilasters
Walls
Con. Skel.
Filler Walls
nated Walls

FACING

Whitewashed
Unfinished

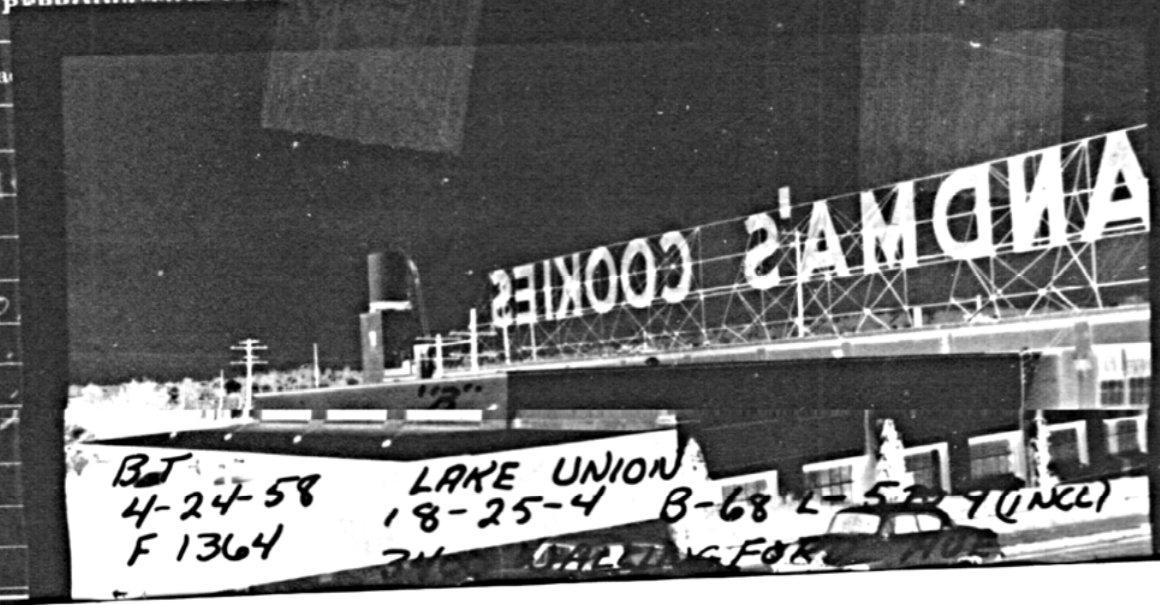
INTERIOR TRIM

6
7
8
9

HEATING

Stove
Pipeless Furnace
Gravity H. A.
Air Cond., Fan
2 Suspended Gas, ~~Hot Water~~
Steam Heat
Hot Water
Oil Burner

Year	Assessed Value
1958	2500 Sander 47
1959	10,200 - B.&T.
92	20190

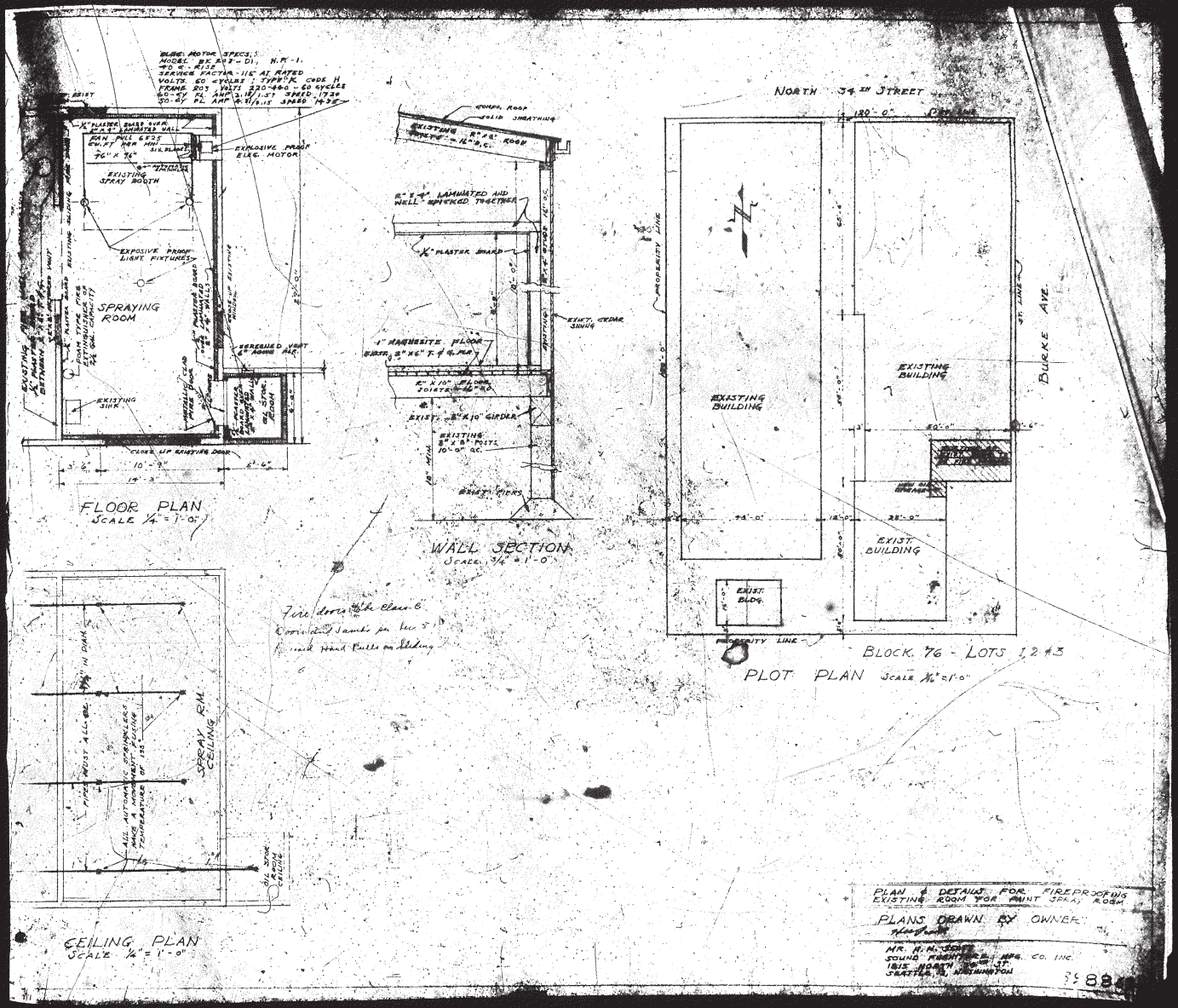




75'

G. Board
335LF - Fence on
200LF - Conc. Ret. wall

Building Plans



MOTOR SPECS.
MODEL BK 823 - DI. H.P. - 1.
40° C. RISE
SERVICE FACTOR - 115 AT RATED
VOLTS 60 CYCLES - TYPE K CODE H
FRAME 203 VOLTS 220-440 - 60 CYCLES
60 - CY FL AMP 3.8/1.9 SPEED - 1730
50 - CY FL AMP 3.8/1.9 SPEED 1435

FLOOR PLAN
SCALE ¼" = 1'-0"

WALL SECTION
SCALE ¾" = 1'-0"

Fire door with class C
Corrugated Sandusky Iron
Painted Hand Rails on Sliding

PLOT PLAN SCALE 1/16" = 1'-0"

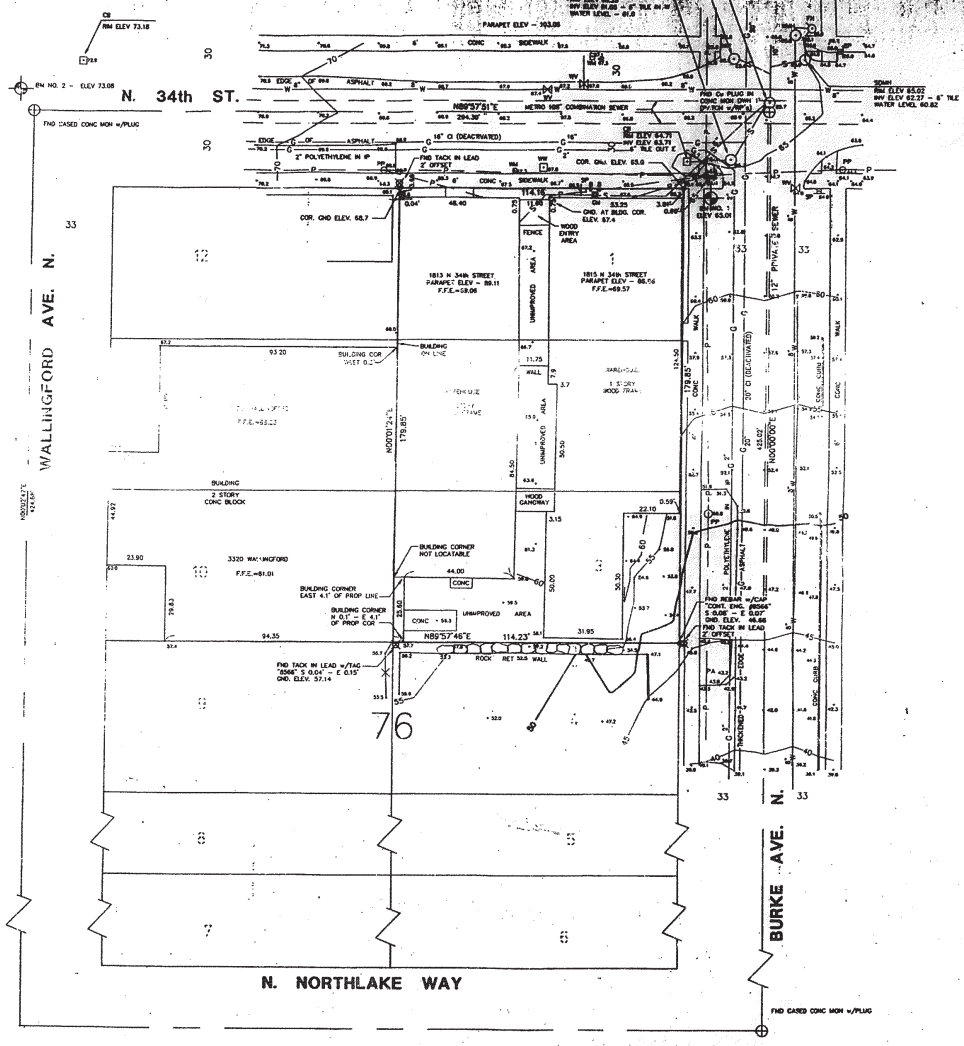
CEILING PLAN
SCALE ¼" = 1'-0"

PLAN & DETAILS FOR FIREPROOFING EXISTING ROOM FOR PAINT SPRAY ROOM

PLANS DRAWN BY OWNER

MR. H. H. JOSEPH
SOUND PACKING & MFG. CO. INC.
1815 NORTH 34TH ST.
SEATTLE 3, WASHINGTON

88



N

SCALE: 1"=20'

POR SE ¼ SE ¼, SEC 18, TWP 25 N, RGE 4 E, W.M.
KING COUNTY, WASHINGTON

0 10 20 30 40 50

GRAPHIC SCALE

LEGAL DESCRIPTION

LOTS 1,2, AND 3, BLOCK 76, LAKE UNION ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 1 OF PLATS, PAGE 238, RECORDS OF KING COUNTY, WASHINGTON.

SUBJECT TO EASEMENTS, RESTRICTIONS, AND RESERVATIONS OF RECORD.

NOTES

THIS BOUNDARY AND TOPOGRAPHY SURVEY WAS DONE WITHOUT THE BENEFIT OF A TITLE REPORT, AND DOES NOT GUARANTEE TO SHOW ALL EASEMENTS OR OTHER MATTERS OF RECORD THAT WOULD BE DISCLOSED BY A TITLE REPORT.

CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION, AND ELEVATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

LEGEND

B --- BOLLARD
CB --- CATCH BASIN
PA --- PLANTER AREA
PP --- POWER POLE
SDMH --- STORM DRAIN MANHOLE
SP --- SIGN POST
SSMH --- SANITARY SEWER MANHOLE
SV --- SEWER VALVE
WMH --- WATER MANHOLE
WV --- WATER VALVE
WW --- WATER WELL?

--G-- GAS
--P-- POWER
--S-- SEWER
--W-- WATER

● SET REBAR w/CAP "TRIAD 18091"
o FOUND CORNER AS NOTED
⊠ FOUND TACK IN LEAD AS NOTED

CONTOUR INTERVAL 5'

BM NO. 1 - ELEV 65.01
CHISELED □ NE CORNER PP BASE SW CORNER INT N. 34th STREET AND BURKE AVENUE N.

BM NO. 2 - ELEV 73.08
TOP NORTH RIM MON CASE INT N. 34th STREET AND WALLINGFORD AVENUE N.

RECEIVED
JAN 1 4 1993
DEPT. OF PLANNING & DEVELOPMENT
Plans Routing

ATSUR ASSOCIATES
Project Management
Civil Engineering
Surveying
Land Use Planning
Environmental Analysis
11410 NE 124th Street • Kirkland, WA 98033 • (206) 821-8448 • (206) 821-3481 FAX

BOUNDARY AND TOPOGRAPHY

AVTECH OFFICE BLDG

CITY OF SEATTLE WASHINGTON

DESIGNED
DRAWN KG
CHECKED SJS
DATE 25 JAN 1993
SUSTAY A DETTERBACK
PROJECT MANAGER

SHEET A of 2

JOB NUMBER 92-003

AVTECH CORPORATION

1815 N. 34TH ST.
SEATTLE, WA. 98103

CUSTOMER/PROPERTY OWNER:
AVTECH CORPORATION
3400 WALLINGFORD AVE. N.
SEATTLE, WA 98103

LEGAL DESCRIPTION:
LOTS 1, 2, AND 3, BLOCK 76, LAKE UNION ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 1 OF PLATS, PAGE 238, RECORDS OF KING COUNTY, WASHINGTON.
PARCEL # 9083307105



VICINITY MAP
AVTECH CORP.

YEAR OF CODE: 06

PROJECT LAYOUT

MECHANICAL CONTRACTOR:
THOMAS INDUSTRIES INC.
CONTACT: TOM HANSON
20942 NE 78TH ST
REDMOND, WA 98053
PHONE: (425) 785-5125
FAX: (425) 868-8692
WACCB: THOMASAI1072P9

SCOPE OF WORK:
INSTALL A BENCH STYLE PAINT BOOTH RELOCATED FROM ANOTHER BUILDING. VENT THE EXHAUST STACK THROUGH THE ROOF AND ENDING IN THE MIDDLE OF THE ROOF TO EXCEED 25' DISTANCE FROM THE PROPERTY LINE, ROOF PENETRATION WILL BE FRAMED FOR SUPPORT, AND INSULATED WITH 2" OF INSULATION AND SEPARATED WITH A 2" AIR GAP BETWEEN THE DUCT AND THE ROOF MATERIALS.

FIRE SUPRESSION AND ELECTRICAL TO BE PERMITTED BY OTHERS.

NOTE:
1504.1.2.6- PER THE INTERNATIONAL FIRE CODE:
THE AREA OF THE BENCH BOOTH WITHIN THIS BUILDING DOES NOT EXCEED 10 PERCENT OF THE AREA OF THE BUILDING.

- SQ. FT. OF BENCH BOOTH = 12 SQ. FT.
- SQ. FT. OF THE BUILDING = 187 SQ. FT.

RECEIVED
OCT 16 2007
DEPT. OF PLANNING AND DEVELOPMENT

DRAWING INDEX:

1. SITE PLAN	DWG# 2866A
2. SYSTEM LAYOUT	DWG# 2867A
3. RELOCATED BENCH BOOTH	DWG# 2868A

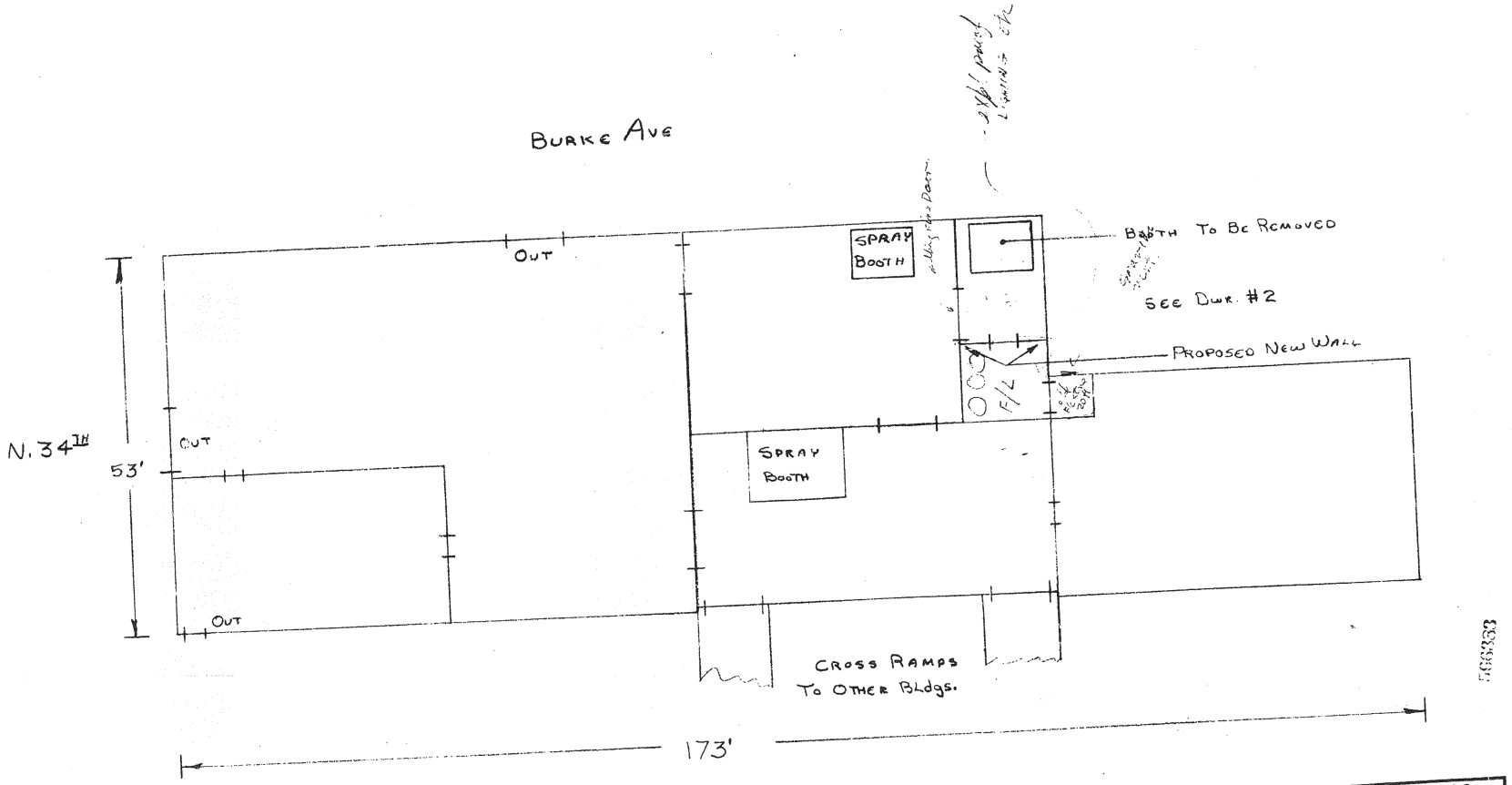
THE CITY OF SEATTLE
DEPARTMENT OF PLANNING AND DEVELOPMENT
OCT 18 2007
APPROVED

Finishing Technologies, Inc.
A division of Jon R. Hamlin, Co.
1217 NW Glisan, Portland, Oregon 97209
P.O. Box 9128, Portland, Oregon 97209

THIS DRAWING AND DESIGN IS THE PROPERTY OF FINISHING TECHNOLOGIES, INC. NEITHER THE DRAWING, REPRODUCTION OF IT, NOR INFORMATION DERIVED FROM IT IS TO BE GIVEN TO OTHERS WITHOUT WRITTEN PERMISSION. NO USE IS TO BE MADE WHICH IS OR MAY BE INJURIOUS TO FINISHING TECHNOLOGIES, INC.

DRAWING APPROVAL:	DATE:
CUSTOMER:	AVTECH CORP.
DRAWN BY: MKS	TITLE: SITE PLAN
DATE: 09/25/07	
REVISIONS: INT. CHANGE	SHEET 1 OF 3
	SCALE: 1"=10'-0"
	DWG. NO. 2866A

2 sht.



PLANS CHECK OFF		
SET # OF	CHECKED BY	DATE
1 Zoning Standards		
2 [illegible]		
3 [illegible]		
4 [illegible]		
5 [illegible]		
6 [illegible]		
7 Fire		
8 P.C.D.		
9 Water		
10 Permit Issued by		

REVISIONS			W. F. HUSTON MFG. CO. 1815 NO. 34th ST., SEATTLE 3, WASH.		
NO.	DATE	BY	BLDG. PLAN		
1			DRAWN BY: BW	SCALE: 1/8-1'	MATERIAL
2			CHK'D	DATE: 8-20-76	DRAWING NO. #1
3			TRACED	APP'D	
4					
5					

CITY OF SEATTLE
DEPT. OF BUILDINGS
Approved Subject to Errors and Omissions
SEP 29 1976
By Onodera

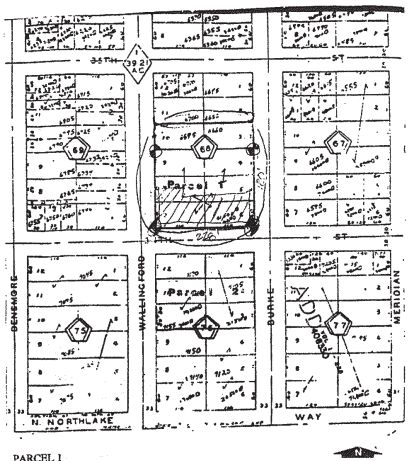
Feetham.

666333

AVTECH Corp.
1815 N. 34th St.
Seattle, WA 98103

CONSTRUCTION
FIELD
CHRCL
AUD/ALT
$0000
1815 N 34TH ST
Richard Hall
Build ID:
6142787

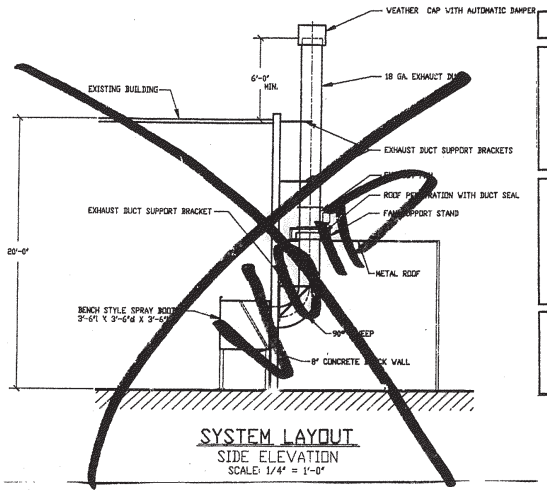
NOTICE THIS DRAWING IS PROPERTY OF BARNES INDUSTRIAL SYSTEMS, CONTAINS PROPRIETARY INFORMATION AND MUST BE RETURNED UPON REQUEST. DO NOT CIRCULATE, REPRODUCE OR DIVULGE TO OTHER PARTIES WITHOUT WRITTEN CONSENT OF BARNES INDUSTRIAL SYSTEMS.



PARCEL 1
3400 WALLINGFORD AVE.
TAX LOT 4-9
BLOCK 68
LAKE UNION ADDITION

KING COUNTY WORK
TAX NO: 408350-0695

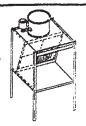
PLOT PLAN
Avtech Properties
Seattle, Washington



SYSTEM LAYOUT
SIDE ELEVATION
SCALE: 1/4" = 1'-0"

SPECIAL APPLICATION BENCH FILTER BOOTHS

Light Duty Booth BF-3-1/2
3'-6" wide
3'-6" deep
3'-6"high
2'-7"bench height (with legs)
6'-1" height overall (with legs)
20" working depth
4-20" x 20" x 3" filter cells
18" dia. fan
1/2 h.p., 1 phase, explosion proof motor.
3000 c.f.m. @ 1/4" s.p.
face velocity 250 f.p.m.

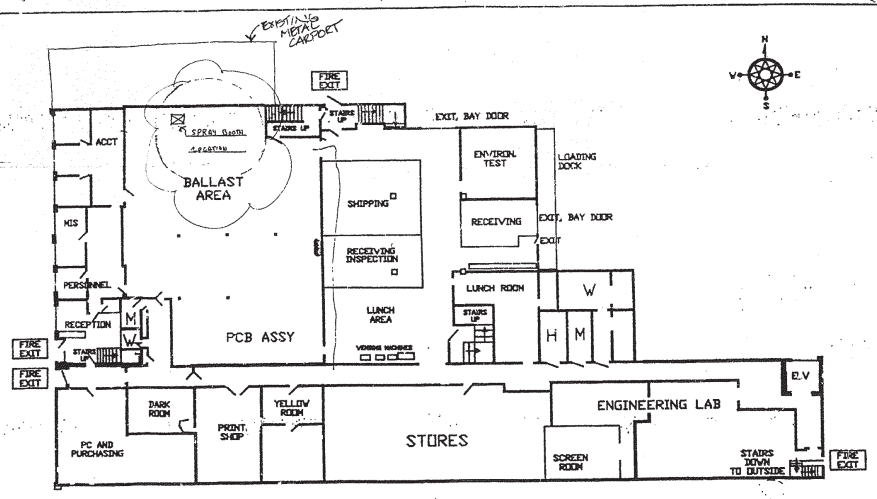


GENERAL INFORMATION

- Booth Package Includes:
  - fan
  - motor
  - belt guard
  - monometer
  - filter grids
  - booth legs
  - exhaust filters
  - nuts & bolts
  - blue print assembly instructions
- All bench type paint spray booths adhere to the Uniform Fire Code (1982) and the National Electric Code (1984). Always check local fire and electrical codes for special conditions that may prevail in your area.

CONSTRUCTION FEATURES

- 18 gauge steel panels.
- Bolt construction. Inside of booth is smooth.
- Filter cells are 20"x20"x3".
- Fans are belt driven with belts totally enclosed. Blades are rigid type and are non-sparking and di-electric.
- Face velocity exceeds code requirements of 150 f.p.m.
- See specifications for face velocity of individual booths.



SPRAY BOOTH INFORMATION

1. This Bleeker Bench Booth is built in accordance with NFPA-33 and UFC 91, section 45.
2. This booth is constructed of No. 18 gauge hot dipped galvanized steel.
3. Exhaust fan is tubeaxial fan with aluminum non-sparking blade. Fan housing belts do not enter duct or booth.
4. The floor of the spray booth will be concrete, which is non-combustible material.
5. Interior surface of spray booth will be smooth and continuous without edges.
6. This booth will be more than three feet from the wall.
7. This booth was designed to meet air velocity of 250 lineal feet per minute.
8. Exhaust filter chamber is located at one end of the spray booth. Exhaust filters installed are UL-listed No. UL R2757. A manometer is installed for differential pressure required for filter changing.
9. All electrical wiring is done in accordance with the National Electrical Code for Spray Booths (Article 516).
10. Exhaust ducting is made of No. 18 gauge sheet metal. Duct size 18".
11. The air solenoid switch is located on the air line feeding the spray booth. Exhaust system must be running and interlock with air solenoid before air is allowed to booth.
12. Plans and specifications on installation for automatic sprinkler system within the spray booth are submitted with drawing.
13. "No Smoking" sign will be installed on the side of the booth.
14. "No Welding" sign will be installed on the side of the booth.
15. Fire extinguisher bottles will be located next to booth.
16. Spray booth location is more than 30 feet from property line.

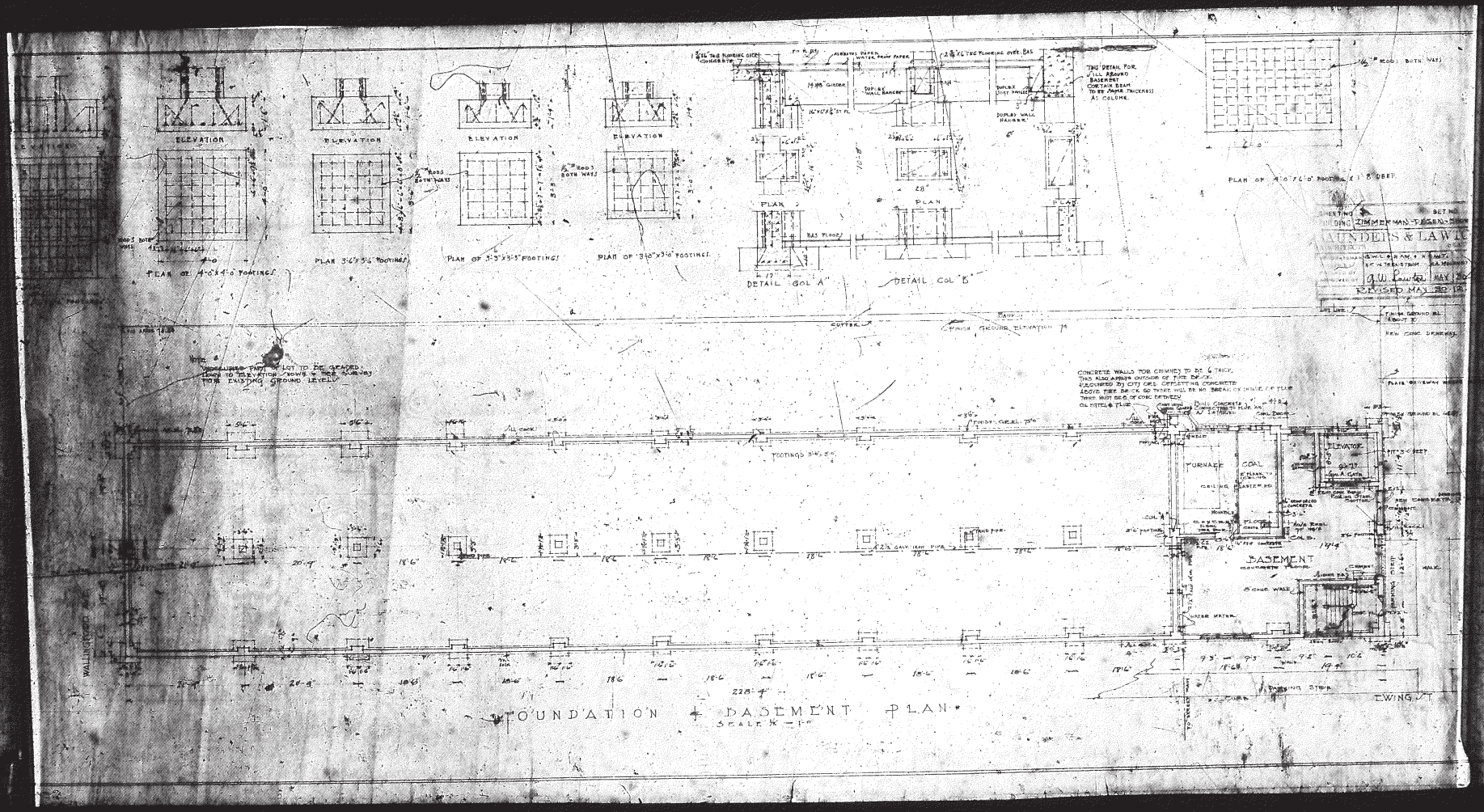
CITY OF SEATTLE
DEPT. OF CONSTRUCTIONS AND LAND USE
APPROVED Subject to Errors
OCT 21

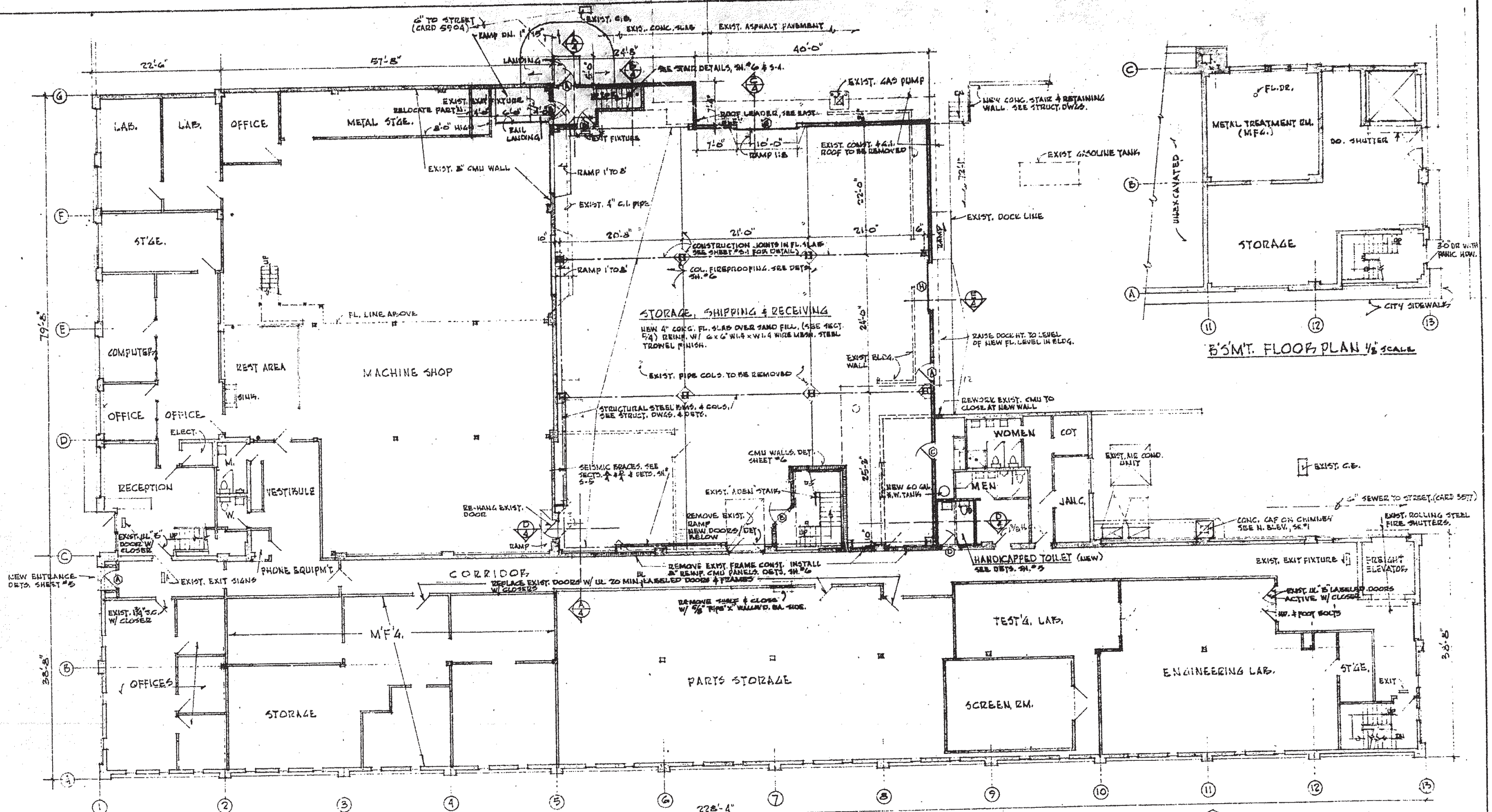
RECEIVED
AUG 16 1993
Dept. of Construction & Land Use

REVISIONS	DATE	BY	CHK

BARNES INDUSTRIAL SYSTEMS INC.
P.O. BOX 98188
SEATTLE, WASHINGTON 98138-2188
(206) 575-5604

TITLE	SYSTEM DETAILS
CUSTOMER	AVTEC
DWG. BY	RMS
DATE	5/13/93
SCALE	1/4" = 1'-0"
SHEET	1 OF 1
DRAWING NO.	


ELEVATION
PLAN OF 4'-0"X4'-0" FOOTINGS
PLAN 3'-6"X3'-6" FOOTINGS
PLAN OF 3'-3"X3'-3" FOOTINGS
PLAN OF 3'-10"X3'-10" FOOTINGS
DETAIL COL "A"
DETAIL COL "B"
PLAN OF 4'-0"X4'-0" FOOTING X 1'-8" DEEP
REVISED MAY 20 '18
FURNACE
COAL
ELEVATOR
BASEMENT
FOOTINGS 3'-6"X3'-6"
EWING ST
FOUNDATION + BASEMENT PLAN
SCALE 1/8"=1'-0"

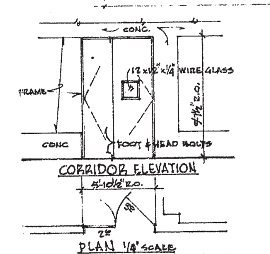


FIRST FLOOR PLAN 1/8" SCALE

ENERGY CODE NOTE: NEW AREA TO UNHEATED SPACE. HEATING SYSTEM TO BE DESIGNED & INSTALLED WITH TERMOSTATIC CONTROL FOR MAXIMUM TEMPERATURE OF 49° F.

NOTES:
CONTRACTOR IS TO REPAIR AND/OR REPLACE EXISTING EXTERIOR CONCRETE OR ASPHALT PAVEMENT CUT OUT OR DAMAGED TO FACILITATE THIS CONSTRUCTION.

LEGEND
- EXISTING CONSTRUCTION
- EXIST. CONST. TO BE REMOVED
- SPANWALL UNITS
- NEW FRAME CONST.
- NEW REINF. 8" CMU
- STEEL STUD & 5/8 TYPE "X" GYP. WALLB'D.



NEW 20 MIN UL LABELED DOOR & FRAME OR, 3/4 HR UL "B" LABEL METAL DOOR & FRAME W/ S.C. ON ACTIVE LEAF. 2 PR 4 1/2 x 4 1/2 HINGES EA. LEAF.

DOOR & HARDWARE SCHEDULE

SYMBOL	SIZE	MATERIAL	FRAME	HINGES	REMARKS
A	3'-0" x 6'-8" x 1 3/4	METAL	METAL	1 1/2 PR 4 1/2 x 4 1/2	PROVIDE 12 x 12" CLEAR WIRE GLASS VISION PANEL. DOOR TO HAVE SCHLAGE "D" SERIES LOCK & AUTOMATIC DOOR CLOSER.
B	3'-0" x 6'-8" x 1 3/4"	METAL	METAL	1 1/2 PR 4 1/2 x 4 1/2	UL LABELED CLASS "B" DOOR & FRAME. DOORS TO HAVE 10" x 10" CLEAR WIRE GLASS VISION PANEL. PROVIDE AND INSTALL LATCHSET & DOOR CLOSER.
C	3'-0" x 6'-8" x 1 3/4"	WOOD	WOOD	1 1/2 PR 4 1/2 x 4 1/2	PROVIDE & INSTALL LATCHSET
D	3'-0" x 6'-8" x 1 3/4"	WOOD	WOOD	1 1/2 PR 4 1/2 x 4 1/2	UL LABELED "20 MIN." DOOR & FRAME. LATCHSET W/ PUSH-BUTTON LOCK TOILET SIDE & EMERGENCY KEY CORRIDOR SIDE.
E	2'-8" x 6'-8" x 1 3/8"	WOOD	WOOD	PR 3 1/2 x 3 1/2	PROVIDE AND INSTALL LATCHSET & AUTOMATIC DOOR CLOSERS.
F	2'-8" x 6'-8" x 1 3/8"	WOOD	WOOD	PR 3 1/2 x 3 1/2	PROVIDE AND INSTALL "D" SERIES LOCK
G	10'-0" x 10'-0"				
H	8'-0" x 8'-0"				

ALL WOOD DOORS TO BE SOLID CORE BIRCH FACED.
METAL DOORS TO BE COMPOSITE METAL FACE CONST. WITH CORES OF SOLID MINERAL OR FIBROUS MATERIAL SURROUNDED BY 18 GA PERIMETER CHANNEL. SURFACE SHEETS TO CONSIST OF TWO STRETCHER LEVELED FORMED 22 GA SURFACE SHEETS. DOORS TO BE PROVIDED WITH SUITABLE REINFORCING FOR HARDWARE NOTED.
LATCH / LOCK SETS TO BE SCHLAGE "D" SERIES A105 TUL 28 FINISH. LOCKS KEYED TO EXISTING SYSTEM. (BEST CORES)
CLOSERS: SARGENT #150 FLEN 135 T.B. & I.

DET., NEW DOOR, CORRIDOR TO SHIPPING & RECEIVING.
REQ'D. PER DCLU 5/3/86

CITY OF SEATTLE DEPT. OF CONSTRUCTION AND LAND USE
MAY 15 1986
APPROVED Subject to Errors and Omissions By

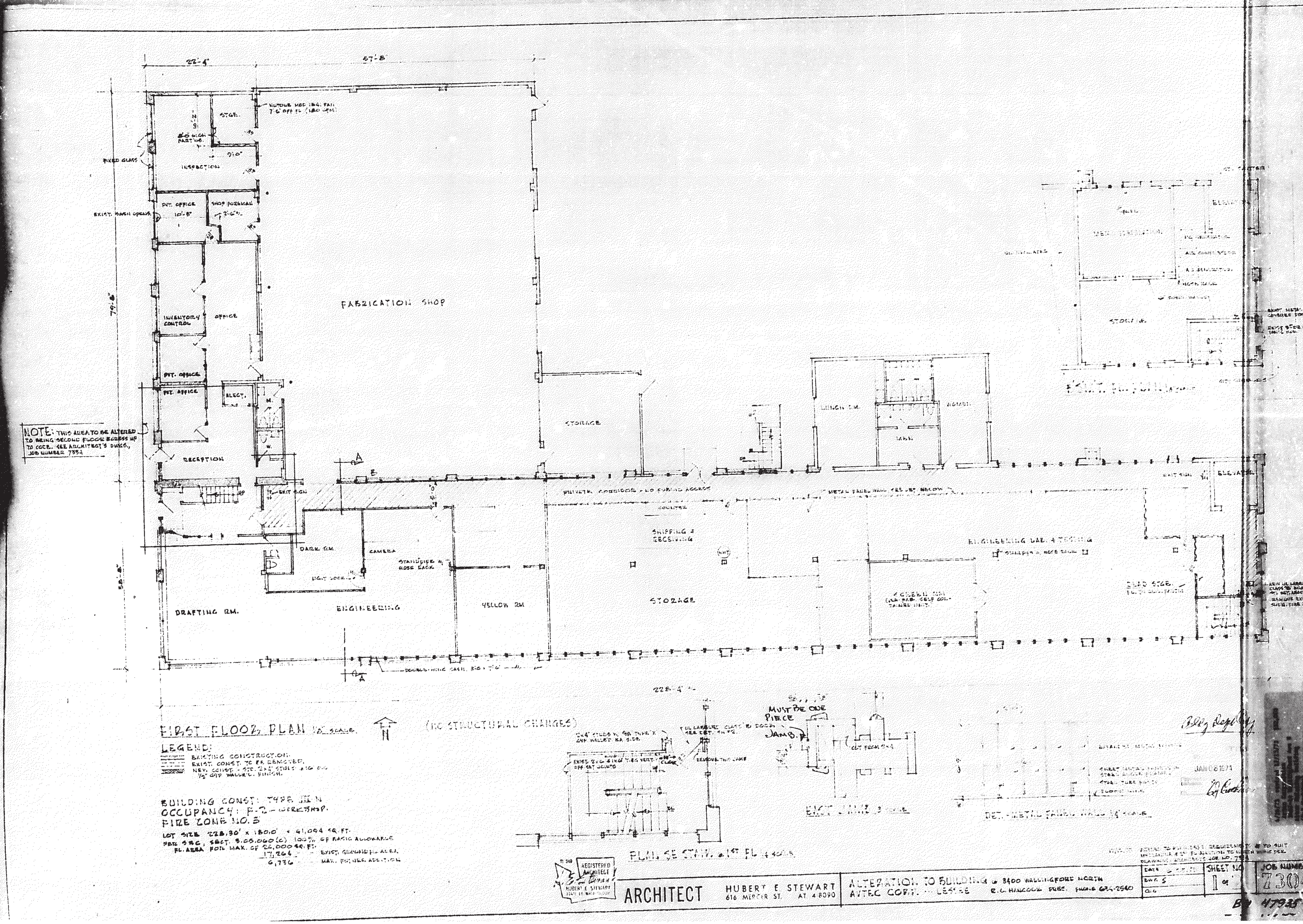
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JAN 6 1986
Dept. of Construction & Land Use

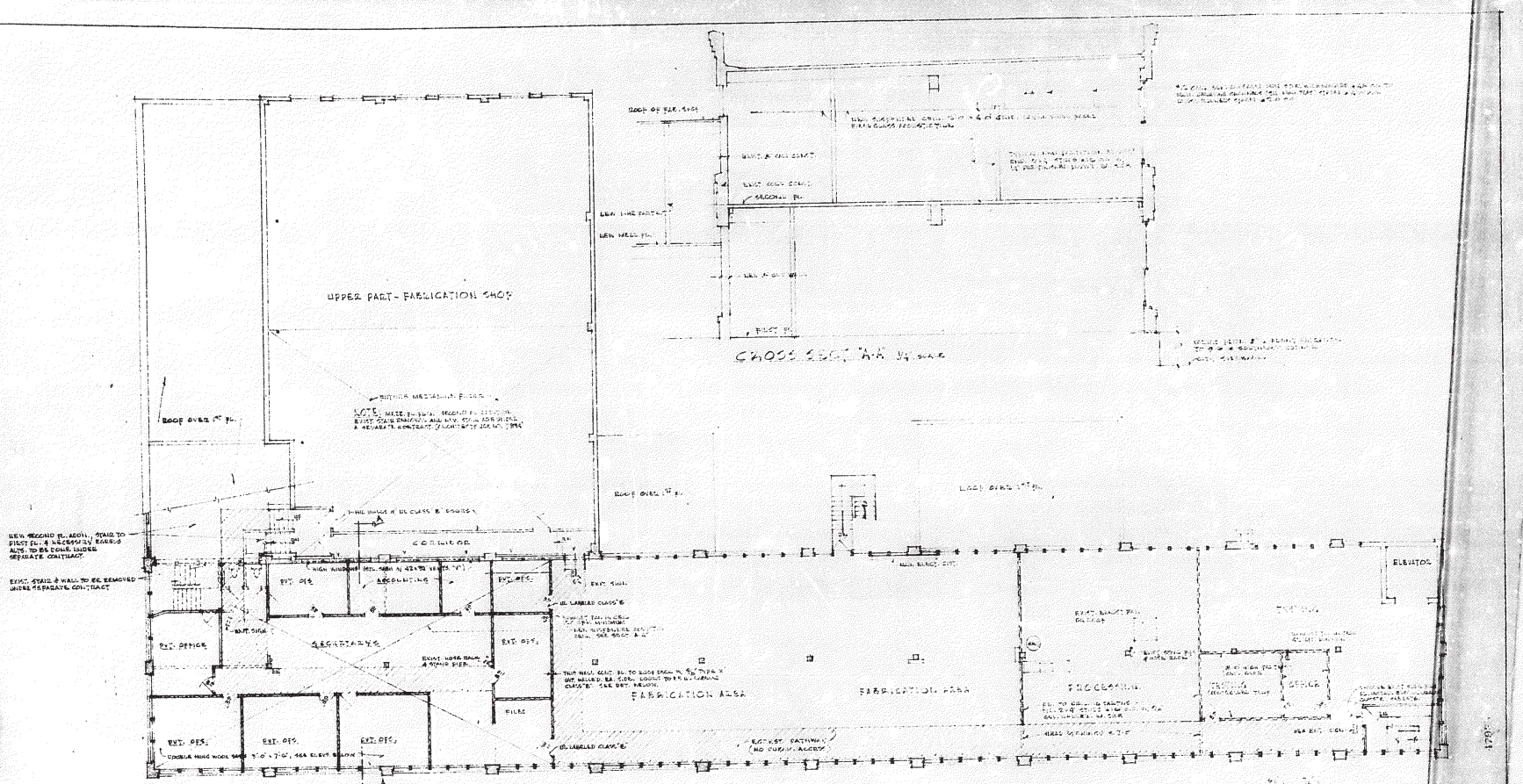
REGISTERED ARCHITECT HUBERT E. STEWART STATE OF WASHINGTON 10/21/85

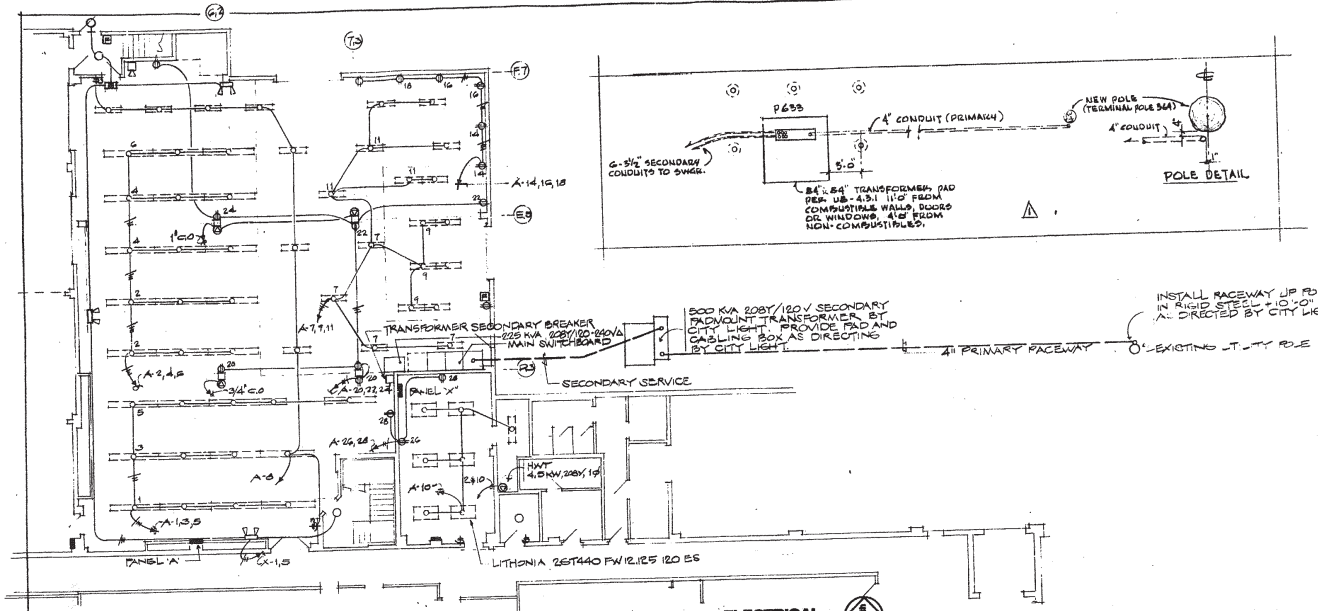
ARCHITECT	HUBERT E. STEWART 109 W. McGRAW STREET SEATTLE 98119 — 282-6708	ADDITION TO EXISTING BUILDING AYTECH CORPORATION -- OWNER / OCCUPANT 3600 WALLINGFORD N. SEATTLE 98103 634-2540	DATE 10/21/85 DWG CKG	SHEET NO. 2 of 6	JOB NUMBER 8504

NOTE: If the microfilmed drawing is LESS clear than this notice, it is due to the quality of the original drawing.

24X


FABRICATION SHOP
INSPECTION
SHOP FOREMAN
INVENTORY CONTROL
OFFICE
PVT. OFFICE
ELECT.
RECEPTION
STORAGE
NOTE: THIS AREA TO BE ALTERED TO BRING SECOND FLOOR EGRESS UP TO CODE. SEE ARCHITECT'S DWGS., JOB NUMBER 7334
FIXED GLASS
DARK RM.
CAMERA
DRAFTING RM.
ENGINEERING
YELLOW RM
SHIPPING & RECEIVING
ENGINEERING LAB. & TESTING
LUNCH RM.
WOMEN
MEN
DOUBLE HUNG SASH
FIRST FLOOR PLAN
(NO STRUCTURAL CHANGES)
N
LEGEND:
EXISTING CONSTRUCTION.
EXIST. CONST. TO BE REMOVED.
BUILDING CONST: TYPE III N
OCCUPANCY: F-2 - WORKSHOP.
FIRE ZONE NO. 5
LOT SIZE 228.30' x 180.0' = 41,094 SQ. FT.
17,264 - EXIST. GROUND FL. AREA
6,736 - MAX. FUTURE ADDITION
MUST BE ONE PIECE
JAMB.
REGISTERED ARCHITECT
HUBERT E. STEWART
ARCHITECT
HUBERT E. STEWART
616 MERCER ST. AT. 4-8090
ALTERATION TO BUILDING @ 3400 WALLINGFORD NORTH
AVTEC CORP. - LESSEE
PHONE 634-2540
SHEET NO.
1
JOB NUMBER
730
47935

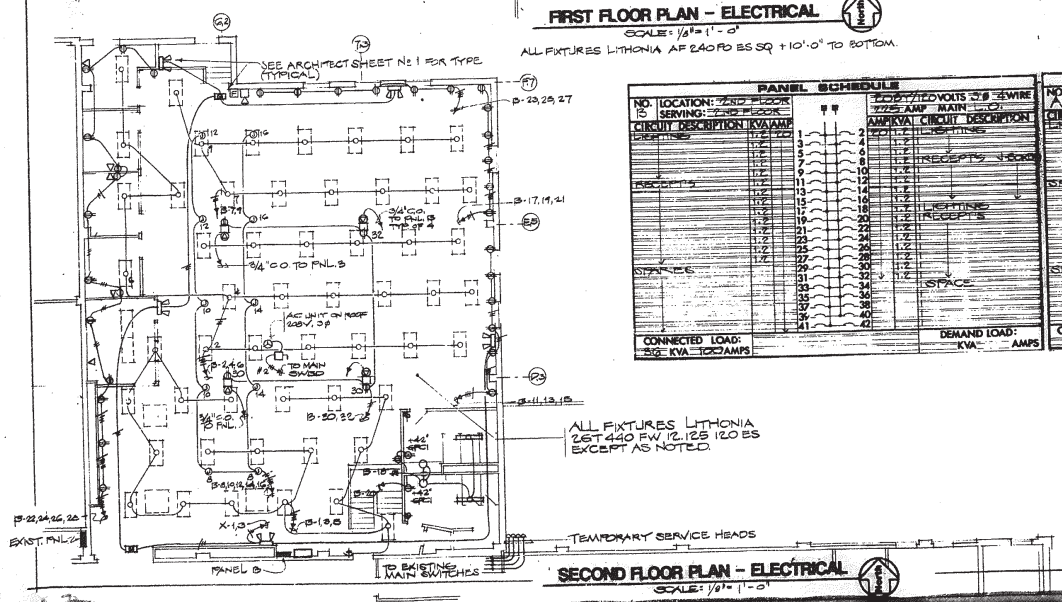

UPPER PART - FABRICATION SHOP
ROOF OVER 1ST FL.
NOTE: MEZZ. FLOOR, SPRINKLER SYSTEM, EXIST. STAIR ENCLOSURE, & ALL EXT. STAIR ADDITIONS & REVISIONS TO BE DONE UNDER A SEPARATE CONTRACT (CONTRACT JOB NO. 7304)
NEW SECOND FL. ADDN., STAIR TO FIRST FL. & NECESSARY EXISTING ALTS. TO BE DONE UNDER SEPARATE CONTRACT.
EXIST. STAIR & WALL TO BE REMOVED UNDER SEPARATE CONTRACT
CORRIDOR
ACCOUNTING
REGISTRARS
EXIST. OFFICE
EXIST. OFFICE
FILES
EXIST. OFFICE
EXIST. OFFICE
EXIST. OFFICE
FABRICATION AREA
FABRICATION AREA
PROCESSING
OFFICE
ELEVATOR
EXIST. STAIR
EXIST. PASSAGEWAY NO PUBLIC ACCESS
NEW EXIT COR.
SECOND FLOOR PLAN 1/8 SCALE (NO STRUCTURAL CHANGE)
LEGEND:
EXIST. CONSTRUCTION
EXIST. CONST. TO BE REMOVED
NEW CONST. - 2x4" STUDS @ 16" O.C. W/ 1/2" SUNITE BD. SIDE UNLESS OTHERWISE NOTED
CROSS SECT. A-A 1/4 SCALE
ROOF OF EXT. SHED
EXIST. 4" CONC. SLAB
EXIST. CONC. SLAB
SECOND FL.
NEW 1-HR. PARTITION
NEW MEZZ. FL.
FIRST FL.
2ND. FL. WEST ELEV.
SOUTH ELEV. (WEST SIDE)
MUST BE ONE PIECE JAMB
NEW EXIT ENCLOSURE
ARCHITECT HUBERT F. STEWART 616 MERCER ST. SEATTLE
ALTERATION TO BUILDING 6800 WALLINGFORD SOUTH
AVTEC CORP. — LESSEE
SEE HENDSON PAGE SHEET 604 SEAD
DATE
DWG.
CKD.
SHEET NO. 2
JOB NUMBER 7304
BP 47225



FIRST FLOOR PLAN – ELECTRICAL

SCALE: 1/8" = 1'-0"

ALL FIXTURES LITHONIA AF 240 FD BS SQ + 10'-0" TO BOTTOM.



ALL FIXTURES LITHONIA 2GT 440 FW 12.125 120 ES EXCEPT AS NOTED.

SECOND FLOOR PLAN – ELECTRICAL

SCALE: 1/8" = 1'-0"

PANEL SCHEDULE

NO.	LOCATION: 2ND FLOOR SERVING: 2ND FLOOR	208Y/120 VOLTS 3Ø 4 WIRE 225 AMP MAIN C.O.					
	CIRCUIT DESCRIPTION	KVA	AMP			AMP	KVA	CIRCUIT DESCRIPTION
	LIGHTING	1.2	20	1	2	20	1.2	LIGHTING
		1.2		3	4		1.2	
		1.2		5	6		1.2	
		1.2		7	8		1.2	
	RECEPTS	1.2		9	10		1.2	RECEPTS
		1.2		11	12		1.2	
		1.2		13	14		1.2	
		1.2		15	16		1.2	
		1.2		17	18		1.2	
		1.2		19	20		1.2	
		1.2		21	22		1.2	
		1.2		23	24		1.2	
		1.2		25	26		1.2	
		1.2		27	28		1.2	
	SPARE			29	30			SPARE
				31	32			
				33	34			
				35	36			
				37	38			
				39	40			
				41	42			
	CONNECTED LOAD: 3.6 KVA 10.0 AMPS							DEMAND LOAD: KVA AMPS

PANEL SCHEDULE

NO.	LOCATION: FIRST FLOOR SERVING: STORAGE	208Y/120 VOLTS 3Ø 4 WIRE 225 AMP MAIN C.O.					
	CIRCUIT DESCRIPTION	KVA	AMP			AMP	KVA	CIRCUIT DESCRIPTION
	LIGHTING	0.72		1	2	20	1.2	LIGHTING
		0.72		3	4		1.2	
		0.72		5	6		1.2	
		0.72		7	8		1.2	
		0.72		9	10		1.2	
		0.72		11	12		1.2	
	SPARE			13	14			SPARE
				15	16	20	0.72	RECEPTS
				17	18		0.72	
				19	20		0.72	
				21	22		0.72	
				23	24		0.72	
				25	26		0.72	
				27	28		0.72	
	SPACE			29	30			SPACE
				31	32			
				33	34			
				35	36			
				37	38			
				39	40	30 2P	4.5	WATER HEATER
				41	42	EP		
	CONNECTED LOAD: 5.9 KVA	5.9 x 1.25 = 7.4 AMPS						DEMAND LOAD: 30 KVA AMPS

EXIT SIGNS & ILLUMINATION SHALL COMPLY WITH APPROVED BUILDING PLANS.

ALL ELECTRICAL MATERIALS & EQUIPMENT SHALL BE LISTED BY APPROVED TESTING LABORATORIES AND APPROVED BY THE ELECTRICAL DIVISION OF THE DEPT. OF CONSTRUCTION AND LAND USE SUBJECT TO FINAL APPROVAL OF FIELD INSPECTION.

ALL ELECTRICAL INSTALLATIONS SHALL COMPLY WITH REQUIREMENTS OF SEATTLE ENERGY CODE.

APPROVED AS NOTED
PERMIT REQUIRED
CITY OF SEATTLE
DEPT. OF CONSTRUCTION AND LAND USE
JUN 25 1986
ELECTRICAL
APPROVED Subject to Inspection
By

△ 6/21/86 POLE & PAD DETAIL ADDED PER CITY LIGHT

DESIGN FIRM: SPARLING & ASSOCIATES 524-1956

ELECT. INSTALLATION & NEW PRIMARY SERVICE FOR AVTECH CORP. OWNER/OCCUPANT 5400 WALLINGFORD N. SEATTLE 98103 634-2940	DATE 3/31/86	SHEET NO. E1 OF 2	JOB NUMBER 8504

NOTE: If the microfilmed drawing is LESS clear than this notice, it is due to the quality of the original drawing.

24X

The extension of time for the DCLU report previously granted is reaffirmed with this letter. That extension is needed to allow for a better environmental analysis and a more complete record to be developed during remand of this rezone application. The Hearing Examiner's authority to authorize such extension is provided in Chapter 3.02 of the Seattle Municipal Code and by Rule 1.25 of the Hearing Examiner Appeal Rules, a copy of which is provided with this letter.

Very truly yours,

Dona Cloud

Dona Cloud

DC:ah

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE IT IS DUE TO THE QUALITY OF THE DOCUMENT.

1.25 Presiding Officials

(a) A duly qualified examiner shall conduct the hearings under these rules.

(b) Powers and Duties. The Examiner shall have the duty to conduct fair and impartial hearings, to take all necessary action to avoid delay in the disposition of proceedings, and to maintain order. The Examiner shall have all powers necessary to that end, including the following:

(1) to administer oaths and affirmations;
(2) to issue subpoenas;
(3) to rule upon offers of proof and receive evidence;
(4) to regulate the course of the hearings and the conduct of the parties and their agents;
(5) to hold conferences for settlement, simplification of issues, or any other proper purpose;
(6) to consider and rule upon all procedural and other motions appropriate to the proceedings; and
(7) to make and issue decisions or recommendations.

(c) Interference. In the performance of adjudicative functions, the Examiner shall not be responsible to or subject to the supervision or direction of any elected official, officer, employee, or agent of any municipal department.

(d) Disqualification of Hearing Examiner.

(1) The Examiner on his or her own initiative may enter an order of disqualification in the event of personal bias or prejudice.
(2) A party may file an affidavit, which is a sworn statement in writing under oath, stating that such party cannot have a fair and impartial hearing by reason of the personal bias or prejudice of the Examiner. The affidavit must set forth facts and reasons for the belief that the personal bias or prejudice exists. The Examiner shall rule on the affidavit prior to making any other ruling and prior to the hearing.
(3) The appearance of fairness doctrine applies to proceedings under these rules.

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Seattle
Department of Construction and Land Use

Dennis J. McLerran, Director
Charles Royer, Mayor

December 20, 1989

Carlyle B. Jensen
979 John Street
Seattle, Washington 98109

Dear Mr. Jensen:

Thank you for your efforts in compiling the information concerning chemical use and pathways at Avtech. The study was reviewed by John Comroy of the Department of Ecology and we expect to receive his written comments soon.

However, review of the Hearing Examiner's remand and the Department's post hearing submittal (PHS) memorandum to the Hearing Examiner, dated April 6, 1989 (attachments A and B), indicates that several issues remain unanswered. Moreover, additional information regarding each of the chemicals described in John Gibson's letter, dated March 28, 1989 (Attachment C), is needed in order to provide a complete overview of Avtech's current and future operations. Thus, in addition to the issues requiring answers pursuant to the remand, we need answers to the following outstanding questions:

How frequently are the chemicals delivered to Avtech, and how much at a time?

In which type of container are they delivered, and how are they handled after delivery? Are they all stored in the same place? If not, where are the storage locations on site? Does the new building include storage space for chemicals?

In what type of process is each chemical used and in what amounts?

Where in the building do these processes take place and how often?

Is there a potential for volatile fumes to be formed? If so, how are they contained? Could they exhaust from the building? Is there any type of Spill Prevention Control Plan to handle emergencies?

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE IT IS DUE TO THE QUALITY OF THE DOCUMENT.

How is Avtech's solid and liquid waste handled. Are they removed from the site? How often? How is it done? By whom? Does any waste enter the City system?

Please answer these questions providing as much information as you can in order to demonstrate that our original recommendation is still appropriate.

In addition, a copy of the WISHA inspection report, regarding the facilities toxic fumes and waste disposal, shall be submitted.

Unless this information is provided in a timely manner to allow the preparation of the Department's status report by the January 4, 1990 deadline, we may not be able to sustain our favorable recommendation for rezone approval and the Avtech's expansion.

Please call me at 684-8875 if you have any questions.

Dennis McLerran
Director

By Cristina Van Valkenburgh
Cristina Van Valkenburgh
Land Use Specialist

cc: John Gibson, Avtech

Attachments

cvanval/880131b

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Marietta Foubert
3419 Wallingford Ave. N.,#2
Seattle, WA 98103

December 28, 1989

John B. Lampe
Superintendent of Water Quality
Water Pollution Control Department
Exchange Building
821 Second Avenue
Seattle, WA 98104-1598

Dear Mr. Lampe:

Thank you for your letter dated December 14, 1989, describing Metro's regulation of industrial waste discharges by the Avtech Corporation at 3400 Wallingford Avenue North. I am relieved and respect Metro's position of independence from the responsibilities of other public regulatory agencies, whose roles do involve repairing broken water meters, taking positions on zoning issues and monitoring off-site hazardous wastes disposal.

My interest and expectation as a citizen are to better understand both Metro's policy-making and unique procedures for controlling water quality and pollution. Our own history, knowledge and discipline may be expressed in our letter exchange, but an effort at communication on water becomes the genuine reason for conveying our thoughts.

I understand the water consumption now is being metered because the Water Department studied and replaced the broken meter. I enclosed a copy of my letter to Superintendent Groncznack, because the Water Department's findings appear to be quite different from Metro's reports.

In your letter's explanation for determining the size of sewer discharges without sewer metering, you review impressions of the size of Avtech's chromating rinse basins. If the chromating rinse basins should be thought of as the only significant industrial discharge to the sewer, these questions should be simply answered:

(1) Do the manufacturer's 2,210 gallons per day of industrial wastewater come from those basins in the chromating room?

(2) In what amounts and frequency does the manufacturer discharge the TTO pollutants: methylene chloride, xylene, trichlorethylene, toluene, nitric acid, SO 225 (with benzene), ammonium hydroxide,hydraulic oil #32 & #24 and paints?

(3) Does the chromate room discharge all of the chromium, copper, irradite 14-2, nitric acid, ferric chloride, and isoprep 188?

(4) What rationale is given for assuming that chromating rinses amount to the 2,210 gallons per day, or the only significant discharge?

200 W Mercer St #205
Seattle, WA 98119-3958

Facility: Reg #:

Exterior Observations (Before Inspection):

no problems noted

(6) Flow Solder Machine - Trichloro (vented)
(7) Sympony Dust Shaker Machine (vented)
(CE) (1) DeVilbiss Spray Booth (Art Cleaning)

Air Contaminant Generating Equipment
Associated Control Apparatus

(1) Spray Painting (2)
CE (2) Binks Dry Filter Spray Booth

(2) DESPATCH Curing Oven (2)
Blue M Curing Oven (5)

(3) Solid Screening 5 vents to outside

(4) Plating Line (1 stack see pg 2)

(5) Baron - Blakeslee Vapor Degreaser w/ TRICHLOROTRIFLUOROETHANE

Report By/Date: Bateman 6-5-87

Form 66-107 (/87) Page 2

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE IT IS DUE TO THE QUALITY OF THE DOCUMENT.

PUGET SOUND AIR POLLUTION CONTROL AGENCY
200 W Mercer St #205
Seattle, WA 98119-3958

Facility: Centech Corp Reg No.:

Summary/Recommendations/Compliance Determinations: 10/6/88

Plating: Nitric Acid, Sulfuric, Cyanide, Sodium Hydroxide, Misc. Acids, Sodium dichromate (Chrome) worked through plant ~~of~~ John said Co there since 1981 ~~so~~ air emissions very ~~low~~ left copy of Reg I and discussed Articles 5, 6, 9

~~discussed fugitive dust~~ no problems due to layout in business park does not appear to be a significant

Report by/Date: [signature] 6-5-89

Form 66-107 (/88) Page 3

NOTICE: IF THE DOCUMENT IS TOO DARK OR LIGHT OR TOO SMALL IT IS DUE TO THE QUALITY OF THE ORIGINAL.

Enter Reg#, END, form, CONTROL D or CONTROL V 11007

PUGET SOUND AIR POLLUTION CONTROL AGENCY
200 W Mercer St #205, Seattle, WA 98119-3958
AUG 16, 1989, 10:45 AM

Registration File Listing

AVTECS CORPORATION

Reg #:11007
DOH #:

3400 HALLINGFORD AVE N, SEATTLE
KING COUNTY 98103-9095

Mail to:
3400 HALLINGFORD AVE N
SEATTLE, WA 98103-9095

JOHN GIBSON VICE PRESIDENT, FINANCE 634-2540
JIM JENNINGS FACILITIES SUPERVISOR 634-2540

Hours/Day 8 Days/Week 5 Weeks/Year 52 Dec-Feb 25% Mar-May 25%
Op. Sched. Note: Jun-Aug 25% Sep-Nov 25%

SIC # 3728 AIRCRAFT EQUIPMENT

EPA Program: SIP Classification: B

Inspection Record (CM File):

INSPECTED 06-05-89 RGB 2

[redacted]

[redacted]

Air Contaminant Generating Equipment (BE File):

(1) SPRAY PAINTING(2)

(2) DESPATCH CURING OVEN(2)
BLUE M CURING OVEN (5)

(3) SILK SCREENING
3 VENTS TO OUTSIDE

(4) PLATING LINE
WITH STACK

(5) BARON-BLAKESLEE VAPOR DEGREASER
WITH TRICHLOROTRIFLUOROETHANE

(6) FLOW SOLDER MACHINE
TREIBER -- VENTED

(7) STYROFOAM DUST SHAKER MACHINE
VENTED

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Marietta Foubert
3419 Wallingford Ave. N., #2
Seattle, WA 98103

August 15, 1989

Stella Nehen
Library and Records Specialist
Puget Sound Air Pollution Control Authority
200 West Mercer St.
Room 205
Seattle, WA 98119-3958

Dear Stella:

In phone conversation today with John Anderson, I learned that upon written request I may get a copy of the June 6, 1989 registration of the Avtech Corporation at 3400 Wallingford Ave. N., Seattle, with the Puget Sound Air Pollution Control Authority. I would like such a copy of registration and any reported inspection by PSAPCA of the metal finishing / chromating facility regarding air quality emission standards.

Also, I would appreciate information on regulatory standards for hexavalent chromium or chromium + 6 for chromating processing.

Thank you for your assistance.

Sincerely,

Marietta Foubert

Marietta Foubert

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Marietta Foubert
3419 Wallingford Ave. N., #2
Seattle, WA 98103

August 15, 1989

John Anderson
Puget Sound Air Pollution Control Authority
200 Mercer Street
Seattle, WA 98119-3958

Dear John:

From our phone conversation this morning I want to give you this specific list of priority toxics for which there is concern for public health. From you I am requesting a statement of the procedures, description of control standards, air conditioning / ventilating systems and monitoring records regarding the use of these chemicals in metal finishing by the Avtech Corporation at 3400 Wallingford Ave. N., Seattle.

How are air emissions or TLV (Threshold Limit Value) for these chemicals?

chromium
hexavalent chromium
trichlorethylene
methylene chloride
toluene
xylene
freon
paint
nitric acid

I am enclosing the Avtech Corporation's list from the public file #8800131 at the Seattle Department of Construction and Land Use, because this letter lists chemical and amounts of usage. By phone you indicated to me that emission inventories rely upon usage quantification and sources for air emission through the air conditioning system.

Since freon may be used for cleaning electronic parts at Avtech, what filtering equipment is used for protection of the earth's ozone?

I would appreciate information from PSAPCA on an estimate of the total quantity and general quality of organics released by Avtech into the surrounding atmosphere.

Thank you for your assistance.

Sincerely,

Marietta Foubert

P.S. As you outlined for me by phone, today I am writing Stella Mahan for my request for a copy of the June 6, 1989 registration of the Avtech Corporation with the Puget Sound Air Pollution Control Authority.

PUGET SOUND AIR POLLUTION CONTROL AGENCY

200 West Mercer Street, Room 205
Seattle, Washington 98119-3958
Telephone: (206) 296-7330
Facsimile: (206) 296-7431

August 31, 1989

Mr. Marietta Foubert
3419 Wallingford Avenue N., #2
Seattle, WA 98103

Air Emissions from Avtech Corporation

Dear Ms. Foubert:

Avtech Corporation has just recently been registered to the Puget Sound Air Pollution Control Agency, and we do not have any emissions data reported from this source. We can estimate emissions from Avtech using the list you sent from the Seattle Department of Construction and Land Use.

Since we do not have the Material Safety Data Sheets, we can only approximate emissions when there is a usage for a certain chemical. For example, we do not know the composition for insulating varnish. We have assumed 100% loss to the atmosphere for all chemicals. This could be an overestimate of the air emissions. The results of our calculations are listed below.

Methyl Isobutyl Ketone	70 gal	667 lb
Butyl Cellosolve	55 gal	412 lb
Trichloroethylene	100 gal	1217 lb
Methylene Chloride	55 gal	606 lb
Xylene	55 gal	395 lb
Toluene	70 gal	504 lb
Acetone	5 gal	33 lb
Nitric Acid	10 gal	125 lb
Freon (assume 113)	960 gal	12525 lb

As mentioned above, since we do not know the emission factors for each of these chemicals, these numbers are probably an overestimate of the emissions emitted annually. Also, we have no record of control equipment used at Avtech to reduce Freon emissions.

Sincerely,

John K. Anderson

John Anderson
Air Pollution Engineer

JKA:pd

SERVING

KING COUNTY
200 West Mercer St
Room 205
Seattle, 98119-3958
(206) 296-7330

KITSAP COUNTY
Dial Operator for Toll
Free Number ZENith 0365
Bainbridge Island Residents
Dial 206-7330

PIERCE COUNTY
1-206-552-3565

SNOHOMISH COUNTY
1-206-552-3565

BOARD OF DIRECTORS

CHAIRMAN Doug Sutherland, Mayor Tacoma

Bill Brubaker, Councilman Snohomish County
Gene Lobe, Mayor Bremerton

Wm Gunklund, Commissioner Kitsap County
William E. Moore, Mayor Everett

Anita J. Frankel, Air Pollution Control Officer
Charles Royer, Mayor Seattle

VICE CHAIRMAN: Linda Tore, Member at

Tim Hill, King County Exe
Joe Stortini, Pierce County Exe

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Marietta Foubert
3419 Wallingford Ave. N., #2
Seattle, WA 98103

March 8, 1990

John Anderson
Air Pollution Engineer
Puget Sound Air Pollution Control Agency
200 West Mercer St., Room 205
Seattle, WA 98119

Dear Mr. Anderson:

You wrote to me August 31, 1989, regarding PSAPCA's calculations on air emissions from the Avtech Corporation at 3400 Wallingford Avenue North, Seattle.

In the time that has passed, the industry has made public the enclosed chemical information sheets which help to describe processing and ventilating by the special equipment your staff person listed during the agency's inventory and registration report on June 5, 1989. Also, since Material Safety Data Sheets are essential to estimations, therefore, I am enclosing the MSDS information from DCLU's file No. 8800131.

This week the Wallingford Community Council requested any updated MSDS information from William Stockham of the King County Office of Emergency Management, under Title III, p. 32, EPA: CHEMICALS IN YOUR COMMUNITY: A Guide to the Emergency Planning and Community Right-to-Know Act. Citizens on the Wallingford Community Council are concerned and discussing needs for local planning to respond in the event of an emergency or accident regarding the storage and use of hazardous, flammable and poisonous chemicals in a factory surrounded on three sides by solid development of apartment houses.

The EPA's visit by Elizabeth Waddell, on July 10, 1989, served the important purpose of evaluating the emission of hexavalent chromium, for which she estimated that only eight to ten pounds of the harmful gas might escape from the manufacturer's chromate conversion.

Perhaps the cumulative effects of air emissions will be better understood, when PSAPCA has the enclosed information disclosed by the industry to supplement your agency's inspection and analysis. The Wallingford Community Council realizes that Wallingford's local community has conditions different from the SARA guideline of 75,000 pounds, a standard applied to the Union Carbide disaster in India. Although a SARA inspector visited Avtech on June 16, 1989, neighbors are asking for a local study more suited to Wallingford, because superfund authorizations by the federal government are consumed elsewhere.

I am a Vice President of the Wallingford Community Council and look forward to reporting PSAPCA's response to the neighborhood's effort to understanding this expanding industry. Thank you for your helpful consideration.

Very truly yours,

Marietta Foubert

Marietta Foubert
Wallingford Community Council Second Vice-President

cc: Rick Graves, President, Wallingford Community Council

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Marietta Foubert
3419 Wallingford Ave. N., #2
Seattle, WA 98103

March 9, 1990

John Anderson
Air Pollution Engineer
Puget Sound Air Pollution Control Agency
200 West Mercer Street, Room 205
Seattle, WA 98119-7330

Dear Mr. Anderson:

Today I called at 12:45 P.M. to report an apparent emission both visible and odorous, exhausting from the south end of the pre-1930 cedar warehouse at 1815 North 34th Street. As recently as October 31, 1989, this facility owned by the Avtech Corporation was found in violation of fire codes because of its spray painting and processing.

When PSAPCA inspected Avtech's operations on June 5, 1989, there is no evidence in the inspection and inventory that PSAPCA checked the manufacturer's factory workshops at 1813 and 1815 North 34th Street; and the aluminum processing at 3326 Wallingford Avenue North; and where more painting is done at 1715 North 34th Street.

Please respond to the very objectionable clouds of lacquer, paint, acetone or some form of ketones emitted just one-half block from public access to Gas Works Park. I found the emissions on the way to your office on March 8, 1990, at 2:37 P.M. I brought you the recent Avtech information on chemicals.

I would appreciate hearing from you as soon as another inspection and inventory occur.

Very truly yours,

Marietta Foubert

Marietta Foubert
Wallingford Community Council Second Vice President

cc: Rick Graves and Greg Hill, WCC President and Land Use Chairman

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Marietta Foubert
3419 Wallingford Ave. N., #2
Seattle, WA 98103

November 1, 1989

ATTACHMENT E

John Haigh
Seattle Fire Department Engineering
Fire Safety-Hazardous Materials and Waste Handling
301 Second Avenue South
Seattle, WA 98104

Dear John:

Since March and April of this year, when both I and Jay Laughlin contacted you in regard to use of inflammables and toxics by the Avtech Corporation at 3400 Wallingford Avenue North, Seattle, I want to know about the Seattle Fire Department's inspections and community emergency preparedness for monitoring Avtech's storage, handling, loading and transporting toxic chemicals and poisonous sludge.

I sent you my letter to Laurence Ashley of DOE, to more fully explain neighborhood conern over the presence and increase in hazardous wastes and inflammable materials by the aircraft electronics manufacturer.

Are you aware that Avtech's annual reports to DOE reveal considerable increases in stockpiling and transporting of 4,000 pounds of varnish, paint thinner, paint, paint sludge, petroleum distillates, ammonium hydroxide, trichlorethylene, methanol, ethanol, nitromethane, toluene, freon and methyl ethyl ketone? Do you receive copies of Avtech's annual reports to DOE?

Can you furnish me with the regulations, procedures, emergency preparedness plan to (1) safeguard people residing in large apartments around Avtech; (2) contingencies pertinent to expanding manufacturing into the residential neighborhood?

What records from Fire Department inspections of Avtech help to secure, monitor and enforce safety guidelines? Could you also explain the fifty foot setback distance that depends upon hazardous operations, storage, loading and transport of hazardous materials?

Thank you for your helpful assistance.

Sincerely,

Marietta Foubert

Marietta Foubert

cc: Jay Laughlin, DCLU, City of Seattle
John Gibson, Avtech
Laurence Ashley, DOE
Rick Graves and Greg Hill, Wallingford Community Council
John Anderson and Naydene Maykut, PSAPCA
Elsie Hulsizer and Doug Hilderbrand, Metro

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Your
Seattle
Fire Department

Claude Harris, Chief
Charles Royer, Mayor

November 14, 1989

Ms. Marietta Foubert
3419 Wallingford Ave. N. #2
Seattle, WA 98103

Dear Ms. Foubert:

We are in receipt of your letter dated November 1, 1989.

Currently the storage and use of flammable and combustible liquids and other selected hazardous materials is regulated under Articles 79 and 80 of the 1985 Seattle Fire Code (SFC), respectively. Many substances which may be considered "hazardous" because they pose potential health risks and which may be regulated under existing regulations by other regulatory agencies (e.g. WISHA, OSHA) are not currently regulated by the SFC unless they also pose a physical hazard. The 1988 edition of the SFC, which has yet to be adopted by the City of Seattle, does include provisions for regulation of such materials.

Fire Department personnel conduct annual building inspections to ensure compliance with the SFC and any special provisions specified in the facility's permit which may be unique to the facility's operation. Our department does not receive copies of annual reports submitted by facilities to the Department of Ecology and there is no systematic means of communicating that information to the Fire Department. Additionally, the SFC does not require facilities to prepare, maintain or submit emergency preparedness plans or contingency plans. However, the Fire Department is the recipient of those plans when and if they are submitted under the Emergency Planning and Community Right-to-Know Act of 1986 (SARA Title III) which is a federal EPA regulation. Those documents are on file at our headquarters located at 301 2nd Avenue South.

Property line setback requirements are provided in the Seattle Building Code (SBC). The SBC, although a companion document to the SFC, is developed and its provisions enforced by the City of Seattle Department of Construction and Land Use (DCLU). The specific property line setback requirements for hazardous (Group H) occupancies are designated in Chapter 9 of the SBC and vary from 60 feet to 30 feet depending on the occupancy classification of the building. If you wish to know more specific information regarding occupancy classifications and property line setbacks, I suggest that you contact DCLU at 684-8875.

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Finally, the Fire Department has no contingencies for limiting expansion of manufacturing facilities which may be located in residential neighborhoods. The City of Seattle zoning and land use codes are developed and enforced by DCLU.

I hope that this adequately addresses your concerns.

Very truly yours,

Claude Harris, Chief
Seattle Fire Department

CH:LKH:dp

cc: Jay Laughlin
City of Seattle - DCLU

Elsie Hulsizer
Municipality of Metropolitan Seattle

Doug Hilderbrand
Municipal of Metropolitan Seattle

John Gibson
Avtech Corporation

Laurence Ashley
Department of Ecology

John Anderson
Puget Sound Air Pollution Control Authority

Naydene Maykut
Puget Sound Air Pollution Control Authority

Rick Graves
Wallingford Community Council

Greg Hill
Wallingford Community Council

Marietta Foubert
3419 Wallingford Ave. No., #2
Seattle, WA 98103

December 1, 1989

Claude Harris, Chief
Seattle Fire Department
301 Second Avenue South
Seattle, WA 98104

Dear Chief Harris:

Thank you for your helpful letter dated November 14, 1989.

I am requesting specific information for clarifying the following points raised in your letter.

(1) Please furnish me with 1985 Seattle Fire Code (SFC) Articles 79 and 80 regarding the storage and use of flammable and combustible liquids and other selected hazardous materials regulated by your department.

(2) Has the Fire Department checked both the enclosed DOE Annual Dangerous Waste Report for 1988 from the Avtech Corporation at 3400 Wallingford Avenue North, as well as the enclosed letter from Avtech obtained from DCLU's public file #8800131. The Master Safety Data Sheets in the DCLU File show that physical hazards are posed by both the flashpoint and carcinogenic effects of Avtech's toxic chemicals and hazardous wastes.

(3) Which Fire Department permit, along with special provisions and inspections, describes the Avtech unique operation of manufacturing? May I receive a copy of the permit and description?

(4) Does the Fire Department furnish a copy of records showing recommendations and compliance inspections at Avtech from 1985-1989?

(5) I want to receive a copy of the Community Emergency Preparedness Plan from the Fire Department Headquarters, as required under the Emergency Planning and Community Right-to-Know Act of 1986.

Thank you for referring to the setback requirements for hazardous (Group H) occupancies in Chapter 9 of the SBC which you consider as a companion document to the SFC. In the case of the Avtech Corporation, DCLU has only recently been notified by the Hearing Examiner that toxic chemicals and hazardous wastes are used by the Avtech Corporation.

I look forward to receiving the specific clarifications requested. Thank you for addressing my concerns.

Sincerely,

Marietta Foubert

Marietta Foubert

cc: Christina Van Valkenburgh, DCLU
Laurence Ashley, DOE
John Gibson, Avtech
Elsie Hulsizer and Doug Hilderbrand, Metro Lab
Rick Graves and Greg Hill, WCC

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Marietta Foubert
3419 Wallingford Ave. N., #2
Seattle, WA 98103

March 12, 1990

Claude Harris, Chief
Seattle Fire Department
301 Second Avenue South
Seattle, WA 98104

Dear Chief Harris:

In your letter dated January 11, 1990, you referred to SFD's inspection of the Avtech Corporation's facility at 1815 North 34th Street, which has an exit route connected to 1813 North 34th Street. Lt. St. Clair's inspection No. 17-696, dated October 31, 1989, describes an unapproved paint booth in the southeast corner of the building that is extremely likely to cause a fire and does not comply with SFD code. Also, he indicates a new permit application should be submitted. He goes on ;to recommend an approved, explosion proof electrical and heating devices.

On March 8, 1990, there were visible emissions of paint or ketone odors exhausting as clouds descending to sidewalk level, visibly seen coming out of the rectangular ventilation grate at the southeast corner of the building. Puget Sound Air Pollution Control Engineer, John Anderson, has been alerted because of the smelling substance.

In 1990, the Burke Gilman Trail and Gas Works Park, public open spaces and protected sensitive areas, are only a short distance from Avtech's warehouse built from some of the last old growth timber from this region.

Do you have reason to question whether the SFD's permit for flammable and hazardous materials in this pre-1930 warehouse (perhaps a landmark) seems reasonably safe and healthy for the general public and surrounding neighborhood?

DCLU's microfilm library records detail Avtech's workshop as pre-dating 1930, with a block and post foundation, constructed of shiplap, ruffing paper and tongue and groove siding. SFD's history of the old warehouses at 1813-1815 North 34th Street specify questionable foundation, holes in the walls and brush against the buildings. In 1990, I have documented for exhibition the interesting, aesthetic character of Avtech's buildings.

However, SFD notes in its field inspection for July 1, 1987 and in a report on June 27, 1977, such observations as poor separation between buildings and tall weeds surrounding buildings. These conditions still prevail in 1990.

On your recommendation or referral in your letter dated, December 7, 1989, last week I contacted William Stockham and George Donohue, regarding Seattle's Emergency Preparedness Plan, taking form under the Emergency Planning and Community Right-to-Know Act of 1986. Since PSAPCA and SFD are vested with public trust for clean air quality and security from combustible, flammable and hazardous materials, the people of Wallingford want reasonable assurance that the freedom of private business expands after all due consideration of

I. EPA/STATE Hazardous Waste I.D.#

WIAD009273434

II. Waste Designated By:
X RCRA/State
X SQ
State Only
Non-Regulated/Non-Handler/Protective Filing

III. Exemption Status:
RCRA Exempt Recycler
State Exempt Recycler
Below QEL
Other

IV. Handling
Emergency
Remedial Action
One-Time-Only
Other

DEPARTMENT USE ONLY

FORM 2

NOTIFICATION OF DANGEROUS WASTE ACTIVITIES

(send to) Attn: DW Notifications
Washington State Department of Ecology
M/S PV-11 Olympia, WA. 98504-8711
(206) 459-6314/6305/6306

DATE IN TO DEPARTMENT

RECEIVED
NOV 12 1985
TECHNICAL OPERATIONS SECTION

Init. JO Date: 11/85 Region: 1
EPA: Date: Copy:
Input: X Update: Acft.:
DEPARTMENT USE ONLY

1. [X] A. FIRST NOTIFICATION
[ ] B. REVISED NOTIFICATION (enter current I.D.# in upper left)
revisions effective: MO / DAY / YR
[ ] C. WE REQUEST TO HAVE OUR I.D.# WITHDRAWN (enter current I.D. assigned to you in section 99 in upper left)
[ ] D. REACTIVATE OUR NOTIFICATION (complete all sections)
[ ] E. SITE CLOSED (We are no longer conducting business at this location and want our I.D. No. canceled)

2.A. WASHINGTON STATE DEPARTMENT OF REVENUE REGISTRATION (TAX) NUMBER
C57-864-829

2.B. SIC CODE(S)
PRIMARY: 3662 SECONDARY: OTHER:

3. NAME OF COMPANY
AVTECH CORPORATION

4. MAILING ADDRESS
STREET, P.O. BOX, OR RURAL ROUTE & BOX NO.
3400 WALLINGFORD AVE N
CITY OR TOWN: SEATTLE
STATE: WA ZIP CODE: 98103

5. LOCATION OF WASTE ACTIVITIES (Installation)
DESCRIPTION OF PHYSICAL LOCATION (Follow instructions Carefully)

6. COUNTY WHERE THIS INSTALLATION IS LOCATED
KING

CITY OR TOWN
STATE
ZIP CODE

7. DANGEROUS WASTE ACTIVITIES YOUR BUSINESS IS CONDUCTING
(Read & Follow Instructions Carefully—Enter an "X" in appropriate box(es))

A. [X] GENERATOR

B. [ ] TRANSPORTER (complete this section only if YOU are transporting waste for hire or your own waste to an off-site facility)
(1) [ ] We Transport Waste For Hire
(2) Modes of Transport YOU Operate
(a) [ ] HIGHWAY (b) [ ] AIR (c) [ ] RAIL
(d) [ ] WATER (e) [ ] OTHER

C. [ ] WASTE MANAGEMENT FACILITY (TSD) (refer to definitions in instructions)
(1) [ ] TREATMENT
(2) [ ] STORAGE
(3) [ ] DISPOSAL
(4) [ ] WE ACCEPT OFF-SITE WASTES

D. [ ] UNDERGROUND INJECTION

8. CONTACT PERSON
NAME (last), (first)
BENERLY LECHKOFF
TITLE
MATERIALS MANAGER
PHONE NO. (area code & number)
206-634-2540

9A. OWNERSHIP (Legal Owner(s) of this Company)
ROBERT HANCOCK

9B. OWNERSHIP (Legal Owner(s) of site (Property))

10. TYPE OF OWNERSHIP (enter letter code in box)
P

ECY 030-6 (12-84) ECLS-006

Page 1

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Form 4 1989 GENERATOR ANNUAL DANGEROUS WASTE REPORT

PLEASE PRINT OR TYPE — Blue or Black Ink Only — (Form designed for use on Elite (12 pitch) typewriter) Use spacebar between each character

WAD009273434

AVTECH CORP
ATTN: HAZARDOUS WASTE COORDINATOR
3400 WALLINGFORD N
SEATTLE WA 98103

You must complete Sections 1 through 4 in addition to placing the label here.
Do not cross out incorrect information.

1. EPA/STATE HAZARDOUS WASTE SITE IDENTIFICATION NUMBER: WAD009273434

2. COMPANY NAME: AVTECH CORPORATION

3. SITE CONTACT PERSON, AND TITLE: LAST: RICHHOFF FIRST: BEVERLY
PHONE NUMBER: 206-634-2540 ext. 25

4. COMPANY MAILING ADDRESS: 3400 WALLINGFORD AVE N
CITY: SEATTLE STATE: WA ZIP: 98103

5. SITE LOCATION ADDRESS: same as #4 (4)
CITY: STATE: ZIP:

6. SITE LOCATION COUNTY: KING

7. WASHINGTON DEPT. OF REVENUE REGISTRATION (UBI) NUMBER: 513-040A-827

8. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES: PRIMARY: 3728 SECONDARY: 5063 OTHER:

9. SITE EMPLOYMENT ON DECEMBER 31, 1989: 300

FOR ECOLOGY USE ONLY

DATE RECEIVED
JAN 30 1990

Init. _____ Date _____
Init. _____ Date _____

Revision ☐ Pages _____
Init. _____ Date _____

Verified _____ Date _____
Batch No. _____

☐A ☐B ☐C

FOR ECOLOGY USE ONLY

SEND TO:

DEPT. OF ECOLOGY
Hazardous Waste Section
Attn: Annual Reports
R/6 Bldg. 4
Mail Stop PV-11
Olympia, WA 98504-8711
Assistance 1-800-874-2022
(206) 459-6387

DUE DATE:

Postmarked
No Later Than

MARCH 1, 1990

WASHINGTON STATE DEPARTMENT OF ECOLOGY

10. REGULATORY STATUS CERTIFICATION—Refer to the instructions and the "Guide For Hazardous Waste Generators" (1988 or First Edition) to complete this section. Mark only one entry by placing your initials in the space provided. If none of these conditions apply to you, skip this section and complete the continuation sheet(s).

A. _____ B. _____ C. _____ D. _____ E. _____

11. CERTIFICATION—I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immedi believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Beverly Richhoff
PRINT OR TYPE NAME

Beverly Richhoff
SIGNATURE (must be in ink)

1/19/90
DATE SIGNED

GENERATOR ANNUAL DANGEROUS WASTE REPORT 1989 Form 4

E PRINT OR TYPE — Blue or Black Ink Only — (Form designed for use on Elite (12 pitch) typewriter) Use spacebar between each character

DINATOR

1. EPA/STATE HAZARDOUS WASTE SITE IDENTIFICATION NUMBER: WAD009273434

2. COMPANY NAME: ANTECH CORPORATION

3. SITE CONTACT PERSON, AND TITLE (LAST / FIRST / TITLE): RECHKOFF | BEVERLY | MATLS MGR
   PHONE NUMBER: 206 - 634 - 2540 ext. 25

4. COMPANY MAILING ADDRESS: 3400 WALLINGFORD AVE N
   CITY: SEATTLE STATE: WA ZIP: 98103 -

F ECOLOGY
Waste Section
Reports

11
WA 98504-8711
1-800-874-2022
(206) 459-6387

arked
er Than

1, 1990

5. SITE LOCATION ADDRESS: Same as above (4)
   CITY: STATE: ZIP: -

5. SITE LOCATION COUNTY: KING

7. WASHINGTON DEPT. OF REVENUE REGISTRATION (UBI) NUMBER: 513-064-829

8. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES: PRIMARY 3728 | SECONDARY 5063 | OTHER

9. SITE EMPLOYMENT ON DECEMBER 31, 1989: 300

the instructions and the "Guide For Hazardous Waste section. Mark only one entry by placing your initials in the You, skip this section and complete the continuation sheet(s).

A. B. C. D. E. lbs. F.

I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information I rate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Beverly Rechkoff — SIGNATURE (must be in ink)

1/19/90 — DATE SIGNED

Page 1 of ____ Pages

Form 4 1989 GENERATOR ANNUAL DANGEROUS WASTE REPORT

12. YOUR EPA/STATE I.D. NUMBER	13. RECEIVING FACILITY (TSD)		14. TRANSPORTER
WAD 0 0 8 2 7 1 3 4 3 4	EPA/STATE I.D. NUMBER: OR 1 0 1 0 6 1 4 8 3 3 1 5 4	NAME: Burns Bioremediation ADDRESS: 5820 NE 82nd Portland 97220 City: Portland State: OR ZIP: 97270	EPA/STATE I.D. NUMBER: OR D 1 0 6 1 4 1 5 1 3 3 5 4 NAME: [illegible] ADDRESS: [illegible] City: Portland

15. WASTE IDENTIFICATION								
LINE	A. Manifest Document Number	B. Manifest Shipment Date (MM DD YY)	C. Status	D. Physical State S=Solid L=Liquid G=Sludge M=Compressed Gas	E. Chemical Nature O=Organic I=Inorganic	F. Waste Description (see instructions)	G. Dangerous Waste Number (see instructions and WAC 173-303)	
1	12658	08 07 89		L	O	Trichloroethylene; Trichloroethane mixture (Contains water-free)	F001	
2	12335	12 08 89		L	O	Trichloroethylene, Trichloroethane Mixture (Contains some water-free)	F001	

16. COMMENTS (Enter information by section and/or line number—see instructions).

GENERATOR ANNUAL DANGEROUS WASTE REPORT 1989 Form 4

NG FACILITY (TSD) NAME: Baron Blakeslee Ltd.
NUMBER ADDRESS: 5620 NE 33rd Portland Oregon 97220
ORD 010 614 838 54 City: Portland , State OR ZIP: 97220

14. TRANSPORTER NAME: Baron Blakeslee Inc
EPA/STATE I.D. NUMBER ADDRESS: 5620 NE 33rd
ORD 010 614 838 54 City: Portland , State OR ZIP: 97220

D. Physical State S=Solid L=Liquid G=Sludge M=Compressed Gas	E. Chemical Nature O=Organic I=Inorganic	F. Waste Description (see instructions)	G. Dangerous Waste Number (see instructions and WAC 173-303)	H. Waste Designation D=DW E=EHW	I. Amount of Waste	J. WEIGHT	K. For TSD Facility Use Only
L	O	Trichloroethylene, Trichloroethane mixture (Common name - Freon)	F001	EHW	1800	P	
L	O	Trichloroethylene, Trichloroethane mixture (Common name - Freon)	F001	EHW	1200	P	

y section and/or line number—see instructions).

Page____ of____

Form 4 1989 GENERATOR ANNUAL DANGEROUS WASTE REPORT

12. YOUR EPA/STATE I.D. NUMBER	13. RECEIVING FACILITY (TSD)		14. TRANSPORTER
WAD 0 3 2 7 3 4 3 4	EPA/STATE I.D. NUMBER: WA D000 3 1 2 9 0 9	NAME: Chempro ADDRESS: 734 So Walle St City: Seattle, State: WA, ZIP: 9 8 1 3 4	EPA/STATE I.D. NUMBER: WA D 9 8 0 9 7 7 5 3 8

15. WASTE IDENTIFICATION							
LINE	A. Manifest Document Number	B. Manifest Shipment Date (MM DD YY)	C. Status	D. Physical State S=Solid L=Liquid G=Sludge M=Compressed Gas	E. Chemical Nature O=Organic I=Inorganic	F. Waste Description (see instructions)	G. Dangerous Waste Number (see instructions and WAC 173-303)
1	15105	12 19 89		L	O	Ammonium Hydroxide	D002 WT02

16. COMMENTS (Enter information by section and/or line number—see instructions).

GENERATOR ANNUAL DANGEROUS WASTE REPORT 1989 Form 4

NG FACILITY (TSD) NUMBER: 0013129 09
NAME: Chempro
ADDRESS: 73+ So Wille Street
City: Seattle, State: WA ZIP: 98134

14. TRANSPORTER
EPA/STATE I.D. NUMBER: WAD980977538
NAME: Chemical Waste Inc.
ADDRESS: 3 miles East of Kittitas Hwy
City: Kent, State: WA ZIP: 98032

D. Physical State S=Solid L=Liquid G=Sludge M=Compressed Gas	E. Chemical Nature O=Organic I=Inorganic	F. Waste Description (see instructions)	G. Dangerous Waste Number (see instructions and WAC 173-303)	H. Waste Designation D=DW E=EW	I. Amount of Waste	J. WEIGHT	K. For TSD Facility Use Only
			D002 WT02				
L	O	Ammonium Hydroxide		DW	440	P	

by section and/or line number—see instructions).

Page ____ of ____

IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Form 4 1989 GENERATOR ANNUAL DANGEROUS WASTE REPORT

12. YOUR EPA/STATE I.D. NUMBER: WAD 0 0 1 2 7 3 4 3 4

13. RECEIVING FACILITY (TSD)
EPA/STATE I.D. NUMBER: WAD 0 2 7 5 4 3 0 3 2
NAME: Gold Kist Incorporated (Lilly Blvd)
ADDRESS: 2244 East 64th Tacoma Road
City: Tacoma, State: WA, ZIP: 9 8 4 2 1

14. TRANSPORTER
EPA/STATE I.D. NUMBER: WA D 9 8 0 9 7 1 5 3 8
NAME: Chem
ADDRESS: 2
City: Kirkla

15. WASTE IDENTIFICATION

LINE	A. Manifest Document Number	B. Manifest Shipment Date (MM DD YY)	C. Status	D. Physical State S=Solid L=Liquid G=Sludge M=Compressed Gas	E. Chemical Nature O=Organic I=Inorganic	F. Waste Description (see instructions)	G. Dangerous Waste Number (see instructions and WAC 173-303)
1	00600	07 07 89		L	O	Paint Cleaning Solvents. Toluene, Xylene, Isopropyl Alcohol, MEK,	D001 F001 F003 F005 WT02
	[illegible]					Butyl cellosolve, Dichloromethane	
2	00716	12 19 89		L	O	" " " "	D001 F001 F003 F005 WT02

16. COMMENTS (Enter information by section and/or line number—see instructions).

FORM ECY 070-28 (Rev. 11/89) [illegible]

GENERATOR ANNUAL DANGEROUS WASTE REPORT 1989 Form 4

ING FACILITY (TSD)	NAME: Boeing Aerospace (Kilig Blvd)	14. TRANSPORTER	NAME: Chem-Sol Services Inc
D. NUMBER	ADDRESS: 2244 East of Tacoma Rd	EPA/STATE I.D. NUMBER	ADDRESS: 2 Mile, East of Kittitas Hwy
2 7 5 4 3 0 3 2	City: Tacoma, State WA ZIP: 98421	WA D 9 8 0 9 7 7 5 3 3	City: Kittitas, State WA ZIP: 9 8 5 7 3 9

D. Physical State S=Solid L=Liquid G=Sludge M=Compressed Gas	E. Chemical Nature O=Organic I=Inorganic	F. Waste Description (see instructions)	G. Dangerous Waste Number (see instructions and WAC 173-303)		H. Waste Designation D=DW E=EHW	I. Amount of Waste	J. WECIOGDHET	K. For TS Facilities Use Only
L	O	Paint Cleaning Solvents. Toluene, Xylene, Isopropyl Alcohol, MIBK,	D001	F001	DW	1,440	P	
		Butyl cellosolve, Dichloromethane	F002	F003				
			F005	WT02				
L	O	" " " "	D001	F001	DW	1,872	P	
			F002	F003				
			F005	WT02				

by section and/or line number—see instructions).

Page ____ of ____

1988 Form 4 GENERATOR ANNUAL DANGEROUS WASTE REPORT 1988

PLEASE PRINT OR TYPE (form designed for use on Elite (12-pitch) typewriter). BLUE OR BLACK INK ONLY

1. COMPANY NAME
ANTECH CORPORATION

2. EPA/STATE HAZARDOUS WASTE SITE IDENTIFICATION NUMBER
WA000927343 4

3. SITE CONTACT PERSON
BEVERLY BECHKOFF

CONTACT TITLE
MATLS MGR

CONTACT PHONE NUMBER
206-634-2540 ext. 25

4. SITE LOCATION ADDRESS
Street or Description (see instructions)
3400 WALLINGFORD AVE N

City
SEATTLE

State WA Zip 98103-

SITE LOCATION COUNTY KING

5. COMPANY MAILING ADDRESS
Street or P.O. Box
3400 WALLINGFORD AVE N

City
SEATTLE

State WA Zip 98103-

6. WASHINGTON STATE DEPT. OF REVENUE REGISTRATION NUMBER
(DO NOT use your Federal Tax Number)
578-064-829

7. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES
Primary 3728
Secondary 5063
Other

8. SITE EMPLOYM ON DECEMBER 31
19

9. REGULATORY STATUS CERTIFICATION

REFER TO THE INSTRUCTIONS FOR THIS SECTION AND THE "GUIDE TO ANNUAL REPORTING" WORKBOOK BEFORE COMPLETING THIS SECTION. MARK ONLY ONE ENTRY THE SPACE PROVIDED. DO NOT COMPLETE PAGE 2 OF THIS REPORTING FORM IF ANY OF THESE CONDITIONS APPLY. IF NONE APPLY, COMPLETE THE ENTIRE FORM AND S

A. [ ] I.D. NUMBER CANCELLED OR WITHDRAWN—I certify that this site qualifies for this status and that I have read and understand the instructions for this section.

B. [ ] EXEMPTIONS—WAC 173-303-017, or WAC 173-303-071, or WAC 173-303-120; or an exemption, variance, or petition pursuant to WAC 173-303-910 has been granted that applies to ALL wastes generated at this site. A WRITTEN, DETAILED EXPLANATION QUOTING WHICH SECTIONS APPLY IS ATTACHED TO THIS REPORT. I understand this does NOT apply to on-site or off-site recycling of wastes, and that recycled wastes and the residues from recycling must be designated and reported.

C. [ ] TRANSPORTER ONLY—This does NOT apply if waste was generated or a spill cleanup occurred at this site.

D. [ ] NO WASTE—I certify that NO WASTE was generated, stored or removed from this site during 1988.

E. [ ] ..... lbs. SQG—I certify that this site qualifies as an SQG as outlined in the instructions or in the "Guide to Annual Reporting". I have entered the maximum generated, or accumulated on-site prior to shipment during the year in the space provided. I understand this section applies only if this site generated or accumulated less than the QEL for ALL wastes each and every month of 1988.

F. [ ] OTHER—You MUST attach a detailed explanation with this form if you are declaring any other reporting exemption, or your form will be rejected.

10. CERTIFICATION *I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Unless I am exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) or RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.*

Beverly Bechkoff
PRINT OR TYPE NAME

Beverly Bechkoff
SIGNATURE (must be in ink)

1/25/89
DATE SIGNED

TOR ANNUAL DANGEROUS WASTE REPORT 1988

Form 4

ich) typewriter). BLUE OR BLACK INK ONLY

2. EPA/STATE HAZARDOUS WASTE SITE IDENTIFICATION NUMBER: WA000927343 4

DATE RECEIVED: JAN 27 1989 / FEB 15 1989

Init: JM Date: 2/15
Init: Date:
Init: Date:
Verified: Date:
Batch No.

CONTACT TITLE: MGR MATLS

CONTACT PHONE NUMBER: 206-634-2540 ext. 25

5. COMPANY MAILING ADDRESS

Street or P.O. Box: 3400 WALLINGFORD AVE N

City: SEATTLE State: WA Zip: 98103

N

98103-

EGISTRATION NUMBER

7. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES

Primary: 3728 Secondary: 5063 Other:

8. SITE EMPLOYMENT ON DECEMBER 31, 1988: 194

REGULATORY STATUS CERTIFICATION

TION AND THE "GUIDE TO ANNUAL REPORTING" WORKBOOK BEFORE COMPLETING THIS SECTION. MARK ONLY ONE ENTRY BY PLACING YOUR INITIALS IN GE 2 OF THIS REPORTING FORM IF ANY OF THESE CONDITIONS APPLY. IF NONE APPLY, COMPLETE THE ENTIRE FORM AND SKIP THIS SECTION.

DRAWN—I certify that this site qualifies for this status and that I have read and understand the instructions for this section.

, or WAC 173-303-071, or WAC 173-303-120; or an exemption, variance, or petition pursuant to WAC 173-303-910 has been s generated at this site. A WRITTEN, DETAILED EXPLANATION QUOTING WHICH SECTIONS APPLY IS ATTACHED TO THIS OT apply to on-site or off-site recycling of wastes, and that recycled wastes and the residues from recycling must be designated

NOT apply if waste was generated or a spill cleanup occurred at this site.

TE was generated, stored or removed from this site during 1988.

es as an SQG as outlined in the instructions or in the "Guide to Annual Reporting". I have entered the maximum generated, or ac- during the year in the space provided. I understand this section applies only if this site generated or accumulated less than the y month of 1988.

ed explanation with this form if you are declaring any other reporting exemption, or your form will be rejected.

SEND TO:
DEPARTMENT OF ECOLOGY
HAZARDOUS WASTE SECTION
ATTN: Annual Reports R/6
Mail Stop PV-11
Olympia, WA 98504-8711

FOR ASSISTANCE CALL:
1-800-874-2022
(Seasonal Toll Free Number)
Other times (206) 459-6281

DUE DATE:
Postmarked No Later Than
MARCH 1, 1989

at I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Unless I am a small quantity generator who has been a waste minimization certification under Section 3002(b) of RCRA. I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Barry Brown
SIGNATURE (must be in ink)

1/20/89
DATE SIGNED

Page 1 of Pag

NOTICE: IF THE DOCUMENT IN THIS FRAME IS LESS CLEAR THAN THIS NOTICE IT IS DUE TO THE QUALITY OF THE DOCUMENT.

Sanborn Maps

Avtech Corporation Property
3400 Wallingford Avenue North
Seattle, WA 98103

Inquiry Number: 3133993.3
July 27, 2011

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

7/27/11

Site Name:
Avtech Corporation Property
3400 Wallingford Avenue North
Seattle, WA 98103

Client Name:
Sound Environmental
2811 Fairview Avenue East
Seattle, WA 98102

EDR Inquiry # 3133993.3

Contact: Ryan Thompson

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Sound Environmental Strategies were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: Avtech Corporation Property
Address: 3400 Wallingford Avenue North
City, State, Zip: Seattle, WA 98103
Cross Street:
P.O. # 0811-001-01
Project: AvTech Corporation Property
Certification # B3CE-4942-AC8A

Maps Provided:

1968
1950
1919
1905

Sanborn® Library search results
Certification # B3CE-4942-AC8A

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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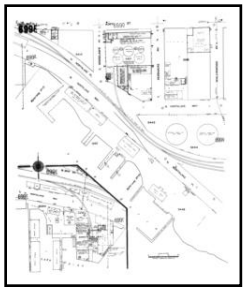
Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

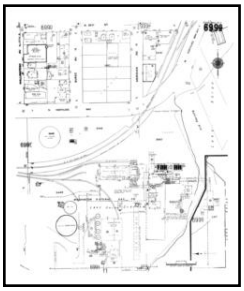
1968 Source Sheets



Volume 6, Sheet 699d



Volume 6, Sheet 699f

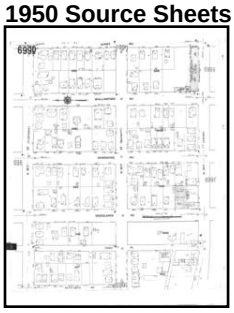


Volume 6, Sheet 699d



Volume 6, Sheet 699h

1950 Source Sheets



Volume 6, Sheet 699d



Volume 6, Sheet 699f



Volume 6, Sheet 699g

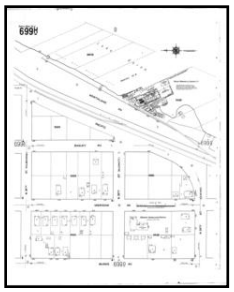


Volume 6, Sheet 699h

1919 Source Sheets



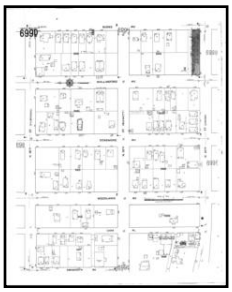
Volume 6, Sheet 699f



Volume 6, Sheet 699h

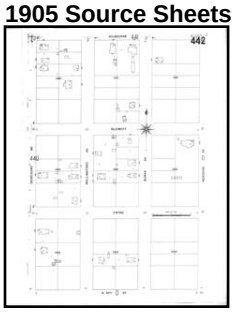


Volume 6, Sheet 699g



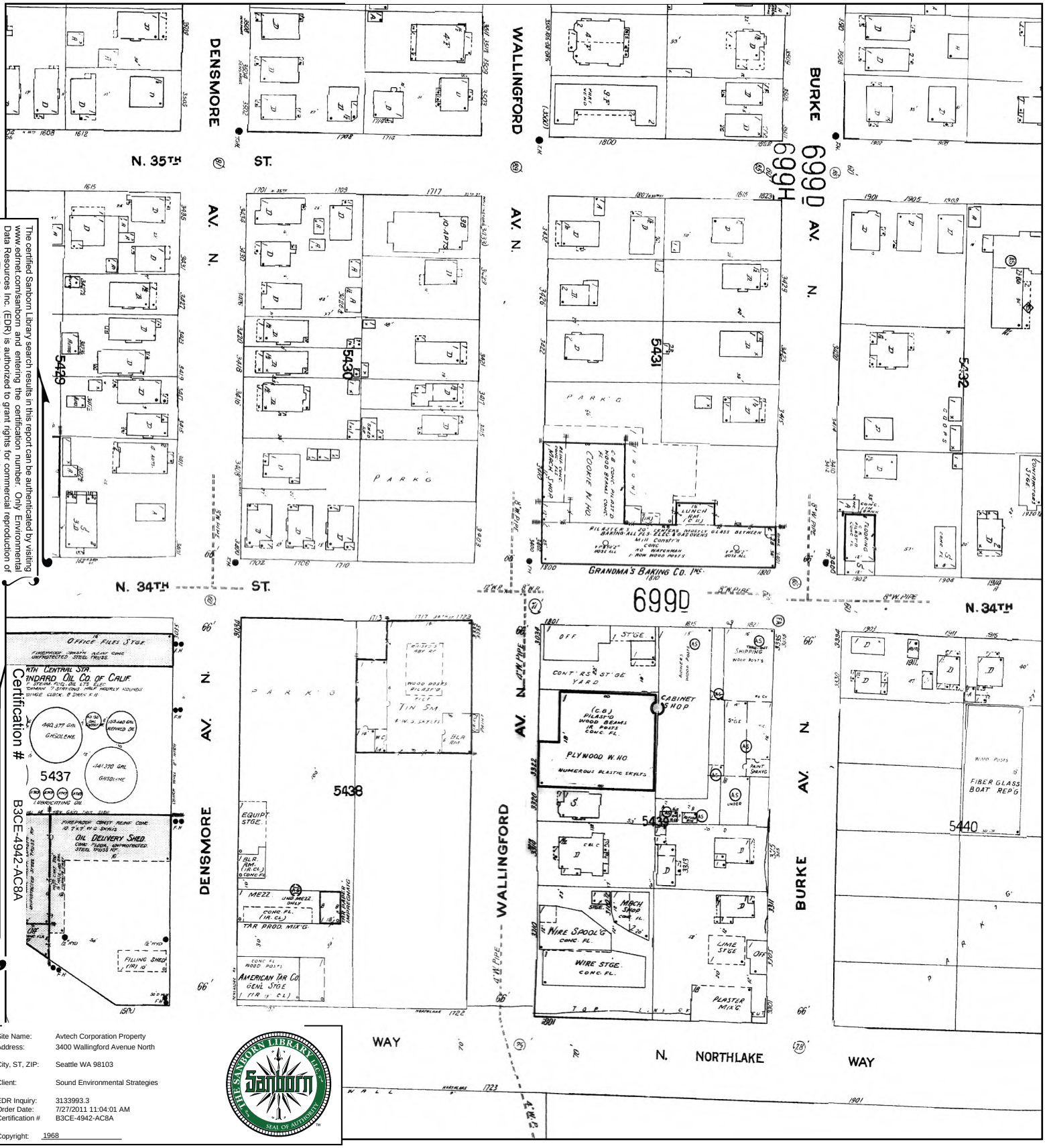
Volume 6, Sheet 699d

1905 Source Sheets



Volume 4, Sheet 442

1968 Certified Sanborn Map



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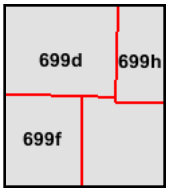
Certification # B3CE-4942-AC8A

Site Name:	Avtech Corporation Property
Address:	3400 Wallingford Avenue North
City, ST, ZIP:	Seattle WA 98103
Client:	Sound Environmental Strategies
EDR Inquiry:	3133993.3
Order Date:	7/27/2011 11:04:01 AM
Certification #	B3CE-4942-AC8A
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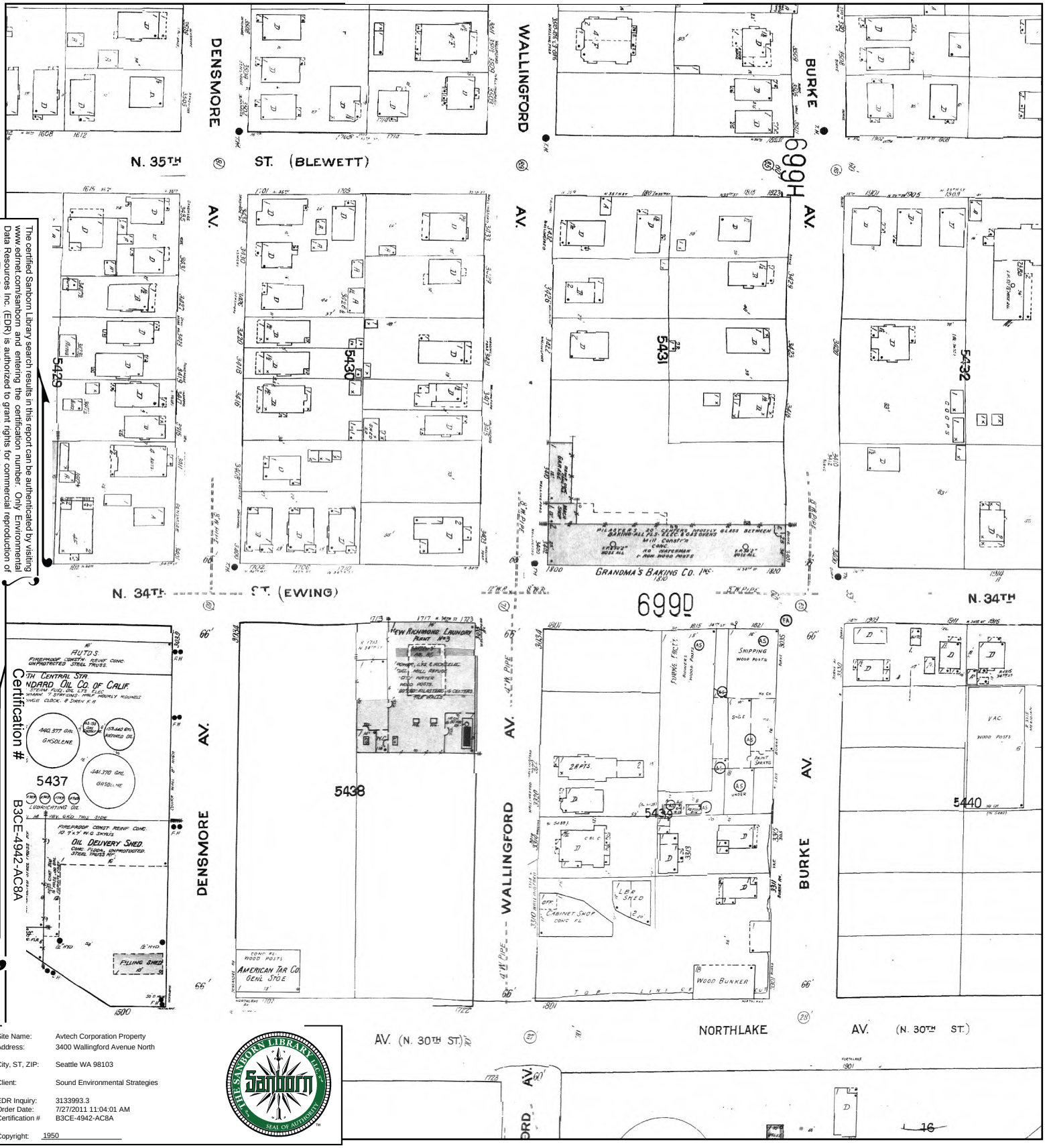


Volume 6, Sheet 699d
Volume 6, Sheet 699f
Volume 6, Sheet 699d
Volume 6, Sheet 699h

0 Feet 150 300 600

N

1950 Certified Sanborn Map



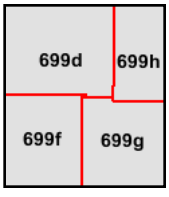
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Certification # B3CE-4942-AC8A

Site Name:	Avtech Corporation Property
Address:	3400 Wallingford Avenue North
City, ST, ZIP:	Seattle WA 98103
Client:	Sound Environmental Strategies
EDR Inquiry:	3133993.3
Order Date:	7/27/2011 11:04:01 AM
Certification #	B3CE-4942-AC8A
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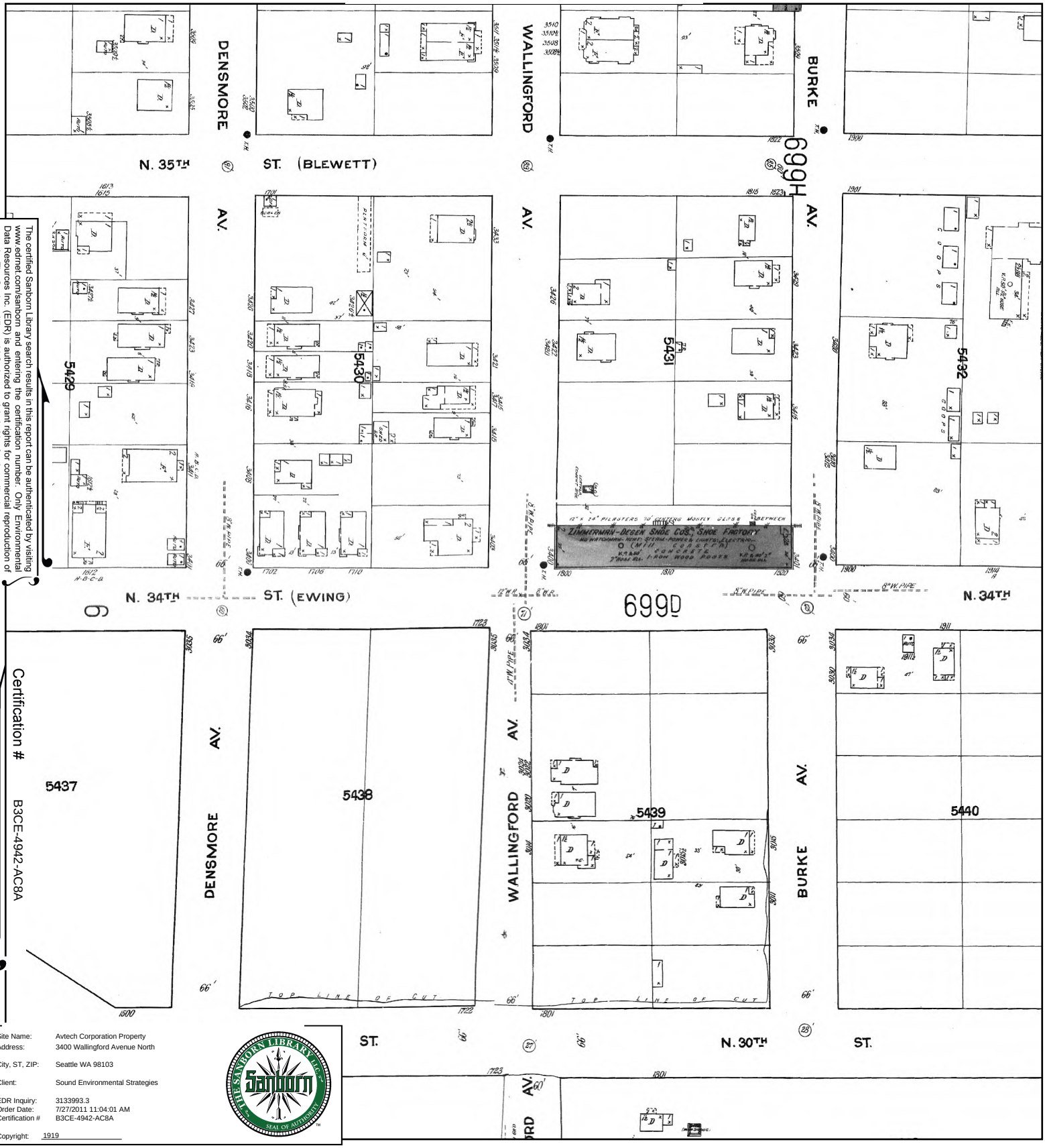


Volume 6, Sheet 699d
Volume 6, Sheet 699f
Volume 6, Sheet 699g
Volume 6, Sheet 699h

0 Feet 150 300 600

N

1919 Certified Sanborn Map



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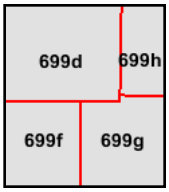
Certification # B3CE-4942-AC8A

Site Name:	Avtech Corporation Property
Address:	3400 Wallingford Avenue North
City, ST, ZIP:	Seattle WA 98103
Client:	Sound Environmental Strategies
EDR Inquiry:	3133993.3
Order Date:	7/27/2011 11:04:01 AM
Certification #	B3CE-4942-AC8A
Copyright:	1919

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Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

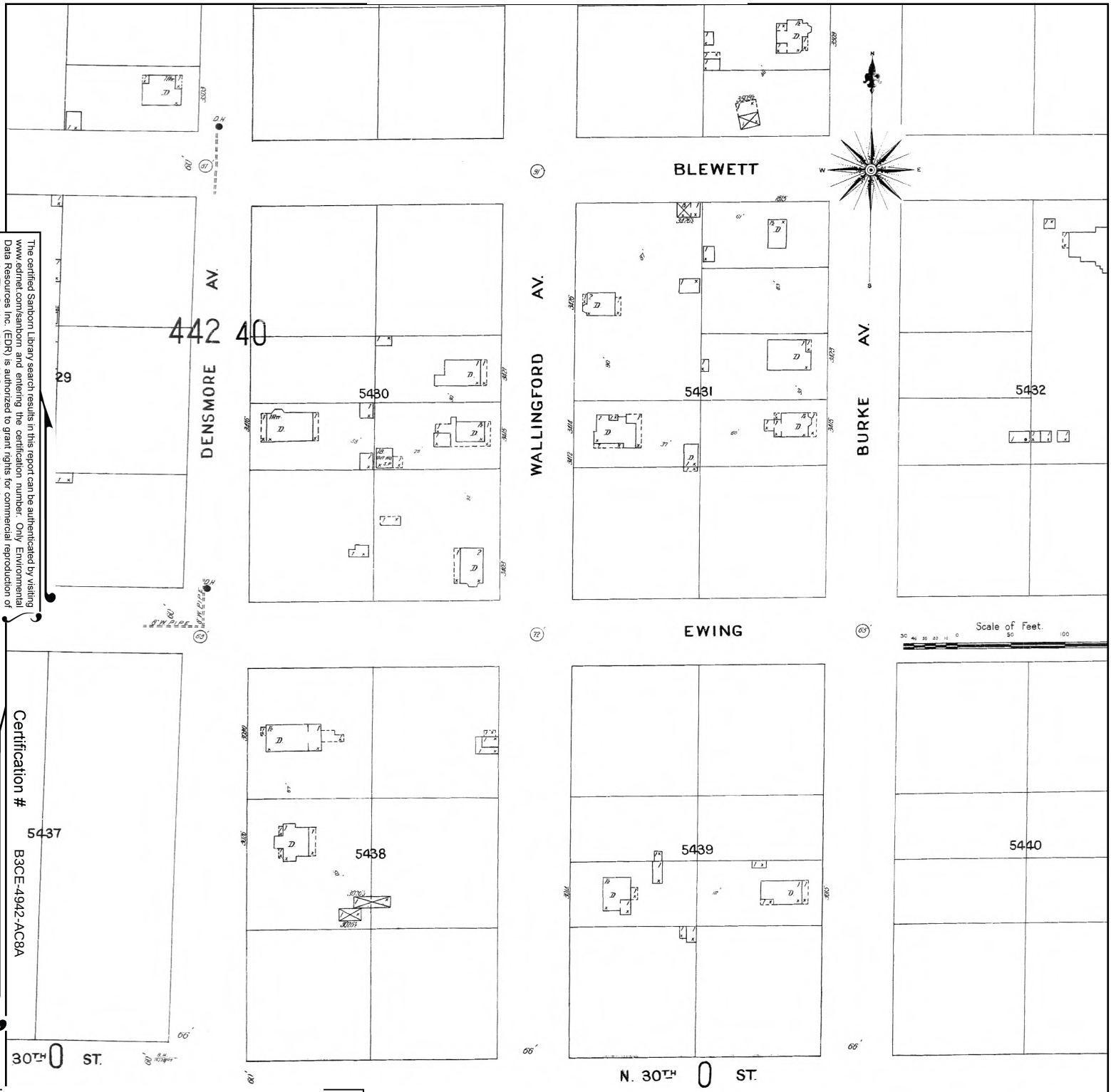




Volume 6, Sheet 699f
Volume 6, Sheet 699h
Volume 6, Sheet 699g
Volume 6, Sheet 699d

N

1905 Certified Sanborn Map



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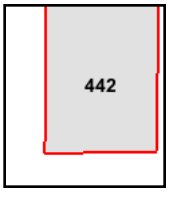
Certification # B3CE-4942-AC8A

Site Name:	Avtech Corporation Property
Address:	3400 Wallingford Avenue North
City, ST, ZIP:	Seattle WA 98103
Client:	Sound Environmental Strategies
EDR Inquiry:	3133993.3
Order Date:	7/27/2011 11:04:01 AM
Certification #	B3CE-4942-AC8A
Copyright:	1905

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0 Feet 150 300 600





Volume 4, Sheet 442

N

APPENDIX B
BORING LOGS

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 23.3' N of N wall of building 2
Well Location E/W: 77.7' E of W retaining wall at N property boundary
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B01 MW01

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
0								**Asphalt**	
		4 17 21	50	0.0	B01-03	SM		**Damp, dense, silty SAND, with gravel, grayish brown, no odor (25-70-5).**	
5		8 18 20		0.0	B01-05	SM		**Damp, dense, silty SAND, with gravel, grayish brown, no odor (25-70-5).**	
			80						
		12 40 50/5"	70	0.0	B01-08	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
10		28 50/6"	40	0.9	B01-10	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		50/6"	30	NR					
					B01-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
15									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BHM097

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 25-35 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 23.3' N of N wall of building 2
Well Location E/W: 77.7' E of W retaining wall at N property boundary
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B01 MW01

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
15		50/6"	30	0.4	B01-15	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
20		50/6"	30	0.0	B01-20	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
25		21 50/6"	60	0.4	B01-25	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, light brown, no odor (5-95-5).**	
30									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BHM097

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 25-35 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 23.3' N of N wall of building 2
Well Location E/W: 77.7' E of W retaining wall at N property boundary
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B01 MW01

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
30		18 45 50/5"	80	0.0	B01-30	SP		**Wet, very dense, medium to fine SAND, with silt and gravel, brown, no odor (5-95-5).**	
35		14 50/6"	70	0.0	B01-35	SP		**Wet, very dense, medium to fine SAND, with silt and gravel, brown, no odor (5-85-10).**	
40								**Boring terminated at 35 feet below ground surface (bgs), screened from 25 to 35 feet and completed as monitoring well MW01.**	
45									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BHM097

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 25-35 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 30.6' N of NE corner of building 2
Well Location E/W: 56.6' E of NE corner of building 2
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B02
--

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
0								**Asphalt**	
		14 19 28	100	0.0	B02-03	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
5		4 13 18	80	0.0	B02-05	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		22 50/6"	60	0.0	B02-08	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (30-65-5).**	
10		12 50/6"	60	0.0	B02-10	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (30-65-5).**	
		50/6"	10		B02-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (30-65-5).**	
15									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 30.6' N of NE corner of building 2
Well Location E/W: 56.6' E of NE corner of building 2
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B02
--

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
15		31 50/2"	40	0.0	B02-15	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
20		50/5"	20		B02-20	SM		**Damp, very dense, silty SAND, with gravel, gray, no odor (25-70-5).**	
25		16 50/4"	60	0.0	B02-25	SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
30									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	--/8"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	35.5	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 30.6' N of NE corner of building 2
Well Location E/W: 56.6' E of NE corner of building 2
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B02
--

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
30		17 37 50/6"	80	0.0	B02-30	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, light brown, no odor (5-90-5).**	
35		5 15 46	90	0.0	B02-35	SP		**Wet, very dense, medium to fine SAND, with silt and gravel, light brown, no odor (5-85-10).**	
								Boring terminated at 35.5' bgs.	
40									
45									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 32' off NE corner of furthest E corner of building 2
Well Location E/W: 25.3' off NE corner of furthest E corner of building 2
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B03
--

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 32 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
0								**Asphalt**	
		13 25 37	100	0.0	B03-03	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
5		50/4"	0	NR	--	--		**No recovery, drilling condition indicates gravel/cobbles.**	
		50/0"	0	NR	--	-		**No recovery, drilling condition indicates gravel/cobbles.**	
10		50/5"	15	NR	B03-10	--		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
		50/4"	10	NR	B03-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
15									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 32' off NE corner of furthest E corner of building 2
Well Location E/W: 25.3' off NE corner of furthest E corner of building 2
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B03
--

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 32 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
15		50/5"	15	NR	B03-15	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
20		36 50/6"	50	0.0	B03-20	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, light brown, no odor (5-90-5).**	
25		50/4"	15	NR	B03-25	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, gray, no odor (5-90-5).** **Drilling conditions indicate gravel/cobbles.**	
30									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	--/8"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	35	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/10/12
Surface Conditions: Asphalt
Well Location N/S: 32' off NE corner of furthest E corner of building 2
Well Location E/W: 25.3' off NE corner of furthest E corner of building 2
Reviewed by: CER
Date Completed: 1/10/12

BORING LOG | B03
--

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 32 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
30		50/4"	10	NR	B03-30	SM		**Damp, very dense, silty SAND, with gravel, grayish brown, no odor (25-70-5).**	
		15 50/6"	70	0.0	B03-35	SP		**Wet, very dense, fine to medium SAND, with silt, brown, no odor (10-90-0).**	
35								**Boring terminated at 35' bgs.**	
40									
45									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/11/12
Surface Conditions: Asphalt
Well Location N/S: 19' N of SW corner of Avtech building 6
Well Location E/W: 6.5' W of SW corner of Avtech building 6
Reviewed by: CER
Date Completed: 1/11/12

BORING LOG | B04 MW02

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Concrete**	
		2 4 4	50	0.7	B04-03	SP		**Damp, loose, medium to fine SAND, with silt, brown, no odor (5-95-0). (FILL)**	
5		2 3 4	50	0.0	B04-05	SP		**Damp, loose, medium to fine SAND, with silt, brown, no odor (5-95-0). (FILL)**	
		14 25 27	1	NR		--		**Insufficient recovery to sample.**	
10		8 18 25	90	0.0	B04-10	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		16 28 43	60	0.0	B04-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
15									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 25 feet bgs
Total Well Depth: 25. feet bgs
State Well ID No.: BHM098

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 15-25 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/11/12
Surface Conditions: Asphalt
Well Location N/S: 19' N of SW corner of Avtech building 6
Well Location E/W: 6.5' W of SW corner of Avtech building 6
Reviewed by: CER
Date Completed: 1/11/12

BORING LOG | B04 MW02

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15		14 24 22	60	0.0	B04-15	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
20		50/6"	10	NR	B04-20	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		50/6"	30	NR	B04-25	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
25								**Boring terminated at 25 feet below ground surface (bgs), screened from 15 to 25 feet and completed as monitoring well MW02.**	
30									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 25 feet bgs
Total Well Depth: 25. feet bgs
State Well ID No.: BHM098

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 15-25 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/11/12
Surface Conditions:	Asphalt
Well Location N/S:	10' S of SE corner of building 6
Well Location E/W:	17.6' W of SE corner of building 5
Reviewed by:	CER
Date Completed:	1/11/12

BORING LOG | B05 MW03

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
0								**Gravel**	
								Cleared boring with vactor truck to 7' bgs.	
5									
		50/6"	50	0.0	B05-08	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
10		50/6"	40	NR	B05-10	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
		40 50/6"	50	0.1	B05-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
15									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	2"/8"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	25-35	feet bgs
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand	
Total Boring Depth:	35	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	35	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	BHM099		**Monument Type:**	Flush mount	

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/11/12
Surface Conditions:	Asphalt
Well Location N/S:	10' S of SE corner of building 6
Well Location E/W:	17.6' W of SE corner of building 5
Reviewed by:	CER
Date Completed:	1/11/12

BORING LOG | B05 MW03

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
15		50/6"	50	0.3	B05-15	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
20		40 50/4"	40	0.1	B05-20	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
						SP		**Damp, very dense, medium to fine SAND, with silt and gravel, brown, no odor (5-90-5).**	
25		40 50/5"	40	0.1	B05-25	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, brown, no odor (10-85-5).**	
								Drilling conditions indicate gravel.	
30									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	2"/8"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	25-35	feet bgs
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand	
Total Boring Depth:	35	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	35	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	BHM099		**Monument Type:**	Flush mount	

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/11/12
Surface Conditions: Asphalt
Well Location N/S: 10' S of SE corner of building 6
Well Location E/W: 17.6' W of SE corner of building 5
Reviewed by: CER
Date Completed: 1/11/12

BORING LOG | B05 MW03

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 30 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
30		22 25 50/6"	90	0.3	B05-30	**SP**		**Wet, very dense, fine to medium SAND, with silt and gravel, brown, no odor (10-85-5).**	
		43 50/5"	50	0.0	B05-35	**SM-SP**		**Damp, very dense, silty, fine SAND, with gravel, brown, no odor (15-80-5).**	
35								**Boring terminated at 35 feet below ground surface (bgs), screened from 25 to 35 feet and completed as monitoring well MW03.**	
40									
45									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 35 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BHM099

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 25-35 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/11/12
Surface Conditions: Asphalt
Well Location N/S: 9' S of SW corner of building 2
Well Location E/W: 82' E of SW corner of building 2
Reviewed by: CER
Date Completed: 1/11/12

BORING LOG | B06 MW04

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 37 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
0								**Gravel**	
								Cleared boring with vactor truck to 7' bgs.	
5									
		23 41 44	70	0.1	B06-08	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
10		18 50/6"	50	0.1	B06-10	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		50/5"	20	NR	B06-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
15									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 40 feet bgs
Total Well Depth: 40 feet bgs
State Well ID No.: BHM100

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 30-40 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/11/12
Surface Conditions: Asphalt
Well Location N/S: 9' S of SW corner of building 2
Well Location E/W: 82' E of SW corner of building 2
Reviewed by: CER
Date Completed: 1/11/12

BORING LOG | B06 MW04

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 37 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
15		50/6"	40	0.3	B06-15	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
20		50/5"	50	NR	B06-20	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
25		50/4"	20	NR	B06-25	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
30									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 40 feet bgs
Total Well Depth: 40 feet bgs
State Well ID No.: BHM100

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 30-40 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/11/12
Surface Conditions: Asphalt
Well Location N/S: 9' S of SW corner of building 2
Well Location E/W: 82' E of SW corner of building 2
Reviewed by: CER
Date Completed: 1/11/12

BORING LOG | B06 MW04

Site Address: 3400 Wallingford Ave N, Seattle, WA

Water Depth At Time of Drilling 37 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
30		38 50/4"	60	0.5	B06-30	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, light brown, no odor (5-90-5).**	
35		17 26 33	NR	0.1	B06-35	SP		**Wet, very dense, medium to fine SAND, with silt and gravel, brown, no odor (5-90-5).**	
40		27 50/6"	70	0.0	B06-40	SP		**Wet, very dense, medium to fine SAND, with silt and gravel, brown, no odor (5-90-5).**	
								Boring terminated at 40 feet below ground surface (bgs), screened from 30 to 40 feet and completed as monitoring well MW04.	
45									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 40 feet bgs
Total Well Depth: 40 feet bgs
State Well ID No.: BHM100

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 30-40 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/12/12
Surface Conditions:	Gravel
Well Location N/S:	4.5' N of SE corner of building 3
Well Location E/W:	38' E of SE corner of building 3
Reviewed by:	CER
Date Completed:	1/12/12

BORING LOG | B07 MW05

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Gravel surfacing.**	
								Cleared boring with a vactor truck to 7' bgs.	
5									
		50/5"	30	0.8	B08-08	SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
10		50/4"	30	NR	B08-10	SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
		50/3"	20	NR	B08-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
15									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	2"/8"	inches	**Notes/Comments:**
Drilling Equipment:	HSA		**Well Screened Interval:**	20-30	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand		
Total Boring Depth:	30	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	30	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	BHM101		**Monument Type:**	Flush mount		

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/12/12
Surface Conditions: Gravel
Well Location N/S: 4.5' N of SE corner of building 3
Well Location E/W: 38' E of SE corner of building 3
Reviewed by: CER
Date Completed: 1/12/12

BORING LOG | B07 MW05

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15		34 50/6"	50	0.4	B08-15	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, light brown, no odor (5-90-5).**	
20		20 32 50/6"	90	0.2	B08-20	SP		**Damp, very dense, medium to fine SAND, with silt and gravel, light brown, no odor (5-90-5).**	
25		35 50/5"	70	0.2	B08-25	SM		**Moist, very dense, silty SAND, gray, no odor (25-75-0).**	
								Wet drill cuttings	
		NR	50	0.0		SM		**Damp, very dense, silty SAND, with gravel, gray, no odor (25-65-10).**	
30						ML			

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 30 feet bgs
Total Well Depth: 30 feet bgs
State Well ID No.: BHM101

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 20-30 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/12/12
Surface Conditions:	Gravel
Well Location N/S:	4.5' N of SE corner of building 3
Well Location E/W:	38' E of SE corner of building 3
Reviewed by:	CER
Date Completed:	1/12/12

BORING LOG | B07 MW05

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30					B08-30			**Damp, very dense, SILT with fine sand, gray, no odor (40-55-5).**	
								Boring terminated at 30 feet below ground surface (bgs), screened from 20 to 30 feet and completed as monitoring well MW05.	
35									
40									
45									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	2"/8"	inches	**Notes/Comments:**
Drilling Equipment:	HSA		**Well Screened Interval:**	20-30	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand		
Total Boring Depth:	30	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	30	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	BHM101		**Monument Type:**	Flush mount		

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/12/12
Surface Conditions:	Asphalt
Well Location N/S:	6' S of NE corner of building 3
Well Location E/W:	14.3" E of NW corner of building 3
Reviewed by:	CER
Date Completed:	1/12/12

BORING LOG | B08
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Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Asphalt**	
								Cleared boring with a vactor truck to 6' bgs.	
5									
		50/6"	20	0.0	B08-08	SM		**Damp, very dense, silty SAND, trace gravel, brown, no odor (25-70-5).**	
10		33 50/6"	50	0.4	B08-10	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		50/6"	20	NR	B08-13	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
15									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	--/8"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	25	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/12/12
Surface Conditions: Asphalt
Well Location N/S: 6' S of NE corner of building 3
Well Location E/W: 14.3" E of NW corner of building 3
Reviewed by: CER
Date Completed: 1/12/12

BORING LOG | B08
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Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15		50/6"	20	NR	B08-15	SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
20		42 50/3"	30	0.4	B08-20	SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
		50/5"	20	0.2	B08-25	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
25								**Boring terminated at 25' bgs.**	
30									

Drilling Co./Driller: Cascade/James
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 25 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/13/12
Surface Conditions: Grass and thin top soil
Well Location N/S: 5.9' N of NE corner of building 1
Well Location E/W: 29' E of NE corner of building 1
Reviewed by: CER
Date Completed: 1/13/12

BORING LOG | B09
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Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Grass and thin topsoil.**	
		21 50/4"	50	1.1		SM		**Damp, very dense, silty SAND, with gravel, brown to reddish brown, no odor (25-70-5).**	
5		39 31 34	NR	0.7	B09-05	SP		**Damp, dense, medium to fine SAND, with silt and gravel, light brown, no odor (10-85-5).**	
		27 50/6"	30	0.5		SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
10		29 44 50/6"	100	0.3	B09-10	SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
		50/6"	30	0.1		SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
		50/6"	30	NR		SM		**Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
15					B09-15			**Boring terminated at 15' bgs.**	

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	--/8"	inches	**Notes/Comments:**
Drilling Equipment:	LAR HSA		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	15	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/13/12
Surface Conditions: Grass and thin top soil
Well Location N/S: 12' N of SE corner of basketball court
Well Location E/W: 1.8' E of SE corner of basketball court
Reviewed by: CER
Date Completed: 1/13/12

BORING LOG | B10
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Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Surface grass**	
		2 2 2	0	NR				**No recovery.**	
5		14 28 41	80	0.5	B10-05	**SM**		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		16 22 50/5"	60	0.5		**SM**		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
10		50/6"	20	0.5		**SM**		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5). Insufficient amount to sample.**	
		43 30 50/4"	50	0.5		**SM**		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
		21 36 38	NR	0.5		**SM**		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
15					B10-15				

Drilling Co./Driller: Cascade/James
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 15.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/13/12
Surface Conditions:	Grass and thin top soil
Well Location N/S:	12' N of SE corner of basketball court
Well Location E/W:	1.8' E of SE corner of basketball court
Reviewed by:	CER
Date Completed:	1/13/12

BORING LOG | B10
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Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15								**Boring terminated at 15.5 ft bgs.**	
20									
25									
30									

Drilling Co./Driller:	Cascade/James		**Well/Auger Diameter:**	--/8"	inches	**Notes/Comments:**
Drilling Equipment:	LAR HSA		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	15.5	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Landscape
Well Location N/S: 8.4' S of NW corner of S Patio
Well Location E/W: 15.0' E of NW corner of S Patio
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B11 MW06

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Grass/topsoil**	
						SM		**Cuttings indicate silty SAND with some gravel, light brown.**	
5									
10						SM		**Cuttings indicate silty SAND with some gravel, light brown.**	
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 45 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB524

Well/Auger Diameter: 2" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Landscape
Well Location N/S: 8.4' S of NW corner of S Patio
Well Location E/W: 15.0' E of NW corner of S Patio
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B11 MW06

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15						SM		**Cuttings indicate silty SAND with some gravel, light brownish-gray.**	
20		50/5	30	0.8	B11-20	SM		**Damp, very dense, silty fine SAND with some gravel, grayish-brown, no hycrocarbon odor (20-75-5).**	
25		50/6	30	0.9	B11-25	SP/SM		**Damp, very dense, fine to medium SAND with silt and gravel, grayish-brown, no hydorcarbon odor (15-80-5).**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 45 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB524

Well/Auger Diameter: 2" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Landscape
Well Location N/S: 8.4' S of NW corner of S Patio
Well Location E/W: 15.0' E of NW corner of S Patio
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B11 MW06

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30		50/5	30	1.0	B11-30	SM/SP		**Moist, very dense, fine to medium SAND with silt and gravel, brown, no hydrocarbon odor (15-75-10).**	
35		17 22 35	100	1.5	B11-35	SP		**Wet, dense, medium to fine SAND with trace silt, brown, no hydrocarbon odor (5-95-0).**	
40								**Cuttings indicate fine to medium SAND.**	
								Boring terminated at 45 feet below ground surface (bgs), screened from 30 to 45 feet and completed as monitoring well MW06.	
45									

						Notes/Comments:
Drilling Co./Driller:	Bortech/Robert		**Well/Auger Diameter:**	2"	inches	
Drilling Equipment:	LAR HSA		**Well Screened Interval:**	30-45	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand		
Total Boring Depth:	45	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	45	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	BCB524		**Monument Type:**	Flush mount		

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Concrete
Well Location N/S: 28.3' S of NE corner of breezeway of building 3
Well Location E/W: 9' W of NE corner of breezeway of building 3
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B12 MW07

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Concrete 10-inch-thick.**	
								Cuttings indicate silty SAND with gravel, light brown.	
5									
								Cuttings indicate silty SAND with gravel, light brown.	
10									
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 55 feet bgs
Total Well Depth: 55 feet bgs
State Well ID No.:

Well/Auger Diameter: 2"/9.25" inches
Well Screened Interval: 35-55 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Concrete
Well Location N/S: 28.3' S of NE corner of breezeway of building 3
Well Location E/W: 9' W of NE corner of breezeway of building 3
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B12 MW07

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15									
20		23 50/4	60	1.5	B12-20	SM		**Damp, very dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).**	
25		50/5	30	2.9	B12-25	SM		**Damp, very dense, silty SAND with gravel, grayish-brown, no hydrocarbon odor (20-75-5).**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 55 feet bgs
Total Well Depth: 55 feet bgs
State Well ID No.:

Well/Auger Diameter: 2"/9.25" inches
Well Screened Interval: 35-55 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	4/23/12
Surface Conditions:	Concrete
Well Location N/S:	28.3' S of NE corner of breezeway of building 3
Well Location E/W:	9' W of NE corner of breezeway of building 3
Reviewed by:	CER
Date Completed:	4/23/12

BORING LOG | B12 MW07

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30		50/5	30	2.7	B12-30	SM		**Damp, very dense, silty SAND with gravel, grayish-brown, no hydrocarbon odor (20-75-5).**	
35		44 50/4	60	3.3	B12-35	SM/SP		**Moist, very dense, medium to fine SAND, with silt and gravel, grayish-brown, no hydrocarbon odor (15-70-10).**	
40								**Cuttings indicate medium to fine SAND with silt and gravel, grayish-brown.**	
45									

Drilling Co./Driller:	Bortech/Robert		**Well/Auger Diameter:**	2"/9.25"	inches	**Notes/Comments:**
Drilling Equipment:	LAR HSA		**Well Screened Interval:**	35-55	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand		
Total Boring Depth:	55	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	55	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:			**Monument Type:**	Flush mount		

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Concrete
Well Location N/S: 28.3' S of NE corner of breezeway of building 3
Well Location E/W: 9' W of NE corner of breezeway of building 3
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B12 MW07

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
45									
50						SP		**Cuttings indocate damp, medium to fine SAND. Rods dry, drill bit dry.**	
55						SP		**Cuttings indicate moist medium fine SAND.**	
								Boring terminated at 55 feet below ground surface (bgs), screened from 35 to 55 feet and completed as monitoring well MW07.	
60									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 55 feet bgs
Total Well Depth: 55 feet bgs
State Well ID No.:

Well/Auger Diameter: 2"/9.25" inches
Well Screened Interval: 35-55 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/24/12
Surface Conditions: Concrete
Well Location N/S: 6' S of NW corner of building 5
Well Location E/W: 19' W of NW corner of building 5
Reviewed by: CER
Date Completed: 4/24/12

BORING LOG | B13 MW08

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Concrete 6-inch-thick.**	
						SM		**Cuttings indicate silty SAND with gravel, light brown.**	
5									
						SM		**Cuttings indicate silty SAND with gravel, brown.**	
10									
						SM		**Cuttings indicate silty SAND with gravel, brown.**	
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 45 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB526

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:
NR = Not Recorded

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/24/12
Surface Conditions: Concrete
Well Location N/S: 6' S of NW corner of building 5
Well Location E/W: 19' W of NW corner of building 5
Reviewed by: CER
Date Completed: 4/24/12

BORING LOG | B13 MW08

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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		41 50/3	60	0.6	B13-20	SM		**Damp, very dense, silty SAND, brown, no hydrocarbon odor (20-75-5).**	
25		50/3	10	NR	B13-25	SM		**Damp, very dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 45 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB526

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:
NR = Not Recorded

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/24/12
Surface Conditions: Concrete
Well Location N/S: 6' S of NW corner of building 5
Well Location E/W: 19' W of NW corner of building 5
Reviewed by: CER
Date Completed: 4/24/12

BORING LOG | B13 MW08

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30		50/4	0	NR	B13-30			**No recovery.**	
35		35 50/5	0		B13-35	**SM/SP**		**Damp, very dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor.**	
40						**SM/SP**		**Cuttings indicate medium to fine SAND with silt and gravel, brown, no hydrocarbon odor.**	
45								**Boring terminated at 45 feet below ground surface (bgs), screened from 30 to 45 feet, and completed as monitoring well MW08.**	

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 45 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB526

Well/Auger Diameter: 2"/8" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:
NR = Not Recorded

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/24/12
Surface Conditions: Asphalt
Well Location N/S: 28.0' S of NE corner of building 2
Well Location E/W: 13.2' E of NE corner of building 2
Reviewed by: CER
Date Completed: 4/24/12

BORING LOG | B14 MW09

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 25 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
0								**Asphalt 4-inch-thick.**	
5								**Cuttings indicate silty SAND with gravel/cobbles, brown.**	
10								**Cuttings indicate silty SAND with gravel, brown.**	
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 36.5 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BCB527

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 20-35 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/24/12
Surface Conditions: Asphalt
Well Location N/S: 28.0' S of NE corner of building 2
Well Location E/W: 13.2' E of NE corner of building 2
Reviewed by: CER
Date Completed: 4/24/12

BORING LOG | B14 MW09

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling 25 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
15						SM		**Cuttings indicate silty SAND with gravel, brown.**	
20		50/5	15	39.0	B14-20	SM		**Damp, very dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
25		21 43 50/6	70	2.8	B14-25	SM/SP		**Wet, very dense, medium fine SAND with silt and gravel, light brown, no hydrocarbon odor (15-75-10).**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 36.5 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BCB527

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 20-35 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/24/12
Surface Conditions: Asphalt
Well Location N/S: 28.0' S of NE corner of building 2
Well Location E/W: 13.2' E of NE corner of building 2
Reviewed by: CER
Date Completed: 4/24/12

BORING LOG | B14 MW09

Site Address: 3400 Wallingford Ave N, Seattle, WA

Water Depth At Time of Drilling: 25 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
30		50/5	30	3.3	B14-30	**SM/SP**		**Wet, very dense, medium to fine SAND with silt and gravel, light brown, no hydrocarbon odor (15-80-5).**	
35		10 25 45	80	2.2	B14-35	**SP**		**Wet, very dense, fine to medium SAND, light gray, no hydrocarbon odor (5-90-5).**	
								Boring terminated at 36.5 feet below ground surface (bgs), screened from 20 to 35 feeet, and completed as monitoring well MW09.	
40									
45									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 36.5 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BCB527

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 20-35 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	4/25/12
Surface Conditions:	Asphalt
Well Location N/S:	15.7' E of W retaining wall
Well Location E/W:	1.2' N of building 1
Reviewed by:	CER
Date Completed:	4/25/12

BORING LOG | B15 MW10

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Asphalt, 3-inch-thick.**	
5								**Drilling indicates silty SAND with gravel, brown.**	
10								**Drilling indicates silty SAND with gravel/cobbles, brown.**	
15									

Drilling Co./Driller:	Bortech/Robert		**Well/Auger Diameter:**	2"/6"	inches	**Notes/Comments:**
Drilling Equipment:	HSA Skid Mount		**Well Screened Interval:**	30-45	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand		
Total Boring Depth:	36.5	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	35	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	BCB528		**Monument Type:**	Flush mount		

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Asphalt
Well Location N/S: 15.7' E of W retaining wall
Well Location E/W: 1.2' N of building 1
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B15 MW10

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15								**Drilling indicates silty SAND with gravel, brown.**	
20		50/5	20	2.1	B15-20	**SM**		**Damp, very sense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
25		24 33 24	70	3.3	B15-25	**SM/SP**		**Wet, dense, medium to fine SAND with silt and gravel, brown, no hydrocarbon odor (15-80-5).**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 36.5 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Asphalt
Well Location N/S: 15.7' E of W retaining wall
Well Location E/W: 1.2' N of building 1
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B15 MW10

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30		50/5	80	3.4	B15-30	SM		**Wet, very dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).**	
35		8 19 35	100	3.0	B15-35	SP		**Wet, loose, medium to fine SAND, grayish-brown, no hydrocarbon odor (5-95-0).**	
						SM		**Wet, dense, silty SAND, grayish-brown, no hydrocarbon odor (20-75-5).**	
40								**Boring terminated at 36.5 feet below ground surface (bgs), screened from 20 to 35 feet, and completed as monitoring well MW10.**	
45									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 36.5 feet bgs
Total Well Depth: 35 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project:	Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	4/25/12
Surface Conditions:	Gravel
Well Location N/S:	15.3' N of NW corner of building 6
Well Location E/W:	23' W of NW corner of building 6
Reviewed by:	CER
Date Completed:	4/25/12

BORING LOG | B16 MW11

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Gravel.**	
								Clear with vactor truck to 7' bgs.	
5									
10						**SM**		**Drilling indicates silty SAND with gravel.**	
15									

Drilling Co./Driller:	Bortech/Robert		**Well/Auger Diameter:**	2"/6"	inches	**Notes/Comments:**
Drilling Equipment:	HSA Skid Mount		**Well Screened Interval:**	35-50	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand		
Total Boring Depth:	50	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	45	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	BCB528		**Monument Type:**	Flush mount		

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Gravel
Well Location N/S: 15.3' N of NW corner of building 6
Well Location E/W: 23' W of NW corner of building 6
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B16 MW11

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15						SM		**Cuttings indicate silty SAND with gravel, brown.**	
20		50/5	20	0.7	B16-20	SM		**Damp, very dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
25		50/6	20	2.2	B16-25	SM		**Damp, very dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 50 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 35-50 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Gravel
Well Location N/S: 15.3' N of NW corner of building 6
Well Location E/W: 23' W of NW corner of building 6
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B16 MW11

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30		27 38 50/4	50	1.4	B16-30	SM		**Damp, very dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).**	
35		15 50/5	30	0.7	B16-35	SM		**Damp, very dense, silty SAND with gravel, light brown, no hydrocarbon odor (15-70-10).**	
40								**Cuttings indicate silty SAND with gravel, light brown.**	
45									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 50 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 35-50 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Gravel
Well Location N/S: 15.3' N of NW corner of building 6
Well Location E/W: 23' W of NW corner of building 6
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B16 MW11

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
45									
50								**Boring terminated at 50 feet below ground surface (bgs), screened from 35 to 50 feet, and completed as monitoring well MW11.**	
55									
60									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 50 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 35-50 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Gravel
Well Location N/S: 7.4' S of SW corner of building 1
Well Location E/W: 14.7' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B17 MW12

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Surface Gravel**	
5						**SM**		**Cuttings indicate silty SAND with gravel, brown.**	
10						**SM**		**Cuttings indicate silty SAND with gravel, brown.**	
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 50 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 35-50 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Gravel
Well Location N/S: 7.4' S of SW corner of building 1
Well Location E/W: 14.7' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B17 MW12

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15						SM		**Cuttings indicate silty SAND with gravel.**	
20						SM		**Cuttings indicate silty SAND with gravel.**	
25						SM		**Cuttings indicate silty SAND with gravel.**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 50 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 35-50 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Gravel
Well Location N/S: 7.4' S of SW corner of building 1
Well Location E/W: 14.7' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B17 MW12

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30									
35		50/5	20	3.8	B17-35	SM		**Damp, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
40		36 20 28	70	3.2	B17-40	SM		**Wet, dense, silty , medium to coarse SAND with gravel, brown, no hydrocarbon odor (15-80-5).**	
45									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 50 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 35-50 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/25/12
Surface Conditions: Gravel
Well Location N/S: 7.4' S of SW corner of building 1
Well Location E/W: 14.7' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/25/12

BORING LOG | B17 MW12

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
45		25 40 45	85	2.2	B17-45	SM		**Damp, silty, fine to medium SAND with gravel, brown, no hydrocarbon odor (15-80-5).**	
50		50/6	10	1.3	B17-50	SM		**Wet, silty, SAND with gravel, light brown, no hydrocarbon odor (15-80-5).**	
								Boring terminated at 50.5 feet below ground surface (bgs), screened from 35 to 50 feet, and completed as monitoring well MW12.	
55									
60									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 50 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB528

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 35-50 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/26/12
Surface Conditions: Gravel
Well Location N/S: 7.0' S of SW corner of building 1
Well Location E/W: 109.9' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/26/12

BORING LOG | B18 MW13

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Surface Gravel**	
								Vactor truck cleared boring to 7' bgs.	
5									
10						**SM**		**Cuttings indicate silty SAND with gravel.**	
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB531

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/26/12
Surface Conditions: Gravel
Well Location N/S: 7.0' S of SW corner of building 1
Well Location E/W: 109.9' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/26/12

BORING LOG | B18 MW13

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15						SM		**Cuttings indicate silty SAND with gravel, brown.**	
20						SM		**Cuttings indicate silty SAND with gravel, brown.**	
25						SM		**Cuttings indicate silty SAND with gravel, brown.**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB531

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/26/12
Surface Conditions: Gravel
Well Location N/S: 7.0' S of SW corner of building 1
Well Location E/W: 109.9' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/26/12

BORING LOG | B18 MW13

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30		50/6	20	1.6	B18-30	SM		**Damp, very dense, silty SAND with gravel, brown, no hydrocarbon odor (20-75-5).**	
35		28 26 35	60	0.6	B18-35	SM		**Wet, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).**	
40		32 50/6	60	0.8	B18-40	SM		**Wet, very dense, silty SAND, light brown, no hydrocarbon odor (20-80-0).**	
45									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB531

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/26/12
Surface Conditions: Gravel
Well Location N/S: 7.0' S of SW corner of building 1
Well Location E/W: 109.9' E of SW corner of building 1
Reviewed by: CER
Date Completed: 4/26/12

BORING LOG | B18 MW13

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
45		50/6	70	1.8	B18-45	SM		**Wet, very dense, silty SAND, light brown, no hydrocarbon odor (20-80-0).**	
						ML		**Damp, very dense, SILT, gray, no hydrocarbon odor (60-40-0).**	
								Boring terminated at 46 feet below ground surface (bgs), screened from 30 to 45 feet, and completed as monitoring well MW13.	
50									
55									
60									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB531

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/27/12
Surface Conditions: Asphalt
Well Location N/S: 41' N of SW corner of building 1
Well Location E/W: 15.1' W of SW corner of building 1
Reviewed by: CER
Date Completed: 4/27/12

BORING LOG | B19 MW14

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Asphalt.**	
								Boring cleared with vector truck to a depth of 7 feet bgs.	
5									
10									
						SM		**Cuttings indicate silty SAND with gravel, brown.**	
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB538

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/27/12
Surface Conditions: Asphalt
Well Location N/S: 41' N of SW corner of building 1
Well Location E/W: 15.1' W of SW corner of building 1
Reviewed by: CER
Date Completed: 4/27/12

BORING LOG | B19 MW14

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15									
20						SM		**Cuttings indicate silty SAND with gravel, brown.**	
25									
30						SM		**Cuttings indicate silty SAND with gravel, brown.**	

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB538

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/27/12
Surface Conditions: Asphalt
Well Location N/S: 41' N of SW corner of building 1
Well Location E/W: 15.1' W of SW corner of building 1
Reviewed by: CER
Date Completed: 4/27/12

BORING LOG | B19 MW14

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30									
35		29 32 40	70	1.3	B19-35	SM/SP		**Wet, very dense, medium to fine SAND with silt and gravel, brownish-gray, no hydrocarbon odor (15-65-20).**	
40		16 18 31	90	2.8	B19-40	SP		**Wet, dense, medium to fine SAND with gravel and some silt, brownish-gray, no hydrocarbon odor (5-85-10).**	
45									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB538

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/27/12
Surface Conditions: Asphalt
Well Location N/S: 41' N of SW corner of building 1
Well Location E/W: 15.1' W of SW corner of building 1
Reviewed by: CER
Date Completed: 4/27/12

BORING LOG | B19 MW14

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
45	X	45 50/5	30	1.1	B19-45	SP		**Moist, very dense, silty SAND with gravel, gray, no hydrocarbon odor (25-70-5).**	
								Boring terminated at 46 feet below ground surface (bgs), screened from 30 to 45 feet, and completed as monitoring well MW14.	
50									
55									
60									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: HSA Skid Mount
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 46 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB538

Well/Auger Diameter: 2"/6" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Landscape
Well Location N/S: 8.4' S of NW corner of S Patio
Well Location E/W: 15.0' E of NW corner of S Patio
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B20 MW15

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Asphalt**	
								Boring cleared with Vacter truck to 7 feet bgs.	
5									
10								**Cuttings indicate silty SAND with gravel, brown.**	
15									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 45 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB524

Well/Auger Diameter: 2" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Landscape
Well Location N/S: 8.4' S of NW corner of S Patio
Well Location E/W: 15.0' E of NW corner of S Patio
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B20 MW15

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
15								**Cuttings indicate silty SAND with gravel, brown.**	
20		50/3	0	--				**No recovery.**	
25		23 50/5	20	1.4	B20-25	**SP**		**Damp, very dense, medium to fine SAND with silt and gravel, light brown, no hydrocarbon odor(5-85-10).**	
30									

Drilling Co./Driller: Bortech/Robert
Drilling Equipment: LAR HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 45 feet bgs
Total Well Depth: 45 feet bgs
State Well ID No.: BCB524

Well/Auger Diameter: 2" inches
Well Screened Interval: 30-45 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Colorado silica sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

Project: Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 4/23/12
Surface Conditions: Landscape
Well Location N/S: 8.4' S of NW corner of S Patio
Well Location E/W: 15.0' E of NW corner of S Patio
Reviewed by: CER
Date Completed: 4/23/12

BORING LOG | B20 MW15

Site Address: 3400 Wallingford Ave N
Seattle, WA

Water Depth At Time of Drilling -- 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
30		15 31 50/6	50	2.4	B20-30	**SM**		**Wet, very dense, silty SAND, light brown, no hydrocarbon odor (20-80-0).**	
35		38 50/5		1.0	B20-35	**ML**		**Damp, very dense, SILT with fine sand, gray, no hydrocarbon odor (50-50-0).**	
								Boring terminated at 36 feet below ground surface (bgs), screened from 23 to 36 feet, and completed as monitoring well MW15.	
40									
45									

Drilling Co./Driller:	Bortech/Robert		**Well/Auger Diameter:**	2"	inches	**Notes/Comments:**
Drilling Equipment:	LAR HSA		**Well Screened Interval:**	30-45	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	Colorado silica sand		
Total Boring Depth:	45	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	45	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	BCB524		**Monument Type:**	Flush mount		

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	01/04/12
Surface Conditions:	Asphalt
Well Location N/S:	24' N of N wall of building 2
Well Location E/W:	15.8' E of W wall (retaining) at west property boundary
Reviewed by:	CCC
Date Completed:	01/04/12

BORING LOG | P01
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Asphalt**	
			100	1.7		SM		**Damp, dense, silty SAND. with gravel, light brown, no odor (25-65-10).**	
				1.4	P01-04	SM			
5				0.9				**Damp, dense, silty SAND. with gravel, light brown, no odor (25-65-10).**	
			NR			SM			
				1.4				**Damp, very dense, silty SAND. with gravel, light gray, no odor (25-65-10).**	
			NR	2.3	P01-09	SM			
10								**Boring terminated at 9' bgs due to refusal.**	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--/2"	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**		feet bgs	
Sampler Type:	Macro-core		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	9	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/04/12
Surface Conditions: Asphalt
Well Location N/S: 17.6' N of W wall of building 2
Well Location E/W: 81' E of W wall (retaining) at W property boundary
Reviewed by: CCC
Date Completed: 01/04/12

BORING LOG | P02
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Asphalt**	
				1.6	P02-01.5	SP		**Damp, dense, medium to fine SAND, with trace silt & wood waste at 1' bgs, light brown, no odor (5-95-0).**	
			100			SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
				1.6		SM			
					P02-04			**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
5			100	0.0		SM			
					P02-07				
				0.3		SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
			100						
				0.3					
10					P02-10				
								Boring terminated at 10' bgs due to refusal.	
15									

						Notes/Comments:
Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--/2"	inches	
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Macro-core		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	10	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	01/04/12
Surface Conditions:	Asphalt
Well Location N/S:	19.8' N of NE corner of building 2
Well Location E/W:	11.7' W of NE corner of building 2
Reviewed by:	CCC
Date Completed:	01/04/12

BORING LOG | P03
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A				SM		**Asphalt**	
			100	0.3				**Damp, dense, silty SAND, trace gravel, light brown, no odor (25-70-5).**	
				0.4	P03-04				
						SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
5			100	0.1					
				0.0		SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
			100		P03-08				
				0.0					
10			100			SM		**Damp, very dense, silty SAND, with gravel, light gray, no odor (25-65-10).**	
				0.3	P03-12				
								Boring terminated at 12' bgs due to refusal.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--/2"	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	Notes
Sampler Type:	Macro-core		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	12	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/04/12
Surface Conditions: Asphalt
Well Location N/S: 18.7' S of NE corner of building 2
Well Location E/W: 17.0' E of NE corner of building 2
Reviewed by: CCC
Date Completed: 01/04/12

BORING LOG | P04
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Asphalt**	
			100			SP		**Damp, loose, medium to fine SAND, brown, no odor (5-95-0).**	
				3.3	P04-02	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
				4.1		SM			
					P04-04			**Damp, dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
5			100	1.4		SM			
						SM			
				4.8		SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
			100		P04-08				
				4.6		SM			
10									
			100	3.5		SM			
				3.0	P04-12	SM			
								Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).	
				2.9		SM			
15					P04-15			**Boring terminated at 15' bgs due to refusal.**	

						Notes/Comments:
Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	--/2"	inches	
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Macro-core		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	15	feet bgs	**Surface Seal:**	Asphalt		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/04/12
Surface Conditions: Asphalt
Well Location N/S: 2.3' S of NE corner of building 2
Well Location E/W: 36.5' E of NE corner of building 2
Reviewed by: CCC
Date Completed: 01/04/12

BORING LOG | P05
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Asphalt**	
			100			SP		**Damp, loose, medium to fine SAND, brown, no odor (5-95-0).**	
				0.6	P05-02	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
				0.6		SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
					P05-04				
5			100	0.6		SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
						SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
				0.2		SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
					P05-08				
				0.2		SM		**Damp, very dense, silty SAND, with gravel, light gray, no odor (25-65-10).**	
10									
			100	1.4		SM		**Damp, very dense, silty SAND, with gravel, light gray, no odor (25-65-10).**	
				4.1		SM		**Damp, very dense, silty SAND, with gravel, light gray, no odor (25-65-10).**	
					P05-13				
								Boring terminated at 13' bgs due to refusal.	
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Direct Push
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 13 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 2 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Coldpatch
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/04/12
Surface Conditions: Asphalt
Well Location N/S: 26' S of NE corner of building 2
Well Location E/W: 46.2' E of NE corner of building 2
Reviewed by: CCC
Date Completed: 01/04/12

BORING LOG | P06
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Asphalt**	
			100			SP		**Damp, loose, medium to fine SAND, brown, no odor (5-95-0).**	
				1.3	P06-02	SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
				2.5		SM		**Damp, dense, silty SAND, with gravel, light brown, no odor (25-70-5).**	
					P06-04				
5			NR	1.3		SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
				1.0		SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
				3.8		SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
			NR		P06-08				
				1.9		SM		**Damp, very dense, silty SAND, with gravel, light gray, no odor (25-65-10).**	
10					P06-10				
								Boring terminated at 10' bgs due to refusal.	
15									

Drilling Co./Driller:	ESN/Marty		**Well/Auger Diameter:**	2	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Macro-core		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	10	feet bgs	**Surface Seal:**	Coldpatch		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/05/12
Surface Conditions: Concrete
Well Location N/S: 1.8' S of N wall in building 2
Well Location E/W: 29' W of E wall in building 2
Reviewed by: CCC
Date Completed: 01/05/12

BORING LOG | P07 --

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**4" of Concrete**	
			70	65.5	P07-02	**SM**		**Damp, dense, silty SAND, with gravel, brown, slight hydrocarbon odor (25-70-5).**	
								Boring terminated at 2' bgs due to refusal.	
5									
10									
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Roto Hammer Probe
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 2 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 1 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/05/12
Surface Conditions: Concrete
Well Location N/S: 25.9' S of N wall in building 2
Well Location E/W: 30' W of E wall in building 2
Reviewed by: CCC
Date Completed: 01/05/12

BORING LOG | P08
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A	100	0.0	P08-02	SM		**4" of Concrete** **Damp, very dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
								Boring terminated at 2' bgs due to refusal.	
5									
10									
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Roto Hammer Probe
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 2 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 1 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/05/12
Surface Conditions: Wood floor
Well Location N/S: 40.5' S of N wall in building 3
Well Location E/W: 22' W of E wall in building 3
Reviewed by:
Date Completed: 01/05/12

BORING LOG | P09 --

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A	50	0.0	P09-02	SM		**Wood floor.** **2" void between wood floor and ground surface.** **Damp, dense, silty SAND, with gravel, reddish brown, no odor (25-65-10).**	
								Boring terminated at 2' bgs due to refusal.	
5									
10									
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Roto Hammer Probe
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 2 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 1 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal:
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/05/12
Surface Conditions: Grass and thin top soil
Well Location N/S: 15' S of N wall courtyard outside building 4
Well Location E/W: 26' E of west wall outside building 4
Reviewed by: CCC
Date Completed: 01/05/12

BORING LOG | P10
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Grass and thin topsoil**	
			80	0.0	P10-02	SM		**Damp, dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
			80	0.0	P10-04	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
5								**Boring terminated at 4' bgs due to refusal.**	
10									
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Roto Hammer Probe
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 4 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 1 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal:
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/05/12
Surface Conditions: Grass
Well Location N/S: 7.5' N of E side of House
Well Location E/W: 34' E of E side of House
Reviewed by: CCC
Date Completed: 01/05/12

BORING LOG | P11
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Grass**	
			60	0.0	P11-02	SM		**Damp, dense, silty SAND, with gravel, brown, no odor (25-70-5).**	
			50	0.0	P11-04	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
5								**Boring terminated at 4' bgs due to refusal.**	
10									
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Roto Hammer Probe
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 4 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 1 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal:
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/05/12
Surface Conditions: Grass and thin top soil
Well Location N/S: 11' S of NE side of House
Well Location E/W: 15' E of E side of House
Reviewed by: CCC
Date Completed: 01/05/12

BORING LOG | P12
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Grass and thin topsoil.**	
			60			**SM**		**Damp, dense, silty SAND, with gravel, reddish brown, no odor (25-70-5).**	
					P12-02				
					P12-03	**SM**		**Damp, very dense, silty SAND, with gravel, reddish brown, no odor (25-65-10).**	
								Boring terminated at 3' bgs due to refusal.	
5									
10									
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Roto Hammer Probe
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 3 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 1 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal:
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 01/05/12
Surface Conditions: Grass
Well Location N/S: 10' N of NE corner of house
Well Location E/W: 1' E of NE corner of house
Reviewed by: CCC
Date Completed: 01/05/12

BORING LOG | P13
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Grass and thin topsoil.**	
			60	0.7	P13-02	SM		**Damp, dense, silty SAND, with gravel, reddish brown, no odor (25-70-5).**	
			10	0.0	P13-04	SM		**Damp, very dense, silty SAND, with gravel, light brown, no odor (25-65-10).**	
5								**Boring terminated at 4' bgs due to refusal.**	
10									
15									

Drilling Co./Driller: ESN/Marty
Drilling Equipment: Roto Hammer Probe
Sampler Type: Macro-core
Hammer Type/Weight: -- lbs
Total Boring Depth: 4 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: 1 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal:
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	04/26/12
Surface Conditions:	Grass
Well Location N/S:	37' S of N wall of building 2
Well Location E/W:	86.5' W of E wall of building 2
Reviewed by:	CER
Date Completed:	04/26/12

BORING LOG | P14
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Concrete, 4-inch-thick.**	
			90	5.2		SM		**Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10).**	
			90	7.8	P14-04	SM		**Damp, very dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).**	
				7.8					
5			90	7.6	P14-06	SM		**Damp, very dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-75-5).**	
								Boring terminated at 6' bgs due to refusal.	
10									
15									

Drilling Co./Driller:	ESN		**Well/Auger Diameter:**	-/2	inches	**Notes/Comments:**
Drilling Equipment:	LAR Probe		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Split Spoon		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	6	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 04/26/12
Surface Conditions: Grass
Well Location N/S: 68.6' S of N building 2 wall
Well Location E/W: 86.5' W of E building 2 wall
Reviewed by: CER
Date Completed: 04/26/12

BORING LOG | P15
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Concrete, 4-inch-thick.**	
			90	5.0	P15-02	SM		**Damp, dense, silty SAND with gravel, light brown, no hydrocarbon odor (20-70-10).**	
			0	--		SM		**No recovery, move boring 2-inches.**	
5			0	--				**No recovery, move boring.**	
								Boring terminated at 6' bgs.	
10									
15									

Drilling Co./Driller: ESN
Drilling Equipment: LAR Probe
Sampler Type: Split spoon
Hammer Type/Weight: -- lbs
Total Boring Depth: 6 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: -/2 inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 12/20/12
Surface Conditions: Concrete
Well Location N/S: 16' S of P14
Well Location E/W: 21.4' W of P14
Reviewed by: CER
Date Completed: 12/20/12

BORING LOG | P101
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A	100	0.2	P101-02	SM		**Concrete 4" thick** **Damp, very dense, silty fine SAND with gravel, light brown, no odor (30-50-20).**	
								Boring terminated at 2' bgs due to refusal.	
5									
10									
15									

Drilling Co./Driller: ESN/Chris
Drilling Equipment: Direct Push LAR
Sampler Type: 2
Hammer Type/Weight: -- lbs
Total Boring Depth: 2 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/2" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	12/20/12
Surface Conditions:	Concrete
Well Location N/S:	16' S of P14
Well Location E/W:	16.2' E of P14
Reviewed by:	CER
Date Completed:	12/20/12

BORING LOG | P102
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- feet bgs

Water Depth After Completion 5 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0		N/A						**Concrete 4" thick**	
			50	0.3		SM		**Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-50-20).**	
					P102-02				
								Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-50-20).	
			100	0.2		SM			
					P102-04				
								Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-50-20).	
5			50	1.1	P102-05	SM			▼
								Boring terminated at 5' bgs due to refusal.	
10									
15									

Drilling Co./Driller:	ESN/Chris		**Well/Auger Diameter:**	--/2"	inches
Drilling Equipment:	Direct Push LAR		**Well Screened Interval:**	--	feet bgs
Sampler Type:	2		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	5	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	12/20/12
Surface Conditions:	Concrete
Well Location N/S:	5' N of P1
Well Location E/W:	14.4' E of P14
Reviewed by:	CER
Date Completed:	12/20/12

BORING LOG | P103
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Concrete 4" thick**	
			100	0.2	P103-02	SM		**Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-50-20).**	
			100	1.2	P103-04	SP		**Dry, very dense, medium to fine SAND with silt and gravel, light brown, no odor (10-80-10).**	
5			100		P103-06	SM		**Dry, very dense, silty fine SAND with gravel, brown, no odor (20-70-10).**	
								Boring terminated at 6' bgs due to refusal.	
10									
15									

Drilling Co./Driller:	ESN/Chris		**Well/Auger Diameter:**	--/2"	inches
Drilling Equipment:	Direct Push LAR		**Well Screened Interval:**	--	feet bgs
Sampler Type:	2		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	6'	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 12/20/12
Surface Conditions: Concrete
Well Location N/S: 24.4' N of P14
Well Location E/W: 1' E of P14
Reviewed by: CER
Date Completed: 12/20/12

BORING LOG | P104 --

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Concrete 4" thick**	
			100	0.0	P104-02	SM		**Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-50-20).**	
			100	0.0	P104-04	SM		**Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-60-10).**	
5								**Boring terminated at 4' bgs due to refusal.**	
10									
15									

Drilling Co./Driller: ESN/Chris
Drilling Equipment: Direct Push LAR
Sampler Type: 2
Hammer Type/Weight: -- lbs
Total Boring Depth: 4' feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/2" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	12/20/12
Surface Conditions:	Concrete
Well Location N/S:	9.3' N of P14
Well Location E/W:	22' W of P14
Reviewed by:	CER
Date Completed:	12/20/12

BORING LOG | P105
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A						**Concrete 4" thick**	
			100	0.0	P105-02	SM		**Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-50-20).**	
			90	0.3	P105-04	SM		**Dry, very dense, silty fine SAND with gravel, light brown, no odor (30-60-10).**	
5			100	0.3	P105-06	SP		**Dry, very dense, medium to fine SAND with silt and gravel, brown, no odor (10-80-10).**	
								Boring terminated at 6' bgs due to refusal.	
10									
15									

Drilling Co./Driller:	ESN/Chris		**Well/Auger Diameter:**	--/2"	inches	**Notes/Comments:**
Drilling Equipment:	Direct Push LAR		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	2		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	6'	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 12/20/12
Surface Conditions: Concrete
Well Location N/S: 8' N of the SE corner of the building
Well Location E/W: 19.5' W of the SE corner of the building
Reviewed by: CER
Date Completed: 12/20/12

BORING LOG | P106
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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A	100	0.3	P106-01	SM		**Concrete 4" thick** **Dry, very dense, silty SAND with gravel, brown, no odor (30-65-05).**	
								Boring terminated at 1' bgs due to refusal.	
5									
10									
15									

Drilling Co./Driller: ESN/Chris
Drilling Equipment: Direct Push Hand Probe
Sampler Type: 2
Hammer Type/Weight: -- lbs
Total Boring Depth: 1' feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/1" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 12/20/12
Surface Conditions: Concrete
Well Location N/S: 18' N of the SE corner of the building
Well Location E/W: 6' W of the SE corner of the building
Reviewed by: CER
Date Completed: 12/20/12

BORING LOG | P107 --

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling -- 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
0		N/A	100	0.3	P107-01	SM		**Concrete 4" thick** **Dry, very dense, silty SAND with gravel, brown, no odor (30-65-05).**	
								Boring terminated at 1' bgs due to refusal.	
5									
10									
15									

Drilling Co./Driller: ESN/Chris
Drilling Equipment: Direct Push Hand Probe
Sampler Type: Split Spoon
Hammer Type/Weight: -- lbs
Total Boring Depth: 1' feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/1" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	12/21/12
Surface Conditions:	Concrete
Well Location N/S:	27.8' W of NE corner of building on Parcel 3
Well Location E/W:	27.8' W of NE corner of building on Parcel 3
Reviewed by:	CER
Date Completed:	12/21/12

BORING LOG | B101
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 31 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
0								**Concrete 6" thick**	
		50/6"	100	0.3	B101-03	SM		**Dry, very dense, silty SAND with gravel, brown, no odor (45-40-15).**	
5									
		50/6"	100	0.3	B101-07	SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-50-20).**	
10									
		50/6"	100	0.0	B101-11	SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-55-15).**	
15					B101-15				

Drilling Co./Driller:	Cascade/Jermiah		**Well/Auger Diameter:**	--/8.25"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split Spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	35.3'	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the south.

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	12/21/12
Surface Conditions:	Concrete
Well Location N/S:	27.8' W of NE corner of building on Parcel 3
Well Location E/W:	27.8' W of NE corner of building on Parcel 3
Reviewed by:	CER
Date Completed:	12/21/12

BORING LOG | B101
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 31 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
15		50/6"	100	0.3		SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-55-15).**	
20		50/6"	100	0.0	B101-19	SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-55-15).**	
25		50/6"	100	0.7	B101-23	SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-55-15).**	
30		50/6"	100	0.0	B101-28	SM		**Dry, very dense, silty SAND with gravel, grey, no odor (30-55-15).**	

Drilling Co./Driller:	Cascade/Jermiah		**Well/Auger Diameter:**	--/8.25"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split Spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	35.3'	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the south.

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 12/21/12
Surface Conditions: Concrete
Well Location N/S: 27.8' W of NE corner of building on Parcel 3
Well Location E/W: 27.8' W of NE corner of building on Parcel 3
Reviewed by: CER
Date Completed: 12/21/12

BORING LOG | B101
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 31 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
30									
		50/6"	100	0.0	B101-31	SM		**Wet, very dense, silty SAND with gravel, light brown, no odor (30-55-15).**	
		50/6"	100	0.0	B101-34	SM		**Wet, very dense, silty SAND with gravel, light brown, no odor (40-50-10).**	
35									
40									
45									

Drilling Co./Driller: Cascade/Jermiah
Drilling Equipment: HSA
Sampler Type: Split Spoon
Hammer Type/Weight: -- lbs
Total Boring Depth: 35.3' feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8.25" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:
Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the south.

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	12/21/12
Surface Conditions:	Asphalt
Well Location N/S:	61' N of NE corner of building on Parcel 3
Well Location E/W:	52' W of NE corner of building on Parcel 3
Reviewed by:	CER
Date Completed:	12/21/12

BORING LOG | B102
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 35 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
0								**Asphalt 3" thick**	
5		34* 50/5"	50	0.0	B102-05	SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-60-10).**	
10		50/5"	100	0.3	B102-10	SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-55-15).**	
15									

Drilling Co./Driller:	Cascade/Jermiah		**Well/Auger Diameter:**	--/8.25"	inches	**Notes/Comments:**
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Split Spoon		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	36	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	12/21/12
Surface Conditions:	Asphalt
Well Location N/S:	61' N of NE corner of building on Parcel 3
Well Location E/W:	52' W of NE corner of building on Parcel 3
Reviewed by:	CER
Date Completed:	12/21/12

BORING LOG | B102

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Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 35 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
15		50/6"	100	0.0	B102-15	SM		**Dry, very dense, silty SAND with gravel, light brown, no odor (30-55-15).**	
20		50/3"	80	0.0	B102-20	SP		**Dry, very dense, medium to fine SAND with silt and gravel, light brown, no odor (10-75-15).**	
25		50/4"	60	0.0	B102-25	SM		**Moist, very dense, silty SAND with gravel, light brown, no odor (40-50-10).**	
30									

Drilling Co./Driller:	Cascade/Jermiah		**Well/Auger Diameter:**	--/8.25"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split Spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	36	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 12/21/12
Surface Conditions: Asphalt
Well Location N/S: 61' N of NE corner of building on Parcel 3
Well Location E/W: 52' W of NE corner of building on Parcel 3
Reviewed by: CER
Date Completed: 12/21/12

BORING LOG | B102
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 35 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
30		50/6"	30	0.0	B102-30	SM		**Damp, very dense, silty SAND with gravel, light brown, no odor (30-60-10).**	
35		30* 50/6"	60	0.0	B102-35	SM		**Wet, very dense, silty SAND with gravel, grey, no odor (30-65-05).**	▽
40									
45									

Drilling Co./Driller: Cascade/Jermiah
Drilling Equipment: HSA
Sampler Type: Split Spoon
Hammer Type/Weight: -- lbs
Total Boring Depth: 36 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8.25" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/2/13
Surface Conditions:	Concrete
Well Location N/S:	4' N of the NW corner of the compressor shed on Parcel 3
Well Location E/W:	22' W of the NW corner of the compressor shed on Parcel 3
Reviewed by:	CER
Date Completed:	1/2/13

BORING LOG | B103
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 33 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
0								**Concrete 5" thick**	
		50/3"	20	0.0	B103-02	SM		**Damp, very dense, silty SAND with gravel, brown, no odor (30-50-20).**	
5									
		50/6"	100	0.0	B103-07	SM		**Damp, very dense, silty SAND with gravel, light brown, no odor (40-50-10).**	
10									
		50/6"	50	0.0	B103-11	SM		**Damp, very dense, silty SAND with gravel, light brown, no odor (35-55-10).**	
15									

Drilling Co./Driller:	Cascade/Jermiah		**Well/Auger Diameter:**	--/8.25"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split Spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	35.3'	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the southwest.

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/2/13
Surface Conditions: Concrete
Well Location N/S: 4' N of the NW corner of the compressor shed on Parcel 3
Well Location E/W: 22' W of the NW corner of the compressor shed on Parcel 3
Reviewed by: CER
Date Completed: 1/2/13

BORING LOG | B103
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 33 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
15		50/6"	100	0.0	B103-16	SM		**Damp, very dense, silty SAND with gravel, brown, no odor (30-50-20).**	
20		50/6"	50	0.0	B103-20	SM		**Damp, very dense, silty SAND with gravel, brown, no odor (30-50-20).**	
25		50/6"	10	0.0	B103-24	SP		**Damp, very dense, medium SAND with silt and gravel, brown, no odor (10-70-20).**	
30		50/6"	50	0.0	B103-29	SP		**Moist, very dense, medium to fine SAND with silt and gravel, light brown, no odor (10-80-10).**	

Drilling Co./Driller: Cascade/Jermiah
Drilling Equipment: HSA
Sampler Type: Split Spoon
Hammer Type/Weight: -- lbs
Total Boring Depth: 35.3' feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8.25" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:
Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the southwest.

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/2/13
Surface Conditions: Concrete
Well Location N/S: 4' N of the NW corner of the compressor shed on Parcel 3
Well Location E/W: 22' W of the NW corner of the compressor shed on Parcel 3
Reviewed by: CER
Date Completed: 1/2/13

BORING LOG | B103
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 33 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
30									
		50/6"	100	0.0	B103-33	SP		**Wet, very dense, medium to fine SAND with silt and gravel, light brown, no odor (10-85-05).**	
35		50/6"	50	0.0	B103-35	SP		**Wet, very dense, silty medium to fine SAND with silt and gravel, light brown, no odor (10-75-15).**	
40									
45									

Drilling Co./Driller: Cascade/Jermiah
Drilling Equipment: HSA
Sampler Type: Split Spoon
Hammer Type/Weight: -- lbs
Total Boring Depth: 35.3' feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8.25" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:
Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the southwest.

SoundEarth Strategies

Project: AMLI Avtech
Project Number: 0789-004
Logged by: RAH
Date Started: 1/2/13
Surface Conditions: Asphalt
Well Location N/S: 3.3' S of MW09
Well Location E/W: 1' W of MW09
Reviewed by: CER
Date Completed: 1/2/13

BORING LOG | B104
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 26 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
0								**Asphalt 6" thick**	
5		50/6"	50	0.9	B104-04	SM		**Damp, very dense, silty SAND with gravel, brown, no odor (30-55-15).**	
10		50/6"	50	0.3	B104-09	SM		**Damp, very dense, silty SAND with gravel, light brown, no odor (30-50-20).**	
15		50/2"	5	NR				**No Recovery, Rock in sampler.**	

Drilling Co./Driller: Cascade/Jermiah
Drilling Equipment: HSA
Sampler Type: Split Spoon
Hammer Type/Weight: -- lbs
Total Boring Depth: 35' feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: --/8.25" inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:
Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the west.

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/2/13
Surface Conditions:	Asphalt
Well Location N/S:	3.3' S of MW09
Well Location E/W:	1' W of MW09
Reviewed by:	CER
Date Completed:	1/2/13

BORING LOG | B104
--

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 26 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
15									
		50/6"	50	0.0	B104-17	SM		**Damp, very dense, silty SAND with gravel, grey, no odor (25-55-20).**	
20									
		50/6"	75	0.3	B104-22	SP		**Damp, very dense, fine to medium SAND with silt and gravel, light brown, no odor (10-80-10).**	
25									
		50/6"	30	0.3	B104-26	SP		**Wet, very dense, medium to fine SAND with silt and gravel, brown, no odor (10-70-20).**	▽
30									

Drilling Co./Driller:	Cascade/Jermiah		
Drilling Equipment:	HSA		
Sampler Type:	Split Spoon		
Hammer Type/Weight:	--	lbs	
Total Boring Depth:	35'	feet bgs	
Total Well Depth:	--	feet bgs	
State Well ID No.:	--		

Well/Auger Diameter:	--/8.25"	inches
Well Screened Interval:	--	feet bgs
Screen Slot Size:	--	inches
Filter Pack Used:	--	
Surface Seal:	Concrete	
Annular Seal:	Bentonite	
Monument Type:	--	

Notes/Comments:

Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the west.

SoundEarth Strategies

Project:	AMLI Avtech
Project Number:	0789-004
Logged by:	RAH
Date Started:	1/2/13
Surface Conditions:	Asphalt
Well Location N/S:	3.3' S of MW09
Well Location E/W:	1' W of MW09
Reviewed by:	CER
Date Completed:	1/2/13

BORING LOG | B104 --

Site Address: 3400 Wallingford Ave N
Seattle, WA 98103

Water Depth At Time of Drilling 26 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
30		50/6"	75	0.3	B104-30	SM		**Damp, very dense, silty SAND with gravel, light brown, no odor (30-60-10).**	
35		50/6"	100	0.0	B104-35	SP		**Wet, very dense, medium to fine SAND with silt and gravel, light brown, no odor (10-80-10).**	
40									
45									

Drilling Co./Driller:	Cascade/Jermiah		**Well/Auger Diameter:**	--/8.25"	inches
Drilling Equipment:	HSA		**Well Screened Interval:**	--	feet bgs
Sampler Type:	Split Spoon		**Screen Slot Size:**	--	inches
Hammer Type/Weight:	--	lbs	**Filter Pack Used:**	--	
Total Boring Depth:	35'	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite	
State Well ID No.:	--		**Monument Type:**	--	

Notes/Comments:

Angle boring, 30 degrees off vertical. Log reported in vertical feet. Boring angled toward the west.

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Concrete
Well Location N/S: 54.' South of NE corner of Building
Well Location E/W: 57.2' West of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB201

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**2 concrete slabs cored prior to drilling, approximately 4" and 6" thick**	
5		18 20 24	60	0.0	SB201-05	**SM-GM**		**Moist, dense, gravelly fine to coarse SAND with silt, brown, no odor (10, 50, 40).**	
10		14 18 20	75	0.0	SB201-10	**SM-ML**		**Moist, dense, well consolidated, silty fine SAND with trace gravel, gray-brown, no odor (45, 55, 0).**	
15									

Drilling Co./Driller: Geologic/Wade
Drilling Equipment: LAR Auger
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: -- inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Concrete
Well Location N/S: 54.' South of NE corner of Building
Well Location E/W: 57.2' West of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB201

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
15		50/6	90	0.0	SB201-15	SM		**Moist, very dense, silty gravelly fine SAND, gray-brown, no odor (30, 50, 0).**	
20		50/6	100	0.0	SB201-20	SM		**Moist, very dense, silty fine SAND with gravel, gray-brown, no odor (20, 70, 10).**	
								End of boring at 20.5 feet bgs. Backfill with bentonite.	
25									
30									

Drilling Co./Driller: Geologic/Wade
Drilling Equipment: LAR Auger
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: -- inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-00
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Concrete
Well Location N/S: 13.3' South of NE corner of Building
Well Location E/W: 53' West of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB202

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Two concrete slabs cored prior to drilling.**	
5		9 11 20	100	0.0	SB202-05	**SP-SM**		**Moist, dense, fine SAND with silt, gray, no odor (10, 90, 0).**	
		50/6	100	0,0	SB202-08	**GM**		**Difficult rocky drilling at approximately 7 feet bgs. Driller added water.** **Moist, very dense, sandy GRAVEL with silt, gray, no odor (15, 40, 45).** **Refusal at ~7.5 to 8 feet bgs. Collected a sample into gravel at point of refusal.** **End of boring at 8 feet bgs. Backfill with bentonite.**	
10									
15									

Drilling Co./Driller:	Geologic/Wade		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Auger		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	8	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Concrete
Well Location N/S: 13.3' South of NE corner of Building
Well Location E/W: 25.8' West of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB203

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Two concrete slabs, approximately 6" and 4" thick, cored prior to drilling.**	
5		9 6 8	100	0.0	SB203-05	**SM-ML**		**Moist, medium dense, silty fine SAND to sandy SILT with trace gravel, sand-rich layer at 6 to 6.25 feet bgs, brown-gray, some oxidation, no odor (45, 50, 5).**	
10		18 19 20	80	0.0	SB203-10	**SM**		**Moist, dense, silty fine SAND with gravel, gray, no odor (30, 60, 10).**	
15									

Drilling Co./Driller:	Geologic/Wade		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Auger		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	21.5	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Concrete
Well Location N/S: 13.3' South of NE corner of Building
Well Location E/W: 25.8' West of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB203

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
15		18 38 50/2	90	0.0	SB203-15	**SM-ML**		**Moist, very dense, silty fine SAND to sandy SILT with gravel, gray, no odor (40, 50, 0).**	
20		26 38 50/5	80	0.0	SB203-20	**SM**		**Moist, very dense, silty fine to medium SAND with gravel, coarsening downwards, gray, no odor (30, 65, 5).**	
								End of boring at 21.5 feet bgs. Backfill with bentonite.	
25									
30									

Drilling Co./Driller:	Geologic/Wade		**Well/Auger Diameter:**	--	inches	**Notes/Comments:**
Drilling Equipment:	LAR Auger		**Well Screened Interval:**	--	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	--	inches	
Hammer Type/Weight:	140	lbs	**Filter Pack Used:**	--		
Total Boring Depth:	21.5	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	--	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:	--		**Monument Type:**	--		

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Concrete
Well Location N/S: 36.5' South of NE corner of Building
Well Location E/W: 31' West of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB204

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Two concrete slabs, approximately 6" and 4" thick, cored prior to drilling.**	
5		10 11 12	80	0.0	SB204-05	**SP**		**Moist, medium dense, fine to medium SAND with trace gravel and silt, brown, no odor (5, 90, 5). 1-2 cm thick lense of gray silt with oxidation at 6.4' bgs.**	
								Rocky drilling.	
10		15 18 24	80	1.4	SB204-10	**SM-ML**		**Moist, dense, silty gravelly fine SAND, gray-brown, no odor (40, 45, 15)**	
15									

Drilling Co./Driller: Geologic/Wade
Drilling Equipment: LAR Auger
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: feet bgs
State Well ID No.: --

Well/Auger Diameter: -- inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:
Notes

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Concrete
Well Location N/S: 36.5' South of NE corner of Building
Well Location E/W: 31' West of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB204

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
15		50/6	75	4.4	SB204-15	SM-ML		**Moist, very dense, silty fine SAND to sandy SILT with gravel, gray, no odor (45, 50, 5).**	
								Gravelly drilling.	
20		50/4	80	0.0	SB204-20	SM		**Moist, very dense, silty fine SAND with gravel, gray-brown, no odor (35, 44, 10).**	
								End of boring at 20.5 feet bgs. Backfilled with bentonite.	
25									
30									

Drilling Co./Driller: Geologic/Wade
Drilling Equipment: LAR Auger
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: feet bgs
State Well ID No.: --

Well/Auger Diameter: -- inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:
Notes

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Asphalt
Well Location N/S: 36.5' South of NE corner of Building
Well Location E/W: 30.8' East of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB205

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
0								**Asphalt**	
5		10 16 20	90	0.0	SB205-05	**SM**		**Moist, dense, silty fine SAND with trace gravel, gray, no odor (35, 60, 5). Coarsening downward.**	
10		50/6	80	0.0	SB205-10	**SM**		**Moist, very dense, silty fine SAND with trace gravel, gray, no odor (30, 65, 5).**	
15									

Drilling Co./Driller: Geologic/Wade
Drilling Equipment: LAR Auger
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: -- inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

SoundEarth Strategies

Project: AMLI-Avtech
Project Number: 0789-004
Logged by: EBF
Date Started: 7/9/13
Surface Conditions: Asphalt
Well Location N/S: 36.5' South of NE corner of Building
Well Location E/W: 30.8' East of NE corner of Building
Reviewed by: CER
Date Completed: 7/9/13

BORING LOG | SB205

Site Address: 3400 Wallingford Ave
Seattle, WA

Water Depth At Time of Drilling -- 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
15		16 44 50/6	90	0.0	SB205-15	SM		**Moist, very dense, silty fine SAND with trace gravel, gray, no odor (15, 80, 5).**	
20		50/4	50	0.0	SB205-20	SM		**Moist, very dense, sily fine SAND with trace gravel, gray, no odor (25, 70, 5).**	
								End of boring at 20.5 feet bgs. Backfilled with bentonite.	
25									
30									

Drilling Co./Driller: Geologic/Wade
Drilling Equipment: LAR Auger
Sampler Type: Split-spoon
Hammer Type/Weight: 140 lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: -- feet bgs
State Well ID No.: --

Well/Auger Diameter: -- inches
Well Screened Interval: -- feet bgs
Screen Slot Size: -- inches
Filter Pack Used: --
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: --

Notes/Comments:

APPENDIX C
LABORATORY ANALYTICAL REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 7, 2013

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 April 26, 2013 from the SOU_0789-004-05_20130426, F&BI 304503 project. Per your request, the sample ID MW14-20130424 was amended to MW04-20130424.

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
SOU0507R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 7, 2013

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 26, 2013 from the SOU_0789-004-05_20130426, F&BI 304503 project. There are 17 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
SOU0507R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 26, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004-05_20130426, F&BI 304503 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
304503 -01	MW03-20130424
304503 -02	MW05-20130424
304503 -03	MW06-20130426
304503 -04	MW07-20130425
304503 -05	MW09-20130424
304503 -06	MW11-20130425
304503 -07	MW12-20130425
304503 -08	MW13-20130424
304503 -09	MW04-20130424
304503 -10	MW15-20130424

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20130424	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/26/13	Lab ID:	304503-01
Date Analyzed:	04/26/13	Data File:	042626.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

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

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	1.8
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	76
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW05-20130424	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/26/13	Lab ID:	304503-02
Date Analyzed:	04/26/13	Data File:	042627.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

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

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW06-20130426	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/26/13	Lab ID:	304503-03
Date Analyzed:	04/26/13	Data File:	042628.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	97	60	133

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	4.5
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW07-20130425	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/26/13	Lab ID:	304503-04
Date Analyzed:	04/26/13	Data File:	042629.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	101	63	127
4-Bromofluorobenzene	98	60	133

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	6.1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW09-20130424	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	304503-05
Date Analyzed:	04/29/13	Data File:	042908.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	104	63	127
4-Bromofluorobenzene	99	60	133

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	24
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-20130425	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	304503-06
Date Analyzed:	04/29/13	Data File:	042909.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

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

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	39
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW12-20130425	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	304503-07
Date Analyzed:	04/29/13	Data File:	042910.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	102	63	127
4-Bromofluorobenzene	98	60	133

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	5.7
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW13-20130424	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	304503-08
Date Analyzed:	04/29/13	Data File:	042911.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	97	60	133

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	2.5
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20130424	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	304503-09
Date Analyzed:	04/29/13	Data File:	042912.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	97	60	133

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	280 ve
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20130424	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	304503-09 1/10
Date Analyzed:	04/29/13	Data File:	042915.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<2
Chloroethane	<10
1,1-Dichloroethene	<10
Methylene chloride	<50
trans-1,2-Dichloroethene	<10
1,1-Dichloroethane	<10
cis-1,2-Dichloroethene	<10
1,2-Dichloroethane (EDC)	<10
1,1,1-Trichloroethane	<10
Trichloroethene	290
Tetrachloroethene	<10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW15-20130424	Client:	SoundEarth Strategies
Date Received:	04/26/13	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	304503-10
Date Analyzed:	04/29/13	Data File:	042913.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	102	63	127
4-Bromofluorobenzene	98	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/26/13	Lab ID:	03-0735 mb2
Date Analyzed:	04/26/13	Data File:	042617.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	97	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004-05_20130426, F&BI 304503
Date Extracted:	04/29/13	Lab ID:	03-0763 mb
Date Analyzed:	04/29/13	Data File:	042907.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	103	63	127
4-Bromofluorobenzene	98	60	133

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

Date of Report: 05/07/13
Date Received: 04/26/13
Project: SOU_0789-004-05_20130426, F&BI 304503

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

Laboratory Code: 304488-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	103	36-166
Chloroethane	ug/L (ppb)	50	<1	117	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	108	60-136
Methylene chloride	ug/L (ppb)	50	<5	101	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	105	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	105	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	107	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	110	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	113	60-146
Trichloroethene	ug/L (ppb)	50	<1	105	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	101	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	104	107	50-154	3
Chloroethane	ug/L (ppb)	50	117	121	58-146	3
1,1-Dichloroethene	ug/L (ppb)	50	110	112	67-136	2
Methylene chloride	ug/L (ppb)	50	97	100	39-148	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	105	107	68-128	2
1,1-Dichloroethane	ug/L (ppb)	50	104	106	79-121	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	106	80-123	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	109	109	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	113	118	83-130	4
Trichloroethene	ug/L (ppb)	50	106	106	80-120	0
Tetrachloroethene	ug/L (ppb)	50	101	101	76-121	0

Date of Report: 05/07/13
Date Received: 04/26/13
Project: SOU_0789-004-05_20130426, F&BI 304503

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

Laboratory Code: 304483-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	111	36-166
Chloroethane	ug/L (ppb)	50	<1	124	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	117	60-136
Methylene chloride	ug/L (ppb)	50	<5	108	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	111	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	113	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	112	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	116	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	121	60-146
Trichloroethene	ug/L (ppb)	50	<1	110	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	106	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	106	105	50-154	1
Chloroethane	ug/L (ppb)	50	116	114	58-146	2
1,1-Dichloroethene	ug/L (ppb)	50	107	107	67-136	0
Methylene chloride	ug/L (ppb)	50	99	100	39-148	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	103	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	104	104	79-121	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	105	80-123	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	109	111	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	116	113	83-130	3
Trichloroethene	ug/L (ppb)	50	105	104	80-120	1
Tetrachloroethene	ug/L (ppb)	50	98	100	76-121	2

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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January 23, 2012

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 12, 2012 from the SOU_0789-004-02_20120112, F&BI 201148 project. There are 9 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
SOU0123R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 12, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004-02_20120112, F&BI 201148 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201148-01	B04-03
201148-02	B04-05
201148-03	B04-10
201148-04	B04-13
201148-05	B04-15
201148-06	B04-20
201148-07	B04-25
201148-08	B05-08
201148-09	B05-10
201148-10	B05-13
201148-11	B05-15
201148-12	B05-20
201148-13	B05-25
201148-14	B05-30
201148-15	B05-35
201148-16	B06-08
201148-17	B06-10
201148-18	B06-13
201148-19	B06-15
201148-20	B06-20
201148-21	B06-25
201148-22	B06-30
201148-23	B06-35
201148-24	B06-40

All quality control requirements were acceptable.

Date of Report: 01/23/12
Date Received: 01/12/12
Project: SOU_0789-004-02_20120112, F&BI 201148
Date Extracted: 01/13/12
Date Analyzed: 01/13/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B04-05 201148-02	<50	<250	88
Method Blank 02-079 MB	<50	<250	88

Analysis For Total Metals By EPA Method 200.8

Client ID:	B04-05	Client:	SoundEarth Strategies
Date Received:	01/12/12	Project:	SOU_0789-004-02, F&BI 201148
Date Extracted:	01/16/12	Lab ID:	201148-02
Date Analyzed:	01/16/12	Data File:	201148-02.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	83	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	8.66
Arsenic	1.25
Selenium	<1
Silver	<1
Cadmium	<1
Barium	42.3
Lead	2.02

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004-02, F&BI 201148
Date Extracted:	01/16/12	Lab ID:	I2-41 mb
Date Analyzed:	01/17/12	Data File:	I2-41 mb.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	93	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 01/23/12
Date Received: 01/12/12
Project: SOU_0789-004-02_20120112, F&BI 201148
Date Extracted: 01/16/12
Date Analyzed: 01/18/12

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
B04-05 201148-02	<0.1
Method Blank	<0.1

Date of Report: 01/23/12
Date Received: 01/12/12
Project: SOU_0789-004-02_20120112, F&BI 201148

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 201148-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	99	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	93	79-144

Date of Report: 01/23/12
Date Received: 01/12/12
Project: SOU_0789-004-02_20120112, F&BI 201148

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201148-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	8.66	98	103	51-132	5
Arsenic	mg/kg (ppm)	10	1.25	94	92	44-151	2
Selenium	mg/kg (ppm)	5	<1	92	92	52-128	0
Silver	mg/kg (ppm)	10	<1	90	103	69-125	13
Cadmium	mg/kg (ppm)	10	<1	102	102	83-120	0
Barium	mg/kg (ppm)	50	42.3	103 b	102 b	47-147	1 b
Lead	mg/kg (ppm)	50	2.02	103	108	65-126	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	88	79-125
Arsenic	mg/kg (ppm)	10	96	80-120
Selenium	mg/kg (ppm)	5	99	81-121
Silver	mg/kg (ppm)	10	94	84-117
Cadmium	mg/kg (ppm)	10	102	89-116
Barium	mg/kg (ppm)	50	102	88-113
Lead	mg/kg (ppm)	50	108	81-120

Date of Report: 01/23/12
Date Received: 01/12/12
Project: SOU_0789-004-02_20120112, F&BI 201148

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 201148-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	0.125	<0.1	114	118	45-162	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	0.125	114	63-144

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

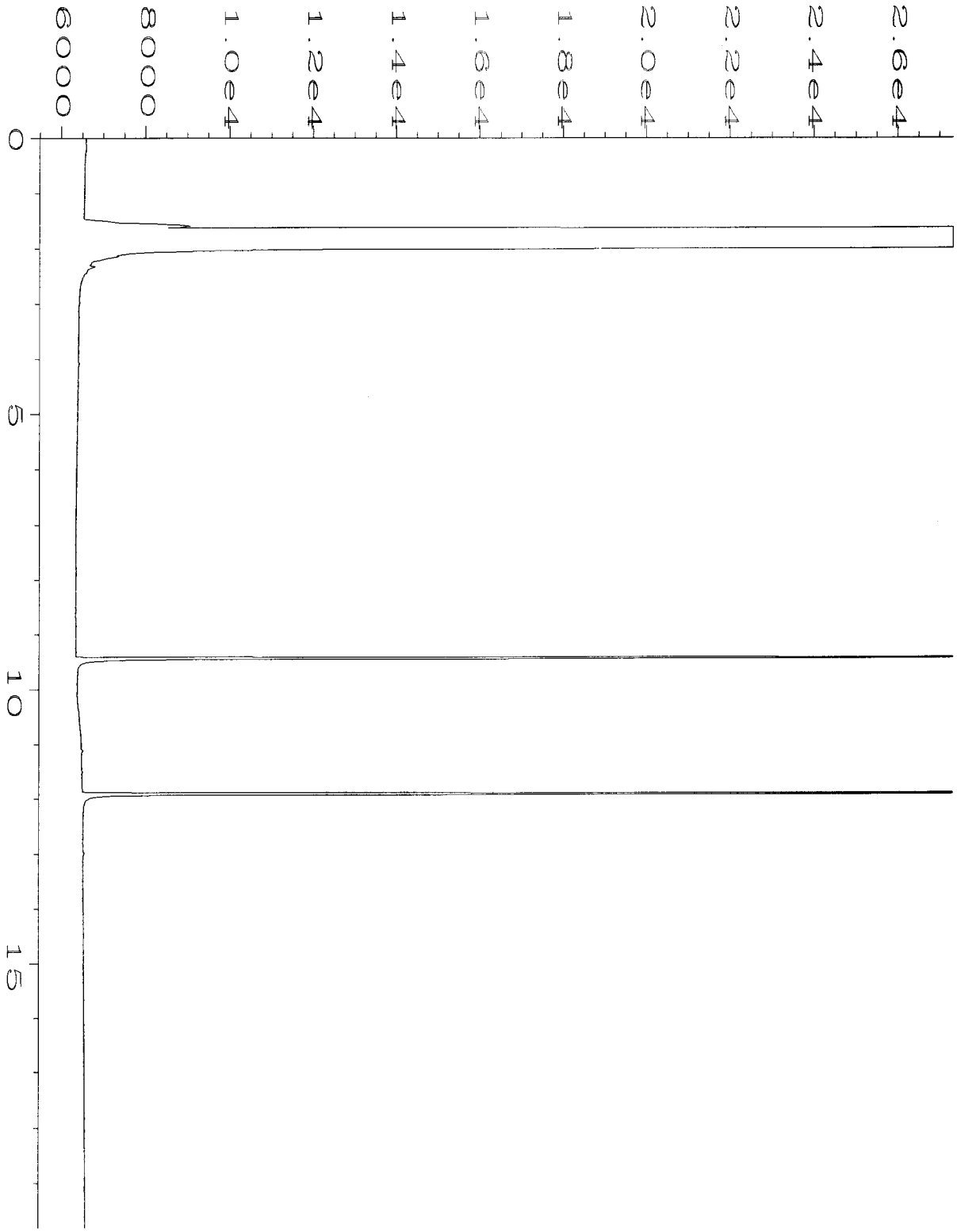
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

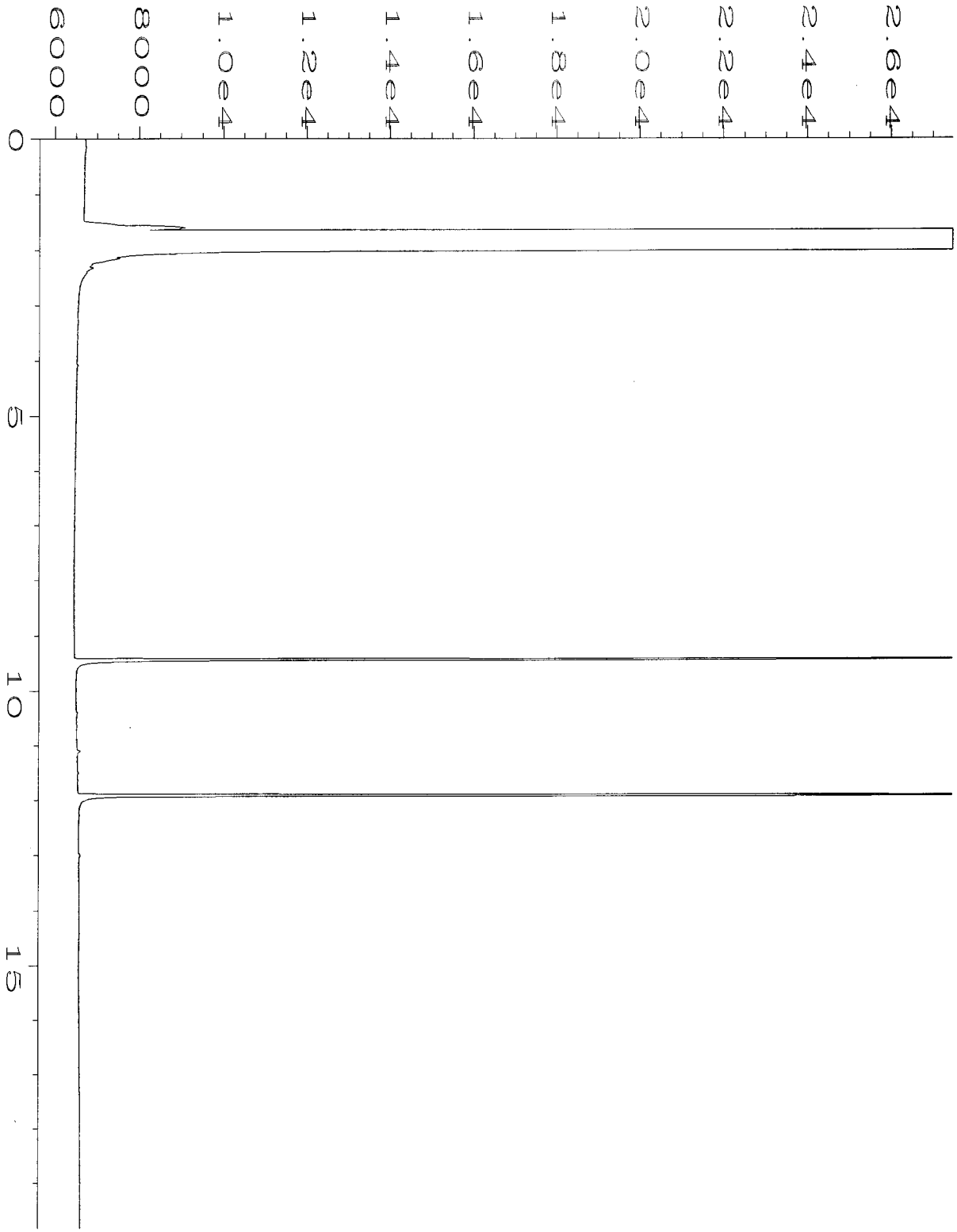
ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

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

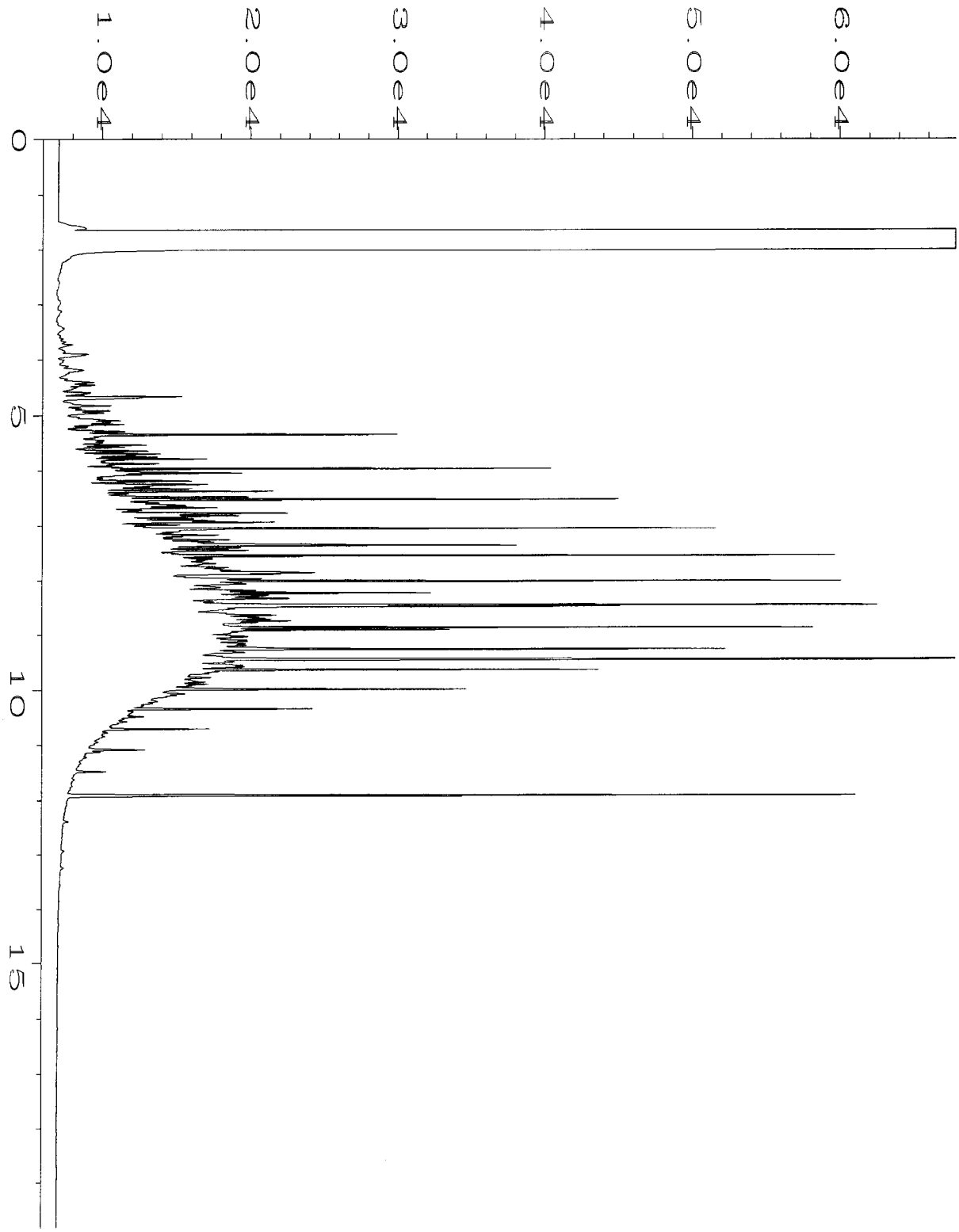


Data File Name	: C:\HPCHEM\1\DATA\01-13-12\017F0501.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 17
Sample Name	: 201148-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 13 Jan 12 05:18 PM	Instrument Method	: TPHD.MTH
Report Created on	: 16 Jan 12 08:59 AM	Analysis Method	: END.MTH



Data File Name : C:\HPCHEM\1\DATA\01-13-12\013F0501.D
Operator : ML
Instrument : GC1
Sample Name : 02-079 mb
Run Time Bar Code:
Acquired on : 13 Jan 12 03:32 PM
Report Created on: 16 Jan 12 08:59 AM

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : END.MTH



Data File Name	: C:\HPCHEM\1\DATA\01-13-12\003F0201.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 WADF 37-06B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 13 Jan 12 09:26 AM	Instrument Method	: TPHD.MTH
Report Created on	: 16 Jan 12 08:58 AM	Analysis Method	: END.MTH

201148

SAMPLE CHAIN OF CUSTODY ME 01-12-12

BTY/VS3 2

Page # 1 of 1

SAMPLERS (signature)	Rob Roberts
PROJECT NAME/NO.	PO #
AMLI Avtech 0789-004 - 02 Task 300	
REMARKS	GEMS Y / N

TURNAROUND TIME
- ☑ Standard (1 Weeks)
- ☐ RUSH
- Rush charges authorized by:

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

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
B04-03	B04	03	01 A-E	1-11-12	0825	Soil	5	X					X			
B04-05		05	02		0840	Soil	5									
B04-10		10	03		0845	Soil	5									
B04-13		13	04		0855	Soil	5									
B04-15		15	05		0900	Soil	5									
B04-20		20	06		0910	Soil	5									
B04-25		25	07		0915	Soil	5									
B05-08	B05	08	08		1030	Soil	5									
B05-10		10	09		1040	Soil	5									
B05-13		13	10		1045	Soil	5									
B05-15		15	11		1050	Soil	5									
B05-20		20	12		1055	Soil	5									
B05-25		25	13		1105	Soil	5									

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Rob Roberts	SES	1/12/12	9:00
Received by:		Eric Glover	F+B	1/12/12	12:16
Relinquished by:					
Received by:					

Samples received at 2 °C

201148

SAMPLE CHAIN OF CUSTODY

ME 01-12-12

BFY/ VS3

Page # 2 of 2

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO.: AMLI Avtech 0789-004

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
B05-30	B05	30	14 A-E	1-11-12	1110	Soil	5									
B05-35	"	35	15	"	1120	Soil	5									
B06-08	B06	08	16		1310	Soil	5									
B06-10	"	10	17		1315	Soil	5									
B06-13	"	13	18		1320	Soil	5									
B06-15	"	15	19		1325	Soil	5									
B06-20	"	20	20		1330	Soil	5									
B06-25	"	25	21		1335	Soil	5									
B06-30	"	30	22		1345	Soil	5									
B06-35	"	35	23		1400	Soil	5									
B06-40	"	40	24		1405	Soil	5									

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Rob Roberts	SES	1/12/12	9:10
Received by:	Eric Glover	F&B	1/12/12	12:16
Relinquished by:				
Received by:				

Samples received at 2 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 2, 2012

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 January 12, 2012 from the SOU_0789-004-02_20120112, F&BI 201148 project. There are 7 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
SOU0202R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 12, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004-02_20120112, F&BI 201148 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201148 -01	B04-03
201148 -02	B04-05
201148 -03	B04-10
201148 -04	B04-13
201148 -05	B04-15
201148 -06	B04-20
201148 -07	B04-25
201148 -08	B05-08
201148 -09	B05-10
201148 -10	B05-13
201148 -11	B05-15
201148 -12	B05-20
201148 -13	B05-25
201148 -14	B05-30
201148 -15	B05-35
201148 -16	B06-08
201148 -17	B06-10
201148 -18	B06-13
201148 -19	B06-15
201148 -20	B06-20
201148 -21	B06-25
201148 -22	B06-30
201148 -23	B06-35
201148 -24	B06-40

The samples were requested to be analyzed outside of the holding time. The data were flagged accordingly.

The 8260C laboratory control sample and laboratory control sample duplicate failed the relative percent difference for chloroethane. The analyte was not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B06-20 ht	Client:	SoundEarth Strategies
Date Received:	01/12/12	Project:	SOU_0789-004-02_20120112, F&BI 201148
Date Extracted:	01/30/12	Lab ID:	201148-20
Date Analyzed:	01/31/12	Data File:	013112.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B06-35 ht	Client:	SoundEarth Strategies
Date Received:	01/12/12	Project:	SOU_0789-004-02_20120112, F&BI 201148
Date Extracted:	01/30/12	Lab ID:	201148-23
Date Analyzed:	01/31/12	Data File:	013113.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	0.046	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004-02_20120112, F&BI 201148
Date Extracted:	01/30/12	Lab ID:	02-0129 mb
Date Analyzed:	01/31/12	Data File:	013111.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	104	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 02/02/12
Date Received: 01/12/12
Project: SOU_0789-004-02_20120112, F&BI 201148

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

Laboratory Code: 201148-20 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	23	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	53	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	53	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	61	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	48	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	65	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	78	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	66	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	62	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	80	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	72	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	78	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	80	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	82	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	85	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	82	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	82	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	82	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	80	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	80	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	79	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	85	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	87	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	85	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	93	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	93	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	84	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	91	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	85	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	88	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	89	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	83	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	89	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	87	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	85	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	88	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	88	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	90	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	90	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	89	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	89	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	89	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	91	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	86	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	84	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	84	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	90	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	92	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	90	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	88	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	91	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	87	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	84	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	88	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	86	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	84	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	85	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	79	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	81	20-144

Date of Report: 02/02/12
Date Received: 01/12/12
Project: SOU_0789-004-02_20120112, F&BI 201148

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	47	44	10-146	7
Chloromethane	mg/kg (ppm)	2.5	74	71	27-133	4
Vinyl chloride	mg/kg (ppm)	2.5	78	74	22-139	5
Bromomethane	mg/kg (ppm)	2.5	81	78	38-114	4
Chloroethane	mg/kg (ppm)	2.5	56	82	20-153	38 vo
Trichlorofluoromethane	mg/kg (ppm)	2.5	90	83	10-196	8
Acetone	mg/kg (ppm)	12.5	91	83	52-141	9
1,1-Dichloroethene	mg/kg (ppm)	2.5	93	88	47-128	6
Methylene chloride	mg/kg (ppm)	2.5	80	73	42-132	9
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	97	94	60-123	3
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	88	67-127	3
1,1-Dichloroethane	mg/kg (ppm)	2.5	96	96	68-115	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	112	120	57-133	7
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	98	99	72-113	1
Chloroform	mg/kg (ppm)	2.5	99	98	66-120	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	104	103	57-123	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	98	97	56-135	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	102	103	62-131	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	102	102	69-128	0
Carbon tetrachloride	mg/kg (ppm)	2.5	102	100	60-139	2
Benzene	mg/kg (ppm)	2.5	96	96	68-114	0
Trichloroethene	mg/kg (ppm)	2.5	94	95	68-114	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	100	101	72-127	1
Bromodichloromethane	mg/kg (ppm)	2.5	104	103	72-130	1
Dibromomethane	mg/kg (ppm)	2.5	100	101	70-120	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	109	107	45-145	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	112	111	75-136	1
Toluene	mg/kg (ppm)	2.5	101	100	66-126	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	111	109	72-132	2
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	100	99	75-113	1
2-Hexanone	mg/kg (ppm)	12.5	102	100	33-152	2
1,3-Dichloropropane	mg/kg (ppm)	2.5	104	103	72-130	1
Tetrachloroethene	mg/kg (ppm)	2.5	101	101	72-114	0
Dibromochloromethane	mg/kg (ppm)	2.5	108	107	74-125	1
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	104	103	74-132	1
Chlorobenzene	mg/kg (ppm)	2.5	101	99	76-111	2
Ethylbenzene	mg/kg (ppm)	2.5	105	104	64-123	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	103	102	69-135	1
m,p-Xylene	mg/kg (ppm)	5	106	106	78-122	0
o-Xylene	mg/kg (ppm)	2.5	103	103	77-124	0
Styrene	mg/kg (ppm)	2.5	103	101	74-126	2
Isopropylbenzene	mg/kg (ppm)	2.5	104	102	76-127	2
Bromoform	mg/kg (ppm)	2.5	108	105	56-132	3
n-Propylbenzene	mg/kg (ppm)	2.5	110	110	74-124	0
Bromobenzene	mg/kg (ppm)	2.5	101	103	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	104	103	76-126	1
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	100	99	56-143	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	99	99	61-137	0
2-Chlorotoluene	mg/kg (ppm)	2.5	106	107	74-121	1
4-Chlorotoluene	mg/kg (ppm)	2.5	109	109	75-122	0
tert-Butylbenzene	mg/kg (ppm)	2.5	106	106	73-130	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	104	103	76-125	1
sec-Butylbenzene	mg/kg (ppm)	2.5	105	104	71-130	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	108	106	70-132	2
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	103	103	75-121	0
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	100	99	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	103	101	76-121	2
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	96	95	61-136	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	92	96	70-129	4
Hexachlorobutadiene	mg/kg (ppm)	2.5	100	95	50-153	5
Naphthalene	mg/kg (ppm)	2.5	85	94	60-125	10
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	86	97	62-130	12

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

201148

SAMPLE CHAIN OF CUSTODY ME 01-12-12

BTY/VS3 2

Page # 1 of 1

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E. Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature) Rob Roberts

PROJECT NAME/NO. AMLI Avtech 0789-004-02 Task 300

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
B04-03	B04	03	01 A-E	1-11-12	0835	Soil	5	X					X			
B04-05		05	02		0840	Soil	5									
B04-08 10		10 08	03		0845	Soil	5									
B04-13		13	04		0855	Soil	5									
B04-15		15	05		0900	Soil	5									
B04-20		20	06		0910	Soil	5									
B04-25		25	07		0915	Soil	5									
B05-08	B05	08	08		1030	Soil	5									
B05-10		10	09		1040	Soil	5									
B05-13		13	10		1045	Soil	5									
B05-15		15	11		1050	Soil	5									
B05-20		20	12		1055	Soil	5									
B05-25		25	13		1105	Soil	5									

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Rob Roberts	SES	1/12/12	9:00
Received by:		Eric Jones	F+B	1/12/12	12:16
Relinquished by:					
Received by:					

Samples received at 2 °C

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

201148

SAMPLE CHAIN OF CUSTODY

ME 01-12-12

BFY/VS3

Page # 2 of 2

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E. Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. AMLI Avtech 0789-004

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
								ANALYSES REQUESTED								
B05-30	B05	30	14 A-E	1-11-12	1110	Soil	5									* per RR 1/27/12 ML
B05-35	"	35	15	"	1120	Soil	5									
B06-08	B06	08	16	"	1310	Soil	5									
B06-10	"	10	17	"	1315	Soil	5									
B06-13	"	13	18	"	1320	Soil	5									
B06-15	"	15	19	"	1325	Soil	5									
B06-20	"	20	20	"	1330	Soil	5				*					
B06-25	"	25	21	"	1335	Soil	5									
B06-30	"	30	22	"	1345	Soil	5									
B06-35	"	35	23	"	1400	Soil	5				*					
B06-40	"	40	24	"	1405	Soil	5									

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Rob Roberts	SES	1/12/12	9:00
Received by:		Eric Glover	FEB	1/12/12	12:15
Relinquished by:					
Received by:					

Samples received at 2 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

July 17, 2013

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on July 9, 2013 from the SOU_0789-004_20130709, F&BI 307116 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
SOU0717R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 9, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20130709, F&BI 307116 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307116-01	SB201-05
307116-02	SB201-10
307116-03	SB201-15
307116-04	SB201-20
307116-05	SB204-05
307116-06	SB204-10
307116-07	SB204-15
307116-08	SB204-20
307116-09	SB203-05
307116-10	SB203-10
307116-11	SB203-15
307116-12	SB203-20
307116-13	SB202-05
307116-14	SB202-08
307116-15	SB205-05
307116-16	SB205-10
307116-17	SB205-15
307116-18	SB205-20

Methylene chloride was detected in the 8260C analysis of sample SB204-15. The data were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB201-05	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-01
Date Analyzed:	07/10/13	Data File:	071007.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	102	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB201-10	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-02
Date Analyzed:	07/10/13	Data File:	071008.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	100	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB201-15	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-03
Date Analyzed:	07/10/13	Data File:	071009.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	104	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB201-20	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-04
Date Analyzed:	07/10/13	Data File:	071010.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	102	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	0.039
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB204-10	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-06
Date Analyzed:	07/10/13	Data File:	071011.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	101	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB204-15	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-07
Date Analyzed:	07/10/13	Data File:	071012.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	102	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	0.57 lc
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	0.046
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB204-20	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-08
Date Analyzed:	07/10/13	Data File:	071013.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	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	0.031
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB203-05	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-09
Date Analyzed:	07/10/13	Data File:	071014.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	100	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB203-10	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-10
Date Analyzed:	07/10/13	Data File:	071015.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	102	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB203-15	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-11
Date Analyzed:	07/10/13	Data File:	071016.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	100	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB202-05	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-13
Date Analyzed:	07/10/13	Data File:	071017.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	100	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB202-08	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-14
Date Analyzed:	07/10/13	Data File:	071018.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper 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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB205-10	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-16
Date Analyzed:	07/10/13	Data File:	071019.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB205-15	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-17
Date Analyzed:	07/10/13	Data File:	071020.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB205-20	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	307116-18
Date Analyzed:	07/10/13	Data File:	071021.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	100	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/10/13	Lab ID:	03-1283 mb2
Date Analyzed:	07/10/13	Data File:	071004.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	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	<0.03
Tetrachloroethene	<0.025

Date of Report: 07/17/13
Date Received: 07/09/13
Project: SOU_0789-004_20130709, F&BI 307116

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

Laboratory Code: 307092-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	42	39	10-138	7
Chloroethane	mg/kg (ppm)	2.5	<0.5	53	52	10-176	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	63	63	10-160	0
Methylene chloride	mg/kg (ppm)	2.5	<0.5	63	68	10-156	8
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	68	14-137	0
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	74	74	25-135	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	72	73	12-160	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	67	67	10-156	0
Trichloroethene	mg/kg (ppm)	2.5	<0.03	74	78	21-139	5
Tetrachloroethene	mg/kg (ppm)	2.5	0.067	68	70	20-133	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	64	22-139
Chloroethane	mg/kg (ppm)	2.5	73	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	86	47-128
Methylene chloride	mg/kg (ppm)	2.5	86	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	90	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	94	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	91	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	88	62-131
Trichloroethene	mg/kg (ppm)	2.5	93	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	93	72-114

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BOEING 307116 (MM)

SAMPLE CHAIN OF CUSTODY

ME 07/09/13

EO3/45

Page # 1 of 2

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Avenue East

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO.: 0789-004

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cVOCs		X-per RR 7/10/13 MG. Notes
SB201-05	SB201	5	01A-E	7/9/13	0905	SOIL	5							X		~~HOLD~~
SB201-10		10	02		0910		5							X		
SB201-15		15	03		0920		5							X		
SB201-20		20	04		0945		5							X		
SB204-05	SB204	5	05		1015		5									
SB204-10		10	06		1050		5							X		
SB204-15		15	07		1105		5							X		
SB204-20		20	08		1135		5							X		
SB209-05	SB203	5	09		1200		5							X		
SB203-10		10	10		1215		5							X		
SB203-15		15	11		1250		5							X		
SB203-20		20	12		1325		5									
SB202-05		5	13		1345		5							X		

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:			SES	7/9/13	1625
Received by:		Nhan Phan	FEBI	7/9/13	1625
Relinquished by:					
Received by:					

Samples received at 5 °C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

(BORING 307116 (AAA)

SAMPLE CHAIN OF CUSTODY

ME 07/09/13

(EQ/VS

Page # 2 of 2

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Avenue East

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)	
PROJECT NAME/NO. 0789-004	PO #
REMARKS	GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cVOCs		Notes
SB202-06	SB202	8	14 A-E	7/9/13	1420	SOIL	5							X		~~HOLD~~
SB205-05	SB205	5	15		1450		5									
SB205-10		10	16		1500		5							X		
SB205-15		15	17		1520		5							X		
SB205-20		20	18		1530		5							X		

ANALYSES REQUESTED

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Liz Parker	SES	7/9/13	1625
Received by:	Nhan Phan	FEBI	7/9/13	1625
Relinquished by:				
Received by:				

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 5 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

3012 16th Avenue West
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www.friedmanandbruya.com

July 23, 2013

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 July 9, 2013 from the SOU_0789-004_20130709, F&BI 307116 project. There are 5 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU0723R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 9, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20130709, F&BI 307116 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307116-01	SB201-05
307116-02	SB201-10
307116-03	SB201-15
307116-04	SB201-20
307116-05	SB204-05
307116-06	SB204-10
307116-07	SB204-15
307116-08	SB204-20
307116-09	SB203-05
307116-10	SB203-10
307116-11	SB203-15
307116-12	SB203-20
307116-13	SB202-05
307116-14	SB202-08
307116-15	SB205-05
307116-16	SB205-10
307116-17	SB205-15
307116-18	SB205-20

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB203-20	Client:	SoundEarth Strategies
Date Received:	07/09/13	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/17/13	Lab ID:	307116-12
Date Analyzed:	07/17/13	Data File:	071717.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20130709, F&BI 307116
Date Extracted:	07/17/13	Lab ID:	03-1318 mb
Date Analyzed:	07/17/13	Data File:	071708.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	62	142
Toluene-d8	98	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	<0.03
Tetrachloroethene	<0.025

Date of Report: 07/23/13
Date Received: 07/09/13
Project: SOU_0789-004_20130709, F&BI 307116

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

Laboratory Code: 307170-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	45	10-138
Chloroethane	mg/kg (ppm)	2.5	<0.5	57	10-176
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	66	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	51	10-156
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	74	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	76	19-140
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	78	25-135
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	78	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	74	10-156
Trichloroethene	mg/kg (ppm)	2.5	<0.03	74	21-139
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	73	20-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	80	76	22-139	5
Chloroethane	mg/kg (ppm)	2.5	86	86	10-163	0
1,1-Dichloroethene	mg/kg (ppm)	2.5	94	100	47-128	6
Methylene chloride	mg/kg (ppm)	2.5	72	72	42-132	0
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	102	104	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	101	102	68-115	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	104	104	72-113	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	102	102	56-135	0
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	101	101	62-131	0
Trichloroethene	mg/kg (ppm)	2.5	100	98	64-117	2
Tetrachloroethene	mg/kg (ppm)	2.5	101	103	72-114	2

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B00116 307116 (MW)

SAMPLE CHAIN OF CUSTODY

ME 07/09/13

EO3/VS

Page # 1 of 2

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Avenue East

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. 0789-004

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cVOCs		Notes: X-per RR 7/10/13 MG. X-per RR 7/17/13 MG
SB201-05	SB201	5	01A-E	7/9/13	0905	SOIL	5							X		~~HOLD~~
SB201-10		10	02		0910		5							X		
SB201-15		15	03		0920		5							X		
SB201-20		20	04		0945		5							X		
SB204-05	SB204	5	05		1015		5									
SB204-10		10	06		1050		5							X		
SB204-15		15	07		1105		5							X		
SB204-20		20	08		1135		5							X		
SB203-05	SB203	5	09		1200		5							X		
SB203-10		10	10		1215		5							X		
SB203-15		15	11		1250		5							X		
SB203-20		20	12		1325		5							X		
SB202-05		5	13		1345		5							X		

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		SES	7/9/13	1625
Received by:	Nhan Phan	FEBI	7/9/13	1625
Relinquished by:				
Received by:				

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

Samples received at 5 °C

(BORING 307116) (HE 07/09/13) (EQ/VS

SAMPLE CHAIN OF CUSTODY

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Avenue East

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. 0789-004

PO #

REMARKS

GEMS Y / N

Page # 2 of 2

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cVOCs		Notes
SB202-00	SB202	0	14A-E	7/9/13	1420	Soil	5							X		~~HOLD~~
SB205-05	SB205	5	15		1450		5									
SB205-10		10	16		1500		5							X		
SB205-15		15	17		1520		5							X		
SB205-20		20	18		1530		5							X		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Liz Parker	SES	7/9/13	1625
Received by:	Nhan Phan	FedEx	7/9/13	1625
Relinquished by:				
Received by:				

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 5 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 21, 2013

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 14, 2013 from the SOU_0789-004_20130114, F&BI 301164 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
SOU0121R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 14, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20130114, F&BI 301164 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
301164 -01	MW09-20130114
301164 -02	MW03-20130114
301164 -03	MW12-20130114
301164 -04	MW06-20130114
301164 -05	MW05-20130114
301164 -06	MW15-20130114

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW09-20130114	Client:	SoundEarth Strategies
Date Received:	01/14/13	Project:	SOU_0789-004_20130114, F&BI 301164
Date Extracted:	01/15/13	Lab ID:	301164-01
Date Analyzed:	01/15/13	Data File:	011548.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	99	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	1.5
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	42
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20130114	Client:	SoundEarth Strategies
Date Received:	01/14/13	Project:	SOU_0789-004_20130114, F&BI 301164
Date Extracted:	01/15/13	Lab ID:	301164-02
Date Analyzed:	01/15/13	Data File:	011549.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	101	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	1.7
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	71
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW12-20130114	Client:	SoundEarth Strategies
Date Received:	01/14/13	Project:	SOU_0789-004_20130114, F&BI 301164
Date Extracted:	01/15/13	Lab ID:	301164-03
Date Analyzed:	01/15/13	Data File:	011550.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

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

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	5.0
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW06-20130114	Client:	SoundEarth Strategies
Date Received:	01/14/13	Project:	SOU_0789-004_20130114, F&BI 301164
Date Extracted:	01/15/13	Lab ID:	301164-04
Date Analyzed:	01/15/13	Data File:	011551.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	98	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	2.4
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW05-20130114	Client:	SoundEarth Strategies
Date Received:	01/14/13	Project:	SOU_0789-004_20130114, F&BI 301164
Date Extracted:	01/15/13	Lab ID:	301164-05
Date Analyzed:	01/15/13	Data File:	011552.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	101	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	3.3
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW15-20130114	Client:	SoundEarth Strategies
Date Received:	01/14/13	Project:	SOU_0789-004_20130114, F&BI 301164
Date Extracted:	01/15/13	Lab ID:	301164-06
Date Analyzed:	01/15/13	Data File:	011553.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

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

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20130114, F&BI 301164
Date Extracted:	01/15/13	Lab ID:	03-0026 mb
Date Analyzed:	01/15/13	Data File:	011529.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

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

Date of Report: 01/21/13
Date Received: 01/14/13
Project: SOU_0789-004_20130114, F&BI 301164

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

Laboratory Code: 301164-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	99	73-131
Chloroethane	ug/L (ppb)	50	<1	96	70-127
1,1-Dichloroethene	ug/L (ppb)	50	<1	101	74-123
Methylene chloride	ug/L (ppb)	50	<5	92	62-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	74-123
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	82-110
cis-1,2-Dichloroethene	ug/L (ppb)	50	1.5	100	75-117
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	100	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	79-117
Trichloroethene	ug/L (ppb)	50	42	101 b	78-108
Tetrachloroethene	ug/L (ppb)	50	<1	94	70-115

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	102	98	73-132	4
Chloroethane	ug/L (ppb)	50	100	94	72-125	6
1,1-Dichloroethene	ug/L (ppb)	50	106	101	75-119	5
Methylene chloride	ug/L (ppb)	50	102	100	71-112	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	105	103	76-118	2
1,1-Dichloroethane	ug/L (ppb)	50	105	103	82-110	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	103	102	83-110	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	102	80-110	0
1,1,1-Trichloroethane	ug/L (ppb)	50	104	104	80-116	0
Trichloroethene	ug/L (ppb)	50	104	101	77-108	3
Tetrachloroethene	ug/L (ppb)	50	100	96	81-109	4

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

301164

SAMPLE CHAIN OF CUSTODY

ME 01-14-13 V2

Send Report To Bob Roberts
Company SoundEarth Strategies
Address 2811 Fairview Ave E
City, State, ZIP Seattle, WA
Phone # 206 306 1900 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 0789-004

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
MW09-20130114	MW09	26	01 A-D	1/14/13	0911	WATER	4				X					X-per RL
MW03-20130114	MW03	34	02		1005		4				X					1/15/13
MW12-20130114	MW12	42	03		1140		4				X					MG
MW06-20130114	MW06	34	04		1252		4				X					
MW05-20130114	MW05	26.5	05		1355		4				X					
MW15-20130114	MW15	30	06		1515		4				X					

DC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		SEI	1/14/13	1615
Received by:	Nhan Pham	FedEx	1/14/13	1615
Relinquished by:				
Received by:				

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

Samples received at 3 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 16, 2013

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 11, 2013 from the SOU_0789-004_20130111, F&BI 301146 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU0116R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 11, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20130111, F&BI 301146 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
301146 -01	MW07-20130111
301146 -02	MW11-20130111
301146 -03	MW04-20130111

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW07-20130111	Client:	SoundEarth Strategies
Date Received:	01/11/13	Project:	SOU_0789-004_20130111, F&BI 301146
Date Extracted:	01/14/13	Lab ID:	301146-01
Date Analyzed:	01/14/13	Data File:	011417.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	100	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	3.5
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-20130111	Client:	SoundEarth Strategies
Date Received:	01/11/13	Project:	SOU_0789-004_20130111, F&BI 301146
Date Extracted:	01/14/13	Lab ID:	301146-02
Date Analyzed:	01/14/13	Data File:	011426.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	101	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	78
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20130111	Client:	SoundEarth Strategies
Date Received:	01/11/13	Project:	SOU_0789-004_20130111, F&BI 301146
Date Extracted:	01/14/13	Lab ID:	301146-03
Date Analyzed:	01/14/13	Data File:	011419.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	100	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	85
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20130111, F&BI 301146
Date Extracted:	01/14/13	Lab ID:	03-0020 mb
Date Analyzed:	01/14/13	Data File:	011407.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	102	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	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 01/16/13
Date Received: 01/11/13
Project: SOU_0789-004_20130111, F&BI 301146

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

Laboratory Code: 301146-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	107	73-131
Chloroethane	ug/L (ppb)	50	<1	98	70-127
1,1-Dichloroethene	ug/L (ppb)	50	<1	104	74-123
Methylene chloride	ug/L (ppb)	50	<5	108	62-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	102	74-123
1,1-Dichloroethane	ug/L (ppb)	50	<1	104	82-110
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	105	75-117
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	106	79-117
Trichloroethene	ug/L (ppb)	50	3.5	102	78-108
Tetrachloroethene	ug/L (ppb)	50	<1	95	70-115

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	108	108	73-132	0
Chloroethane	ug/L (ppb)	50	97	96	72-125	1
1,1-Dichloroethene	ug/L (ppb)	50	104	104	75-119	0
Methylene chloride	ug/L (ppb)	50	110	112	71-112	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	103	104	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	107	107	82-110	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	104	83-110	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	109	80-110	1
1,1,1-Trichloroethane	ug/L (ppb)	50	110	109	80-116	1
Trichloroethene	ug/L (ppb)	50	102	104	77-108	2
Tetrachloroethene	ug/L (ppb)	50	96	96	81-109	0

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

301146

SAMPLE CHAIN OF CUSTODY

ME 01-11-13

Page # 1 of 1 V3

Send Report To Rob Roberts
Company Sund Earth
Address 2811 Fairview Ave E
City, State, ZIP Seattle, WA
Phone # 206 306 1902 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 0789-004

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270	RCRA-8 Metals			Notes
MW07-20130111	MW07	40	01A-D	1/11/13	1152	WATER	4				X					
MW11-20130111	MW11	47	02	"	1330	"	4				X					
MW04-20130111	MW04	38.5	03	"	1502	"	4				X					

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Liz Parks	SES	1/11/13	1630
Received by:		HONG NGUYEN	FBI	"	"
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 3 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 19, 2012

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 13, 2012 from the SOU_0789-004_20120113, F&BI 201168 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
SOU0119R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 13, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120113, F&BI 201168 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201168-01	B07-08
201168-02	B07-10
201168-03	B07-13
201168-04	B07-15
201168-05	B07-20
201168-06	B07-25
201168-07	B07-30
201168-08	B08-08
201168-09	B08-10
201168-10	B08-13
201168-11	B08-15
201168-12	B08-20
201168-13	B08-25

All quality control requirements were acceptable.

Date of Report: 01/19/12
Date Received: 01/13/12
Project: SOU_0789-004_20120113, F&BI 201168
Date Extracted: 01/16/12
Date Analyzed: 01/16/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B08-08 201168-08	<50	<250	99
Method Blank 02-085 MB	<50	<250	90

Analysis For Total Metals By EPA Method 200.8

Client ID:	B07-08	Client:	SoundEarth Strategies
Date Received:	01/13/12	Project:	SOU_0789-004_20120113, F&BI 201168
Date Extracted:	01/17/12	Lab ID:	201168-01
Date Analyzed:	01/17/12	Data File:	201168-01.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	93	60	125
Holmium	102	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	8.10
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	16.4
Lead	1.31

Analysis For Total Metals By EPA Method 200.8

Client ID:	B08-08	Client:	SoundEarth Strategies
Date Received:	01/13/12	Project:	SOU_0789-004_20120113, F&BI 201168
Date Extracted:	01/17/12	Lab ID:	201168-08
Date Analyzed:	01/17/12	Data File:	201168-08.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	92	60	125
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	11.0
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	29.7
Lead	2.90

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789-004_20120113, F&BI 201168
Date Extracted:	01/16/12	Lab ID:	I2-41 mb
Date Analyzed:	01/17/12	Data File:	I2-41 mb.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	93	60	125
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 01/19/12
Date Received: 01/13/12
Project: SOU_0789-004_20120113, F&BI 201168
Date Extracted: 01/17/12
Date Analyzed: 01/18/12

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
B07-08 201168-01	<0.1
B08-08 201168-08	<0.1
Method Blank	<0.1

Date of Report: 01/19/12
Date Received: 01/13/12
Project: SOU_0789-004_20120113, F&BI 201168

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 201162-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	101	102	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	79-144

Date of Report: 01/19/12
Date Received: 01/13/12
Project: SOU_0789-004_20120113, F&BI 201168

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201148-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	8.66	98	103	51-132	5
Arsenic	mg/kg (ppm)	10	1.25	94	92	44-151	2
Selenium	mg/kg (ppm)	5	<1	92	92	52-128	0
Silver	mg/kg (ppm)	10	<1	90	103	69-125	13
Cadmium	mg/kg (ppm)	10	<1	102	102	83-120	0
Barium	mg/kg (ppm)	50	42.3	103 b	102 b	47-147	1 b
Lead	mg/kg (ppm)	50	2.02	103	108	65-126	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	107	79-125
Arsenic	mg/kg (ppm)	10	99	80-120
Selenium	mg/kg (ppm)	5	98	81-121
Silver	mg/kg (ppm)	10	94	84-117
Cadmium	mg/kg (ppm)	10	103	89-116
Barium	mg/kg (ppm)	50	107	88-113
Lead	mg/kg (ppm)	50	106	81-120

Date of Report: 01/19/12
Date Received: 01/13/12
Project: SOU_0789-004_20120113, F&BI 201168

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 201148-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	0.125	<0.1	114	118	45-162	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	0.125	114	63-144

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

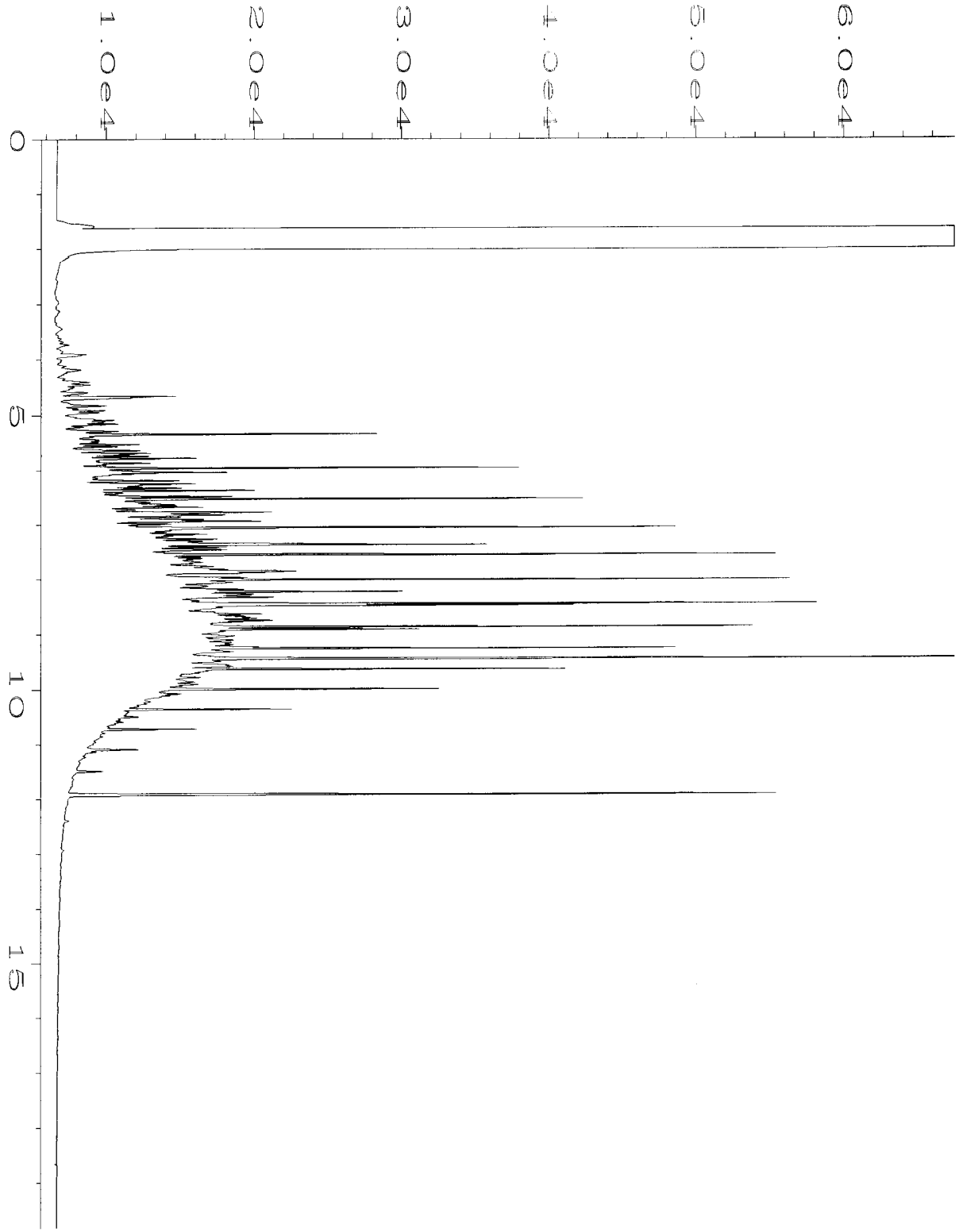
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

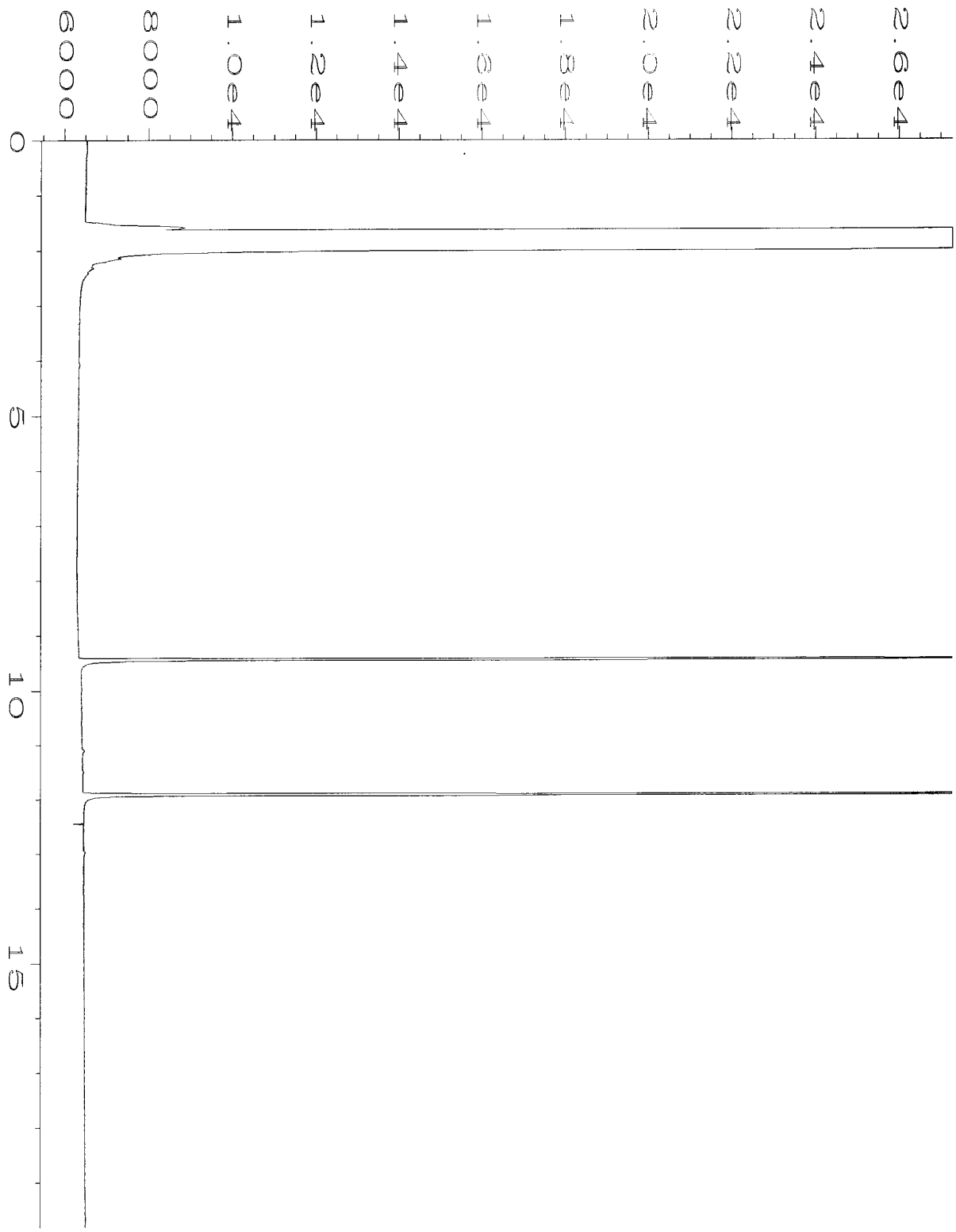
ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

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

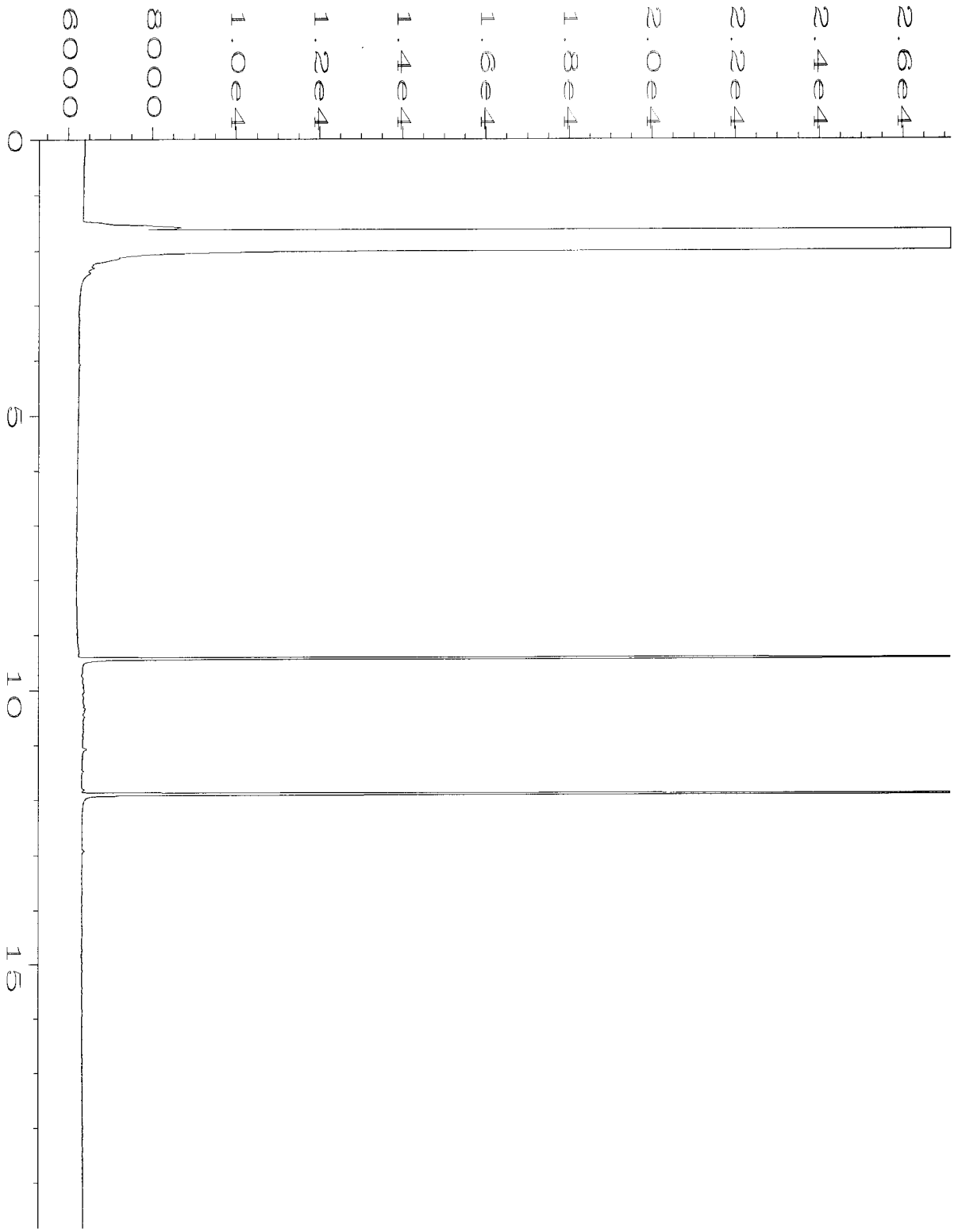


Data File Name	: C:\HPCHEM\1\DATA\01-16-12\003F0201.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 WADF 37-06B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 16 Jan 12 09:19 AM	Instrument Method	: TPHD.MTH
Report Created on	: 17 Jan 12 09:13 AM	Analysis Method	: END.MTH



Data File Name : C:\HPCHEM\1\DATA\01-16-12\011F0601.D
Operator : ML
Instrument : GC1
Sample Name : 02-085 mb
Run Time Bar Code:
Acquired on : 16 Jan 12 03:06 PM
Report Created on: 17 Jan 12 09:13 AM

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 6
Instrument Method: TPHD.MTH
Analysis Method : END.MTH



Data File Name : C:\HPCHEM\1\DATA\01-16-12\018F0601.D
Operator : ML
Instrument : GC1
Sample Name : 201168-08
Run Time Bar Code:
Acquired on : 16 Jan 12 06:14 PM
Report Created on: 17 Jan 12 09:14 AM

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 6
Instrument Method: TPHD.MTH
Analysis Method : END.MTH

201168

SAMPLE CHAIN OF CUSTODY ME 01-13-12 BE3 / 1 of 1 VR3

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature) Rob H

PROJECT NAME/NO. AMLI Avtech 0789-004

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
				1-12-12												
B07-08	B07	08	01 AtE	~~0945~~	0945	Soil	5						X			
B07-10	"	10	02	1-12-12	0950	Soil	5									
B07-13	"	13	03	"	1000	Soil	5									
B07-15	"	15	04	"	1010	Soil	5									
B07-20	"	20	05	"	1020	Soil	5									
B07-25	"	25	06	"	1030	Soil	5									
B07-30	"	30	07	"	1040	Soil	5									
B08-08	B08	08	08	"	1215	Soil	5	X					X			
B08-10	"	10	09	"	1220	Soil	5									
B08-13	"	13	10	"	1225	Soil	5									
B08-15	"	15	11	"	1230	Soil	5									
B08-20	"	20	12	"	1240	Soil	5									
B08-25	"	25	13	"	1255	Soil	5									

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Rob Roberts	ROB ROBERTS	SES	1-13-12	1230
Received by:		Matt Lyngstad	FRB Inc	1/13/12	1230
Relinquished by:					
Received by:			Samples received at 4 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 26, 2012

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 13, 2012 from the SOU_0789-004_20120113, F&BI 201167 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU0126R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 13, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120113, F&BI 201167 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201167 -01	B09-05
201167 -02	B09-10
201167 -03	B09-15
201167 -04	B10-0.5
201167 -05	B10-15

All quality control requirements were acceptable.

Date of Report: 01/26/12
Date Received: 01/13/12
Project: SOU_0789-004_20120113, F&BI 201167
Date Extracted: 01/24/12
Date Analyzed: 01/24/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B10-0.5 201167-04	<50	<250	104
Method Blank 02-111 MB2	<50	<250	95

Date of Report: 01/26/12
Date Received: 01/13/12
Project: SOU_0789-004_20120113, F&BI 201167

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 201209-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	99	97	73-135	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	106	74-139

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

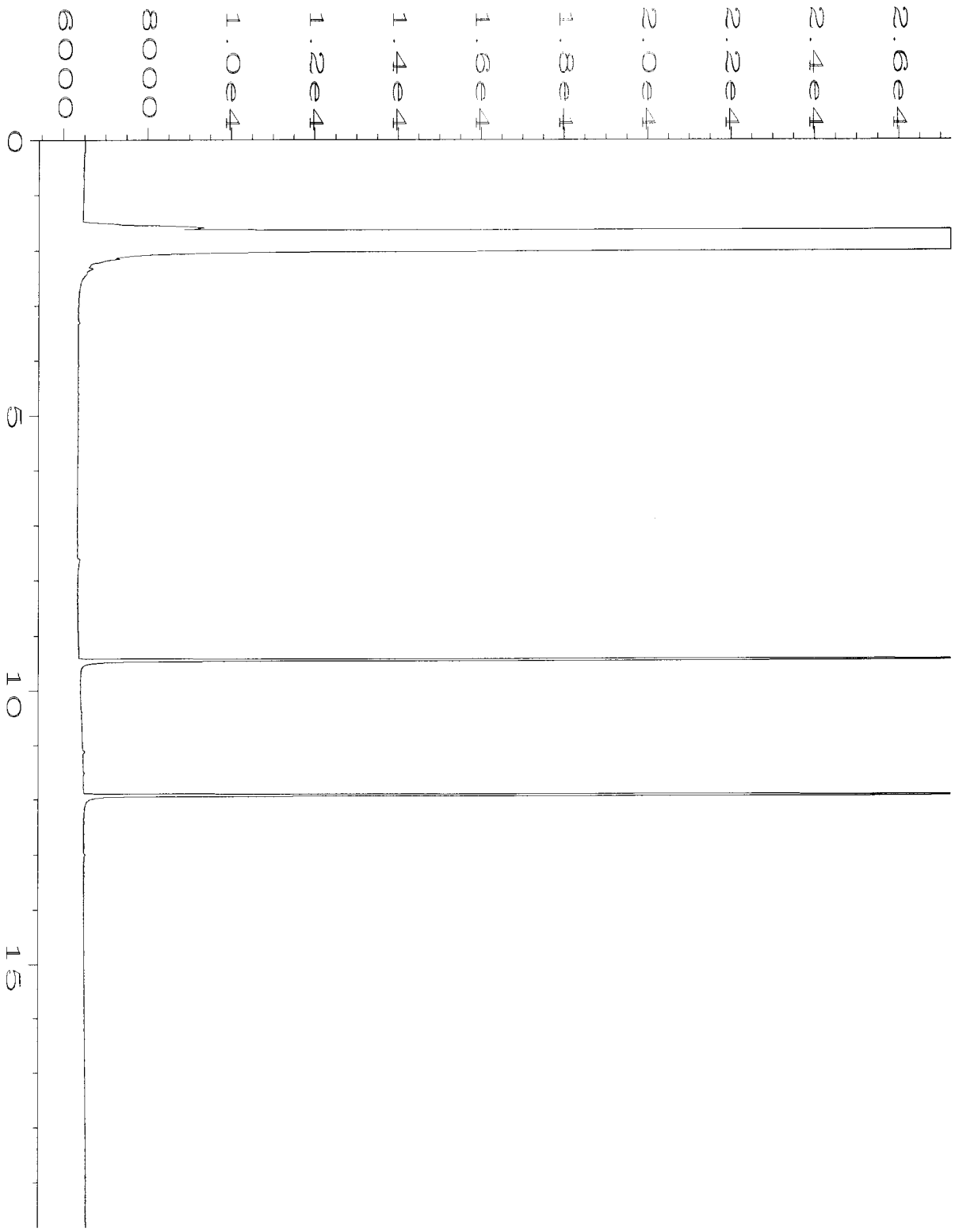
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

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

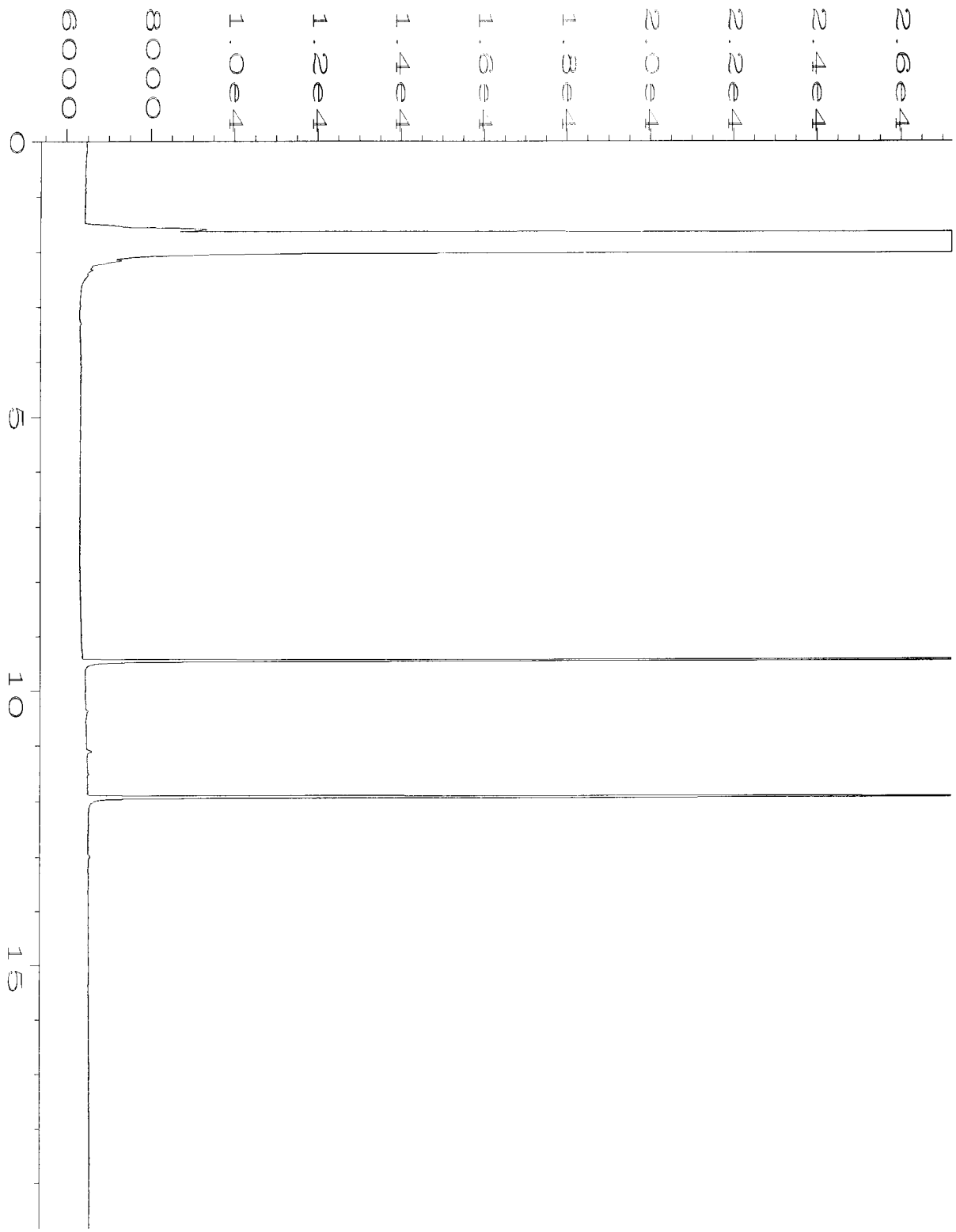
vo - The value reported fell outside the control limits established for this analyte.

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



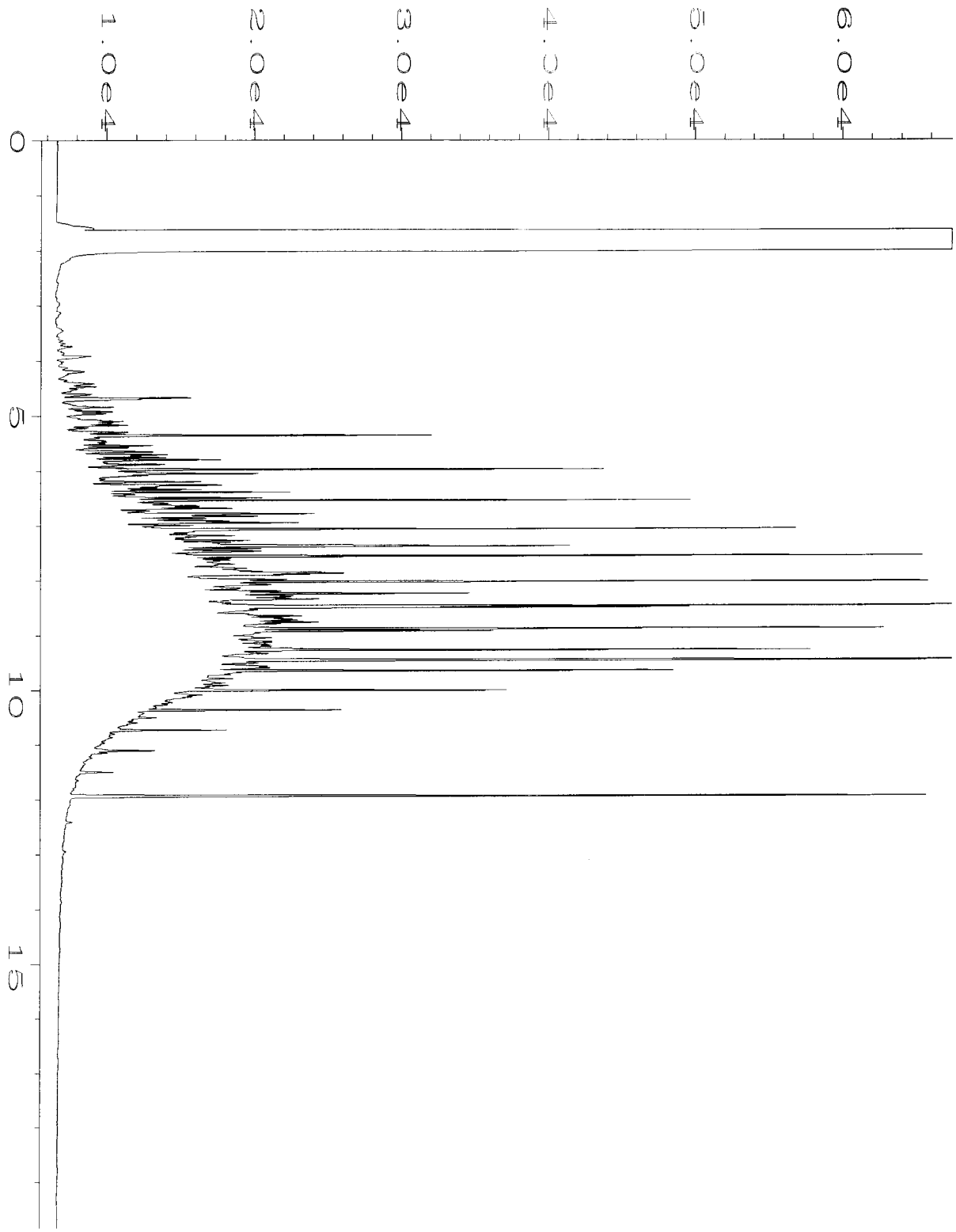
Data File Name : C:\HPCHEM\1\DATA\01-24-12\018F0501.D
Operator : ML
Instrument : GC1
Sample Name : 201167-04
Run Time Bar Code:
Acquired on : 24 Jan 12 04:02 PM
Report Created on: 25 Jan 12 09:26 AM

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\01-24-12\017F0501.D
Operator : ML
Instrument : GC1
Sample Name : 02-111 mb2
Run Time Bar Code:
Acquired on : 24 Jan 12 03:35 PM
Report Created on: 25 Jan 12 09:24 AM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\1\DATA\01-24-12\003F0201.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 WADF 37-06B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 24 Jan 12 09:18 AM	Instrument Method	: TPHD.MTH
Report Created on	: 25 Jan 12 09:24 AM	Analysis Method	: TPHD.MTH

201167

SAMPLE CHAIN OF CUSTODY ME 01-13-12

VSI 1/B03

Page # 1 of 1

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO.: AMLI Avtech 0789-004

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
								ANALYSES REQUESTED								
B09-05	B09	05	01A-E	1-13-12	0830	Soil	5									~~Hold~~
B09-10	B09	10	02	1-13-12	0850	Soil	5									
B09-15	B09	15	03	1-13-12	0905	Soil	5									
B10-05	B10	05	04	1-13-12	0945	Soil	5	★								
B10-15	B10	15	05	1-13-12	1015	Soil	5									

★ - per RR 1/20/12 MK

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Kat A Horsberger	SES	1-13-12	1150
Received by:		VINH	FBI	1-13-12	1150
Relinquished by:					
Received by:					

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

Samples received at 2 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 23, 2012

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 11, 2012 from the SOU_0789-004_20120111, F&BI 201123 project. There are 20 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU0123R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 11, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120111, F&BI 201123 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201123 -01	B01-03
201123 -02	B01-05
201123 -03	B01-08
201123 -04	B01-10
201123 -05	B01-13
201123 -06	B01-15
201123 -07	B01-20
201123 -08	B01-25
201123 -09	B01-30
201123 -10	B01-35
201123 -11	B02-03
201123 -12	B02-05
201123 -13	B02-08
201123 -14	B02-10
201123 -15	B02-13
201123 -16	B02-15
201123 -17	B02-20
201123 -18	B02-25
201123 -19	B02-30
201123 -20	B02-35
201123 -21	B03-03
201123 -22	B03-10
201123 -23	B03-13
201123 -24	B03-15
201123 -25	B03-20
201123 -26	B03-25
201123 -27	B03-30
201123 -28	B03-35

All quality control requirements were acceptable.

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123
Date Extracted: 01/20/12
Date Analyzed: 01/20/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
B03-10 201123-22	<0.02	<0.02	<0.02	<0.06	<2	85
Method Blank 02-0105 MB	<0.02	<0.02	<0.02	<0.06	<2	85

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123
Date Extracted: 01/12/12
Date Analyzed: 01/12/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B01-03 201123-01	<50	<250	95
B02-03 201123-11	<50	<250	93
B03-03 201123-21	<50	<250	99
B03-10 201123-22	<50	<250	97
Method Blank 02-076 MB	<50	<250	96

Analysis For Total Metals By EPA Method 200.8

Client ID:	B01-03	Client:	SoundEarth Strategies
Date Received:	01/11/12	Project:	SOU_0789-004_20120111, F&BI 201123
Date Extracted:	01/12/12	Lab ID:	201123-01
Date Analyzed:	01/13/12	Data File:	201123-01.064
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	82	60	125
Indium	85	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	9.68
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	43.3
Lead	1.59

Analysis For Total Metals By EPA Method 200.8

Client ID:	B02-03	Client:	SoundEarth Strategies
Date Received:	01/11/12	Project:	SOU_0789-004_20120111, F&BI 201123
Date Extracted:	01/12/12	Lab ID:	201123-11
Date Analyzed:	01/13/12	Data File:	201123-11.065
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	83	60	125
Indium	84	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	6.54
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	28.6
Lead	1.18

Analysis For Total Metals By EPA Method 200.8

Client ID:	B03-10	Client:	SoundEarth Strategies
Date Received:	01/11/12	Project:	SOU_0789-004_20120111, F&BI 201123
Date Extracted:	01/12/12	Lab ID:	201123-22
Date Analyzed:	01/13/12	Data File:	201123-22.066
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	81	60	125
Indium	81	60	125
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	10.6
Arsenic	1.55
Selenium	<1
Silver	<1
Cadmium	<1
Barium	29.2
Lead	1.61

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789-004_20120111, F&BI 201123
Date Extracted:	01/11/12	Lab ID:	I2-35 mb
Date Analyzed:	01/13/12	Data File:	I2-35 mb.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	92	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123
Date Extracted: 01/12/12
Date Analyzed: 01/18/12

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
B01-03 201123-01	<0.1
B02-03 201123-11	<0.1
B03-10 201123-22	<0.1
Method Blank	<0.1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B01-13	Client:	SoundEarth Strategies
Date Received:	01/11/12	Project:	SOU_0789-004_20120111, F&BI 201123
Date Extracted:	01/13/12	Lab ID:	201123-05
Date Analyzed:	01/13/12	Data File:	011328.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B03-10	Client:	SoundEarth Strategies
Date Received:	01/11/12	Project:	SOU_0789-004_20120111, F&BI 201123
Date Extracted:	01/13/12	Lab ID:	201123-22
Date Analyzed:	01/14/12	Data File:	011329.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789-004_20120111, F&BI 201123
Date Extracted:	01/13/12	Lab ID:	02-0049 mb
Date Analyzed:	01/13/12	Data File:	011319.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123
Date Extracted: 01/11/12
Date Analyzed: 01/17/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR PCBs REPORTED AS AROCLORS USING EPA METHOD 8082A

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Aroclor 1221	1232	1016	1242	1248	1254	1260	Surrogate (% Rec.) (Limit 50-150)
B02-03 201123-11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	95
Method Blank 02-063 MB2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	97

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	0.5	81	80	69-120	1
Toluene	mg/kg (ppm)	0.5	88	85	70-117	3
Ethylbenzene	mg/kg (ppm)	0.5	88	87	65-123	1
Xylenes	mg/kg (ppm)	1.5	88	86	66-120	2
Gasoline	mg/kg (ppm)	20	105	115	71-131	9

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 201123-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	99	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	79-144

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201119-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	18.4	88 b	89 b	51-132	1 b
Arsenic	mg/kg (ppm)	10	3.24	83 b	85 b	44-151	2 b
Selenium	mg/kg (ppm)	5	<1	83	83	52-128	0
Silver	mg/kg (ppm)	10	<1	92	94	69-125	2
Cadmium	mg/kg (ppm)	10	<1	99	102	83-120	3
Barium	mg/kg (ppm)	50	71.4	93 b	94 b	47-147	1 b
Lead	mg/kg (ppm)	50	568	1300 b	0 b	65-126	200 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	101	79-125
Arsenic	mg/kg (ppm)	10	88	80-120
Selenium	mg/kg (ppm)	5	91	81-121
Silver	mg/kg (ppm)	10	94	84-117
Cadmium	mg/kg (ppm)	10	99	89-116
Barium	mg/kg (ppm)	50	99	88-113
Lead	mg/kg (ppm)	50	101	81-120

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 201119-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	0.125	0.23	152 b	46 b	45-162	107 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	0.125	110	63-144

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123

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

Laboratory Code: 201123-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	23	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	50	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	48	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	64	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	70	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	67	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	76	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	81	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	77	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	74	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	76	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	89	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	79	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	79	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	81	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	79	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	79	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	80	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	79	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	79	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	76	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	81	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	82	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	81	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	88	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	90	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	80	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	88	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	80	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	90	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	83	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	75	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	83	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	81	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	80	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	84	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	82	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	85	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	90	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	84	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	85	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	87	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	87	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	83	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	80	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	81	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	86	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	86	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	90	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	89	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	89	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	84	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	82	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	80	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	81	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	77	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	81	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	79	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	82	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	76	20-144

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	45	44	10-146	2
Chloromethane	mg/kg (ppm)	2.5	67	65	27-133	3
Vinyl chloride	mg/kg (ppm)	2.5	73	70	22-139	4
Bromomethane	mg/kg (ppm)	2.5	82	78	38-114	5
Chloroethane	mg/kg (ppm)	2.5	77	74	20-153	4
Trichlorofluoromethane	mg/kg (ppm)	2.5	77	81	10-196	5
Acetone	mg/kg (ppm)	12.5	86	82	52-141	5
1,1-Dichloroethene	mg/kg (ppm)	2.5	84	82	47-128	2
Methylene chloride	mg/kg (ppm)	2.5	96	90	42-132	6
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	91	86	60-123	6
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	90	85	67-127	6
1,1-Dichloroethane	mg/kg (ppm)	2.5	90	88	68-115	2
2,2-Dichloropropane	mg/kg (ppm)	2.5	120	118	57-133	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	95	92	72-113	3
Chloroform	mg/kg (ppm)	2.5	91	88	66-120	3
2-Butanone (MEK)	mg/kg (ppm)	12.5	93	92	57-123	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	90	88	56-135	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	90	89	62-131	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	97	95	69-128	2
Carbon tetrachloride	mg/kg (ppm)	2.5	96	92	60-139	4
Benzene	mg/kg (ppm)	2.5	92	90	68-114	2
Trichloroethene	mg/kg (ppm)	2.5	88	85	68-114	3
1,2-Dichloropropane	mg/kg (ppm)	2.5	94	92	72-127	2
Bromodichloromethane	mg/kg (ppm)	2.5	94	92	72-130	2
Dibromomethane	mg/kg (ppm)	2.5	94	92	70-120	2
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	101	99	45-145	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	107	104	75-136	3
Toluene	mg/kg (ppm)	2.5	94	92	66-126	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	103	100	72-132	3
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	93	90	75-113	3
2-Hexanone	mg/kg (ppm)	12.5	98	97	33-152	1
1,3-Dichloropropane	mg/kg (ppm)	2.5	96	94	72-130	2
Tetrachloroethene	mg/kg (ppm)	2.5	92	90	72-114	2
Dibromochloromethane	mg/kg (ppm)	2.5	95	94	74-125	1
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	94	93	74-132	1
Chlorobenzene	mg/kg (ppm)	2.5	93	91	76-111	2
Ethylbenzene	mg/kg (ppm)	2.5	98	96	64-123	2
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	92	89	69-135	3
m,p-Xylene	mg/kg (ppm)	5	99	97	78-122	2
o-Xylene	mg/kg (ppm)	2.5	104	102	77-124	2
Styrene	mg/kg (ppm)	2.5	95	93	74-126	2
Isopropylbenzene	mg/kg (ppm)	2.5	97	95	76-127	2
Bromoform	mg/kg (ppm)	2.5	99	98	56-132	1
n-Propylbenzene	mg/kg (ppm)	2.5	103	100	74-124	3
Bromobenzene	mg/kg (ppm)	2.5	96	94	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	104	101	76-126	3
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	92	89	56-143	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	93	89	61-137	4
2-Chlorotoluene	mg/kg (ppm)	2.5	100	97	74-121	3
4-Chlorotoluene	mg/kg (ppm)	2.5	101	99	75-122	2
tert-Butylbenzene	mg/kg (ppm)	2.5	105	102	73-130	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	105	101	76-125	4
sec-Butylbenzene	mg/kg (ppm)	2.5	105	102	71-130	3
p-Isopropyltoluene	mg/kg (ppm)	2.5	99	96	70-132	3
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	95	92	75-121	3
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	93	91	74-117	2
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	95	92	76-121	3
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	90	86	61-136	5
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	101	96	70-129	5
Hexachlorobutadiene	mg/kg (ppm)	2.5	96	94	50-153	2
Naphthalene	mg/kg (ppm)	2.5	99	94	60-125	5
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	96	90	62-130	6

Date of Report: 01/23/12
Date Received: 01/11/12
Project: SOU_0789-004_20120111, F&BI 201123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 201018-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	<0.1	<0.1	nm
Aroclor 1260	mg/kg (ppm)	<0.1	<0.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	94	100	60-142	6
Aroclor 1260	mg/kg (ppm)	0.8	100	98	63-144	2

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

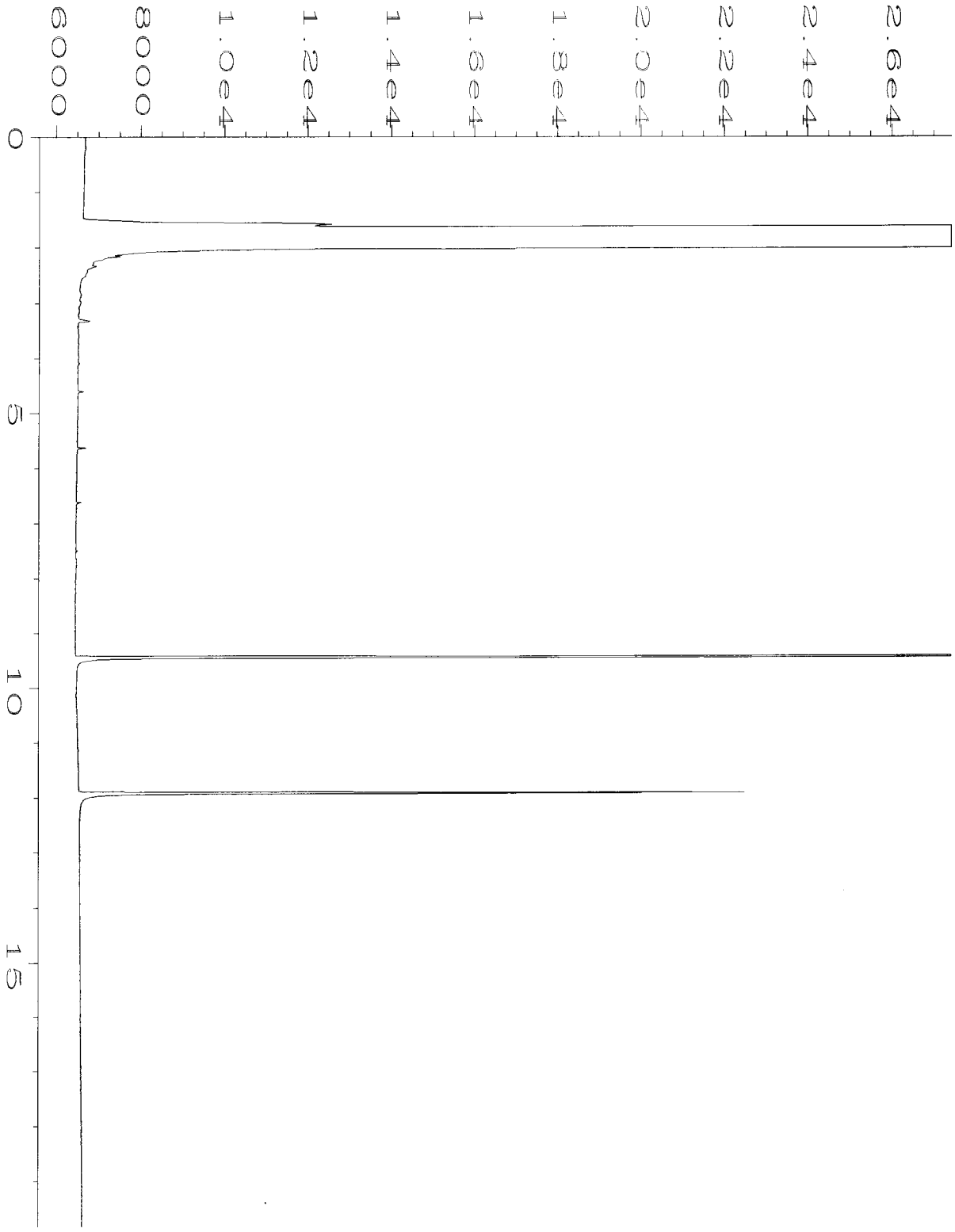
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

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

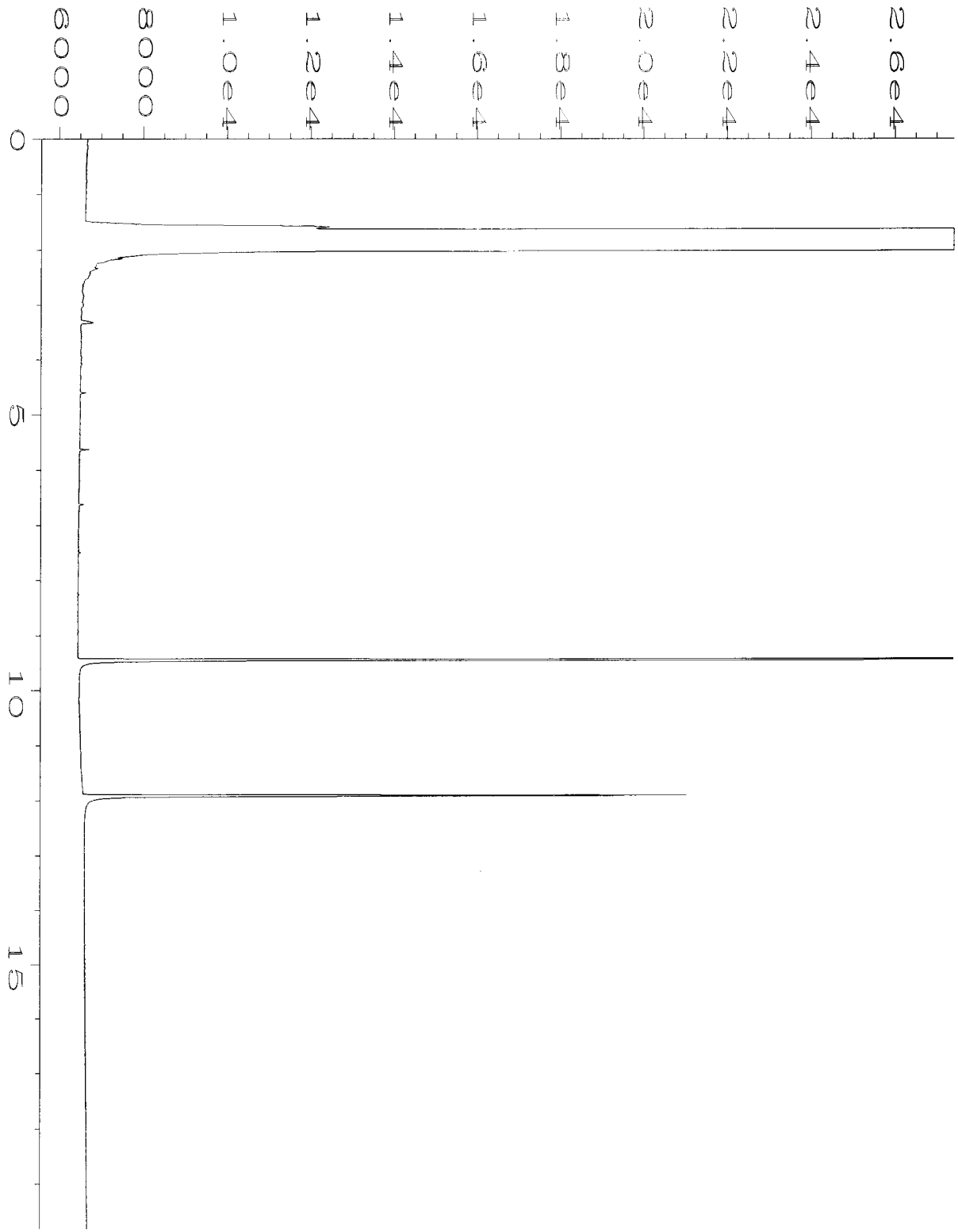
vo - The value reported fell outside the control limits established for this analyte.

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



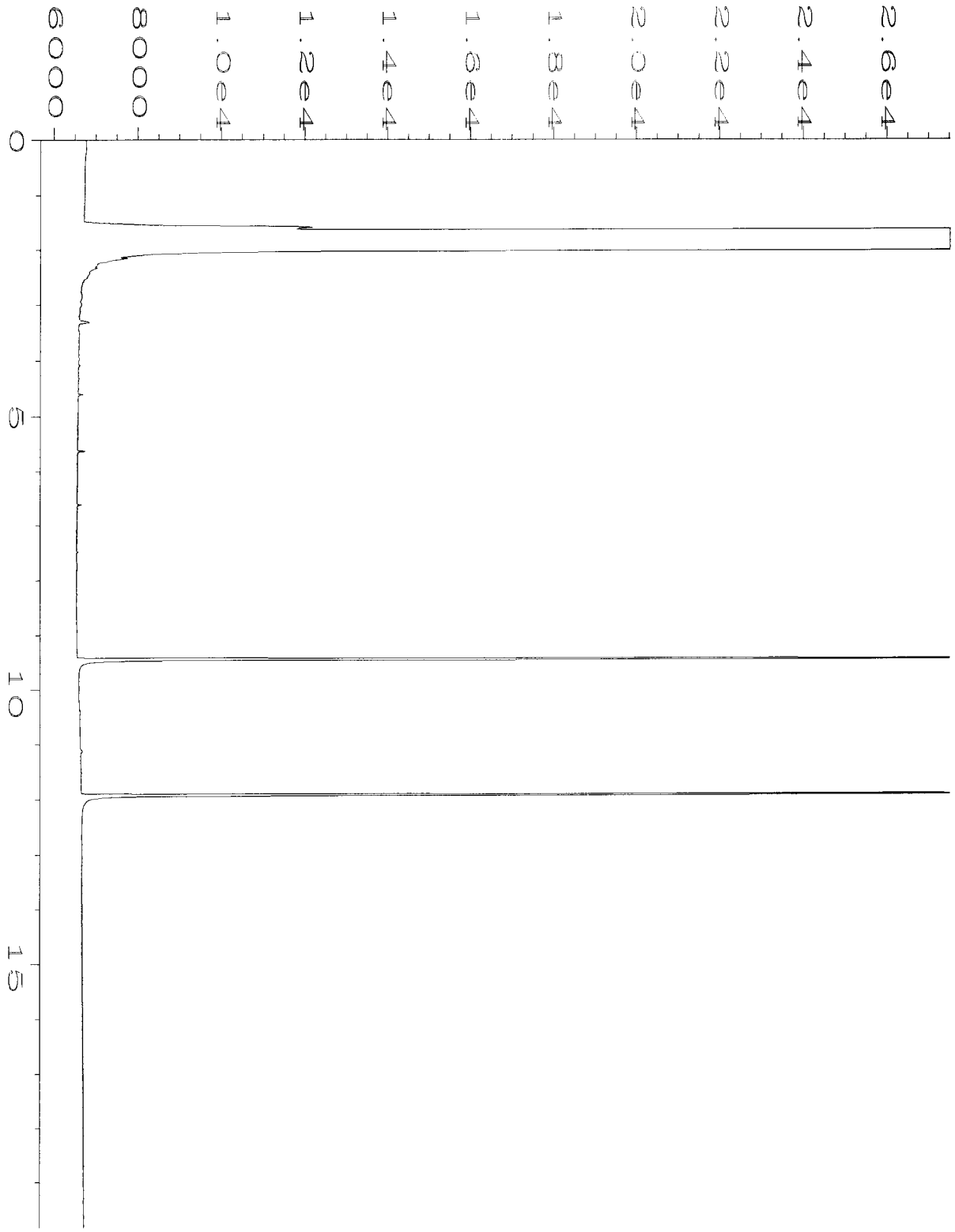
Data File Name : C:\HPCHEM\1\DATA\01-12-12\016F0301.D
Operator : ML
Instrument : GC1
Sample Name : 201123-01
Run Time Bar Code:
Acquired on : 12 Jan 12 03:45 PM
Report Created on: 13 Jan 12 09:08 AM

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 3
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



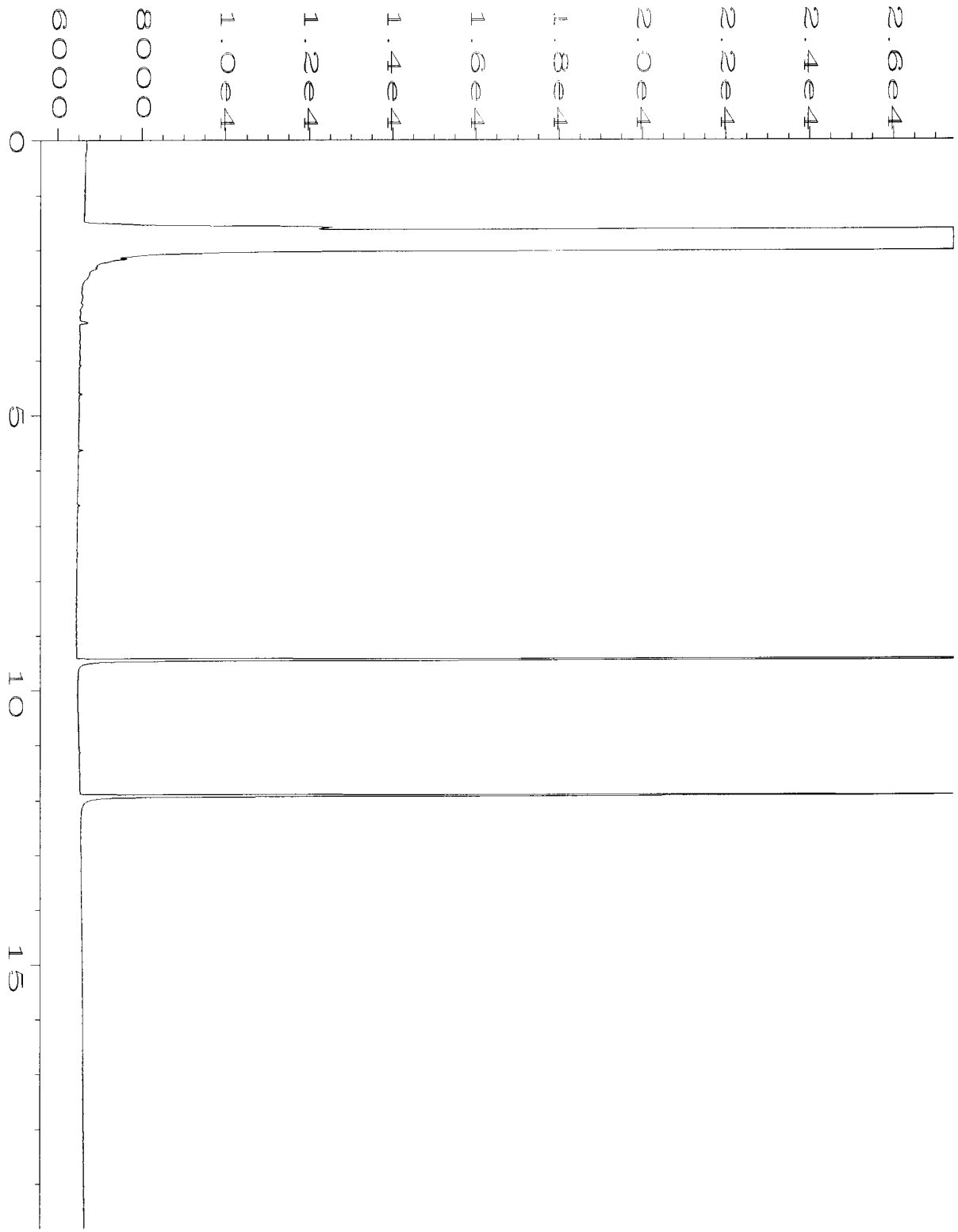
Data File Name : C:\HPCHEM\1\DATA\01-12-12\017F0301.D
Operator : ML
Instrument : GC1
Sample Name : 201123-11
Run Time Bar Code:
Acquired on : 12 Jan 12 04:12 PM
Report Created on: 13 Jan 12 09:08 AM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 3
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



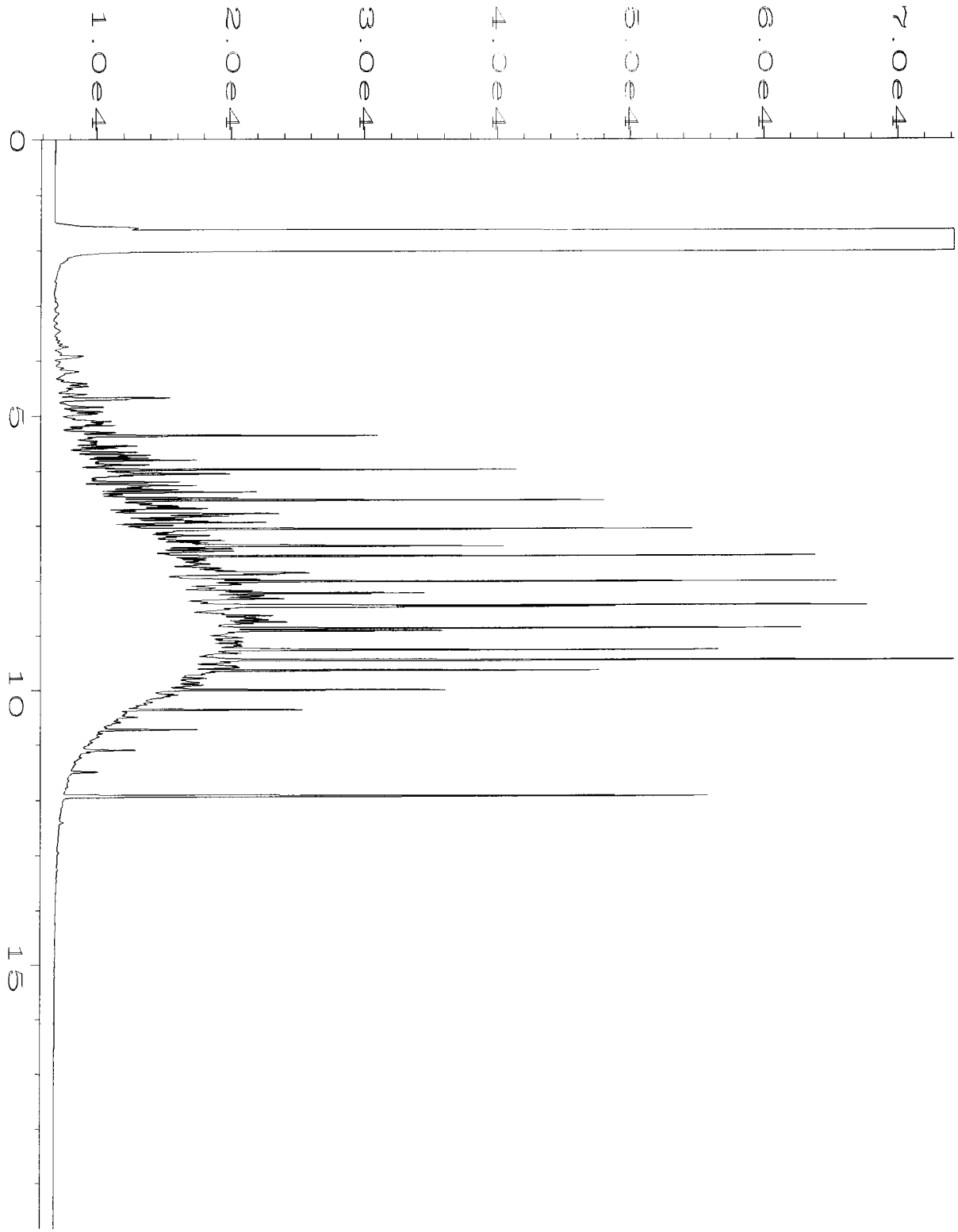
Data File Name : C:\HPCHEM\1\DATA\01-12-12\018F0501.D
Operator : ML
Instrument : GC1
Sample Name : 201123-21
Run Time Bar Code:
Acquired on : 12 Jan 12 05:33 PM
Report Created on: 13 Jan 12 09:08 AM

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\01-12-12\012F0301.D
Operator : ML
Instrument : GC1
Sample Name : 02-076 mb
Run Time Bar Code:
Acquired on : 12 Jan 12 01:59 PM
Report Created on: 13 Jan 12 09:07 AM

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 3
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\1\DATA\01-12-12\003F0201.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 WADF 37-06B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 12 Jan 12 09:13 AM	Instrument Method	: TPHD.MTH
Report Created on	: 13 Jan 12 09:07 AM	Analysis Method	: TPHD.MTH

( ) 201123

SAMPLE CHAIN OF CUSTODY ME 01/11/12

VS3/BT3

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. AMLI Avtech 0789-004

PO #

REMARKS Rob Roberts added Archers 1-11-12

GEMS Y / N

Page # 1 of 3

TURNAROUND TIME
- [x] Standard (1 Weeks)
- [ ] RUSH
- Rush charges authorized by:

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	PCBs		Notes
B01-03	B01	03	01 A-E	1-10-12	0900	Soil	5	X					X			
B01-05	"	05	02	"	0905	Soil	5									
B01-08	"	08	03	"	0915	Soil	5									
B01-10	"	10	04	"	0920	Soil	5									
B01-13	"	13	05	"	0925	Soil	5				X					
B01-15	"	15	06	"	0930	Soil	5									
B01-20	"	20	07	"	0935	Soil	5									
B01-25	"	25	08	"	0945	Soil	5									
B01-30	"	30	09	"	0955	Soil	5									
B01-35	"	35	10	"	1005	Soil	5									
B02-03	B02	03	11	"	1135	Soil	5	X					X	X		
B02-05	"	05	12	"	1140	Soil	5									
B02-08	"	08	13	"	1145	Soil	5									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	ROB ROBERTS	SES	1-11-12	12:00
Received by:	DD VD	FHBI	11	12:15
Relinquished by:				
Received by:				

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

Samples received at 2 °C

(201123

SAMPLE CHAIN OF CUSTODY ME 01/11/12

VS3/BQ3

Page # 1 of 3

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. AMLI Avtech 0789-004 | PO #

REMARKS | GEMS Y / N

TURNAROUND TIME
☒ Standard (1 Weeks)
☐ RUSH
Rush charges authorized by:

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
B02-10	B02	10	14A-E	1-10-12	1150	Soil	5									★-per RR 1/11/12 MS
B02-13		13	15		1155	Soil	5									
B02-15		15	16		1200	Soil	5									
B02-20		20	17		1205	Soil	5									≠ cancel per RR 1/11/12 MS
B02-25		25	18		1210	Soil	5									
B02-30		30	19		1215	Soil	5									
B02-35		35	20		1220	Soil	5									
B03-03	B03	03	21		1405	Soil	5	X								
B03-~~08~~ 10		~~08~~ 10	22		1~~4~~ 20	Soil	5	X	X	X	★	≠	X			
B03-13		13	23		1425	Soil	5									
B03-15		15	24		1430	Soil	5									
B03-20		20	25		1~~4~~5	Soil	5									
B03-25		25	26		1455	Soil	~~4~~ 5									

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		RUB ROBERTS	SES	1-11-12	1012:14
Received by:	Dave	DAVE	F+BE	11	12.15
Relinquished by:					
Received by:					

Samples received at 2 °C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

(201123

SAMPLE CHAIN OF CUSTODY

ME 01/11/12

VS3/BT3

Page # 3 of 7

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)	
PROJECT NAME/NO. AMLI Avtech 0789-004	PO #
REMARKS	GEMS Y / N

TURNAROUND TIME
- ☒ Standard (1 Weeks)
- ☐ RUSH
- Rush charges authorized by:

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
B03-30	B03	30	27A-E	1-10-12	1505	Soil	4									
B03-35	B03	35	28A-E	1	1515	Soil	4									

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		ROB ROBERTS	SES	1-11-12	12:00
Received by:		DAVID	F&BE	11	12:15
Relinquished by:					
Received by:					

Samples received at 2 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 8, 2013

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 3, 2013 from the SOU_0789_20130103, F&BI 301013 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
SOU0108R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 3, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20130103, F&BI 301013 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
301013-01	B103-02
301013-02	B103-07
301013-03	B103-11
301013-04	B103-16
301013-05	B103-20
301013-06	B103-24
301013-07	B103-29
301013-08	B103-33
301013-09	B103-35
301013-10	B104-04
301013-11	B104-09
301013-12	B104-17
301013-13	B104-22
301013-14	B104-26
301013-15	B104-30
301013-16	B104-35

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B103-07	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-02
Date Analyzed:	01/03/13	Data File:	010323.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	100	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B103-16	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-04
Date Analyzed:	01/03/13	Data File:	010324.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

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

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B103-24	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-06
Date Analyzed:	01/03/13	Data File:	010325.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	100	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B103-35	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-09
Date Analyzed:	01/03/13	Data File:	010326.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	100	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B104-04	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-10
Date Analyzed:	01/03/13	Data File:	010327.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	102	55	145
4-Bromofluorobenzene	101	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B104-09	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-11
Date Analyzed:	01/03/13	Data File:	010328.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	100	65	139

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	0.12
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B104-22	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-13
Date Analyzed:	01/03/13	Data File:	010329.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	101	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B104-30	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-15
Date Analyzed:	01/03/13	Data File:	010330.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	101	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B104-35	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	301013-16
Date Analyzed:	01/03/13	Data File:	010331.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	102	55	145
4-Bromofluorobenzene	101	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/03/13	Lab ID:	03-004 mb
Date Analyzed:	01/03/13	Data File:	010314.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	101	65	139

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	<0.03
Tetrachloroethene	<0.025

Date of Report: 01/08/13
Date Received: 01/03/13
Project: SOU_0789_20130103, F&BI 301013

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

Laboratory Code: 301013-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	59	10-138
Chloroethane	mg/kg (ppm)	2.5	<0.5	71	10-176
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	72	10-156
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	79	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	81	19-140
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	84	25-135
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	83	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	85	10-156
Trichloroethene	mg/kg (ppm)	2.5	<0.03	83	21-139
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	84	20-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	60	59	22-139	2
Chloroethane	mg/kg (ppm)	2.5	77	71	20-153	8
1,1-Dichloroethene	mg/kg (ppm)	2.5	80	81	47-128	1
Methylene chloride	mg/kg (ppm)	2.5	87	72	42-132	19
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	85	79	67-127	7
1,1-Dichloroethane	mg/kg (ppm)	2.5	87	81	68-115	7
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	84	72-113	8
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	93	83	56-135	11
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	92	85	62-131	8
Trichloroethene	mg/kg (ppm)	2.5	90	83	68-114	8
Tetrachloroethene	mg/kg (ppm)	2.5	90	84	72-114	7

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

301013

SAMPLE CHAIN OF CUSTODY

ME 01/03/13

VS3

Send Report To Rob Roberts
Company SES
Address 2811 Fairview Ave E Suite 2000
City, State, ZIP Seattle WA 98102
Phone # 206-306-1900 Fax # 206 306-1907

SAMPLERS (signature)

PROJECT NAME/NO. AvTech 0789

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Cyanide, Total	CVOC's	Notes
B103-02	B103	02	01 A-D	1-2-13	0915	Soil	4							X		Hold
B103-07		07	02		0920	Soil	4							X	X	~~Hold~~
B103-11		11	03		0930	Soil	4							X		Hold
B103-16		16	04		0935	Soil	4							X	X	~~Hold~~
B103-20		20	05		0945	Soil	4							X		Hold
B103-24		24	06		0950	Soil	4							X	X	~~Hold~~
B103-29		29	07		0955	Soil	4							X		Hold
B103-33		33	08		1000	Soil	4									Hold
B103-35		35	09		1005	Soil	4								X	~~Hold~~
B104-04	B104	04	10		1255	Soil	4								X	Hold
B104-09		09	11		1300	Soil	4								X	~~Hold~~
B104-17		17	12		1310	Soil	4									Hold
B104-22		22	13		1315	Soil	4								X	~~Hold~~

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A Hodgson	SES	1-3-13	0900
Received by:	Nhan Phan	FEBT	1-3-13	0900
Relinquished by:				
Received by:				

Samples received at 2 °C

301013

SAMPLE CHAIN OF CUSTODY

ME 01/03/13

VS3

Page # 2 of 2

Send Report To _____

Company _____

Address _____ (See Page 1)

City, State, ZIP _____

Phone # _____ Fax # _____

SAMPLERS (signature)

PROJECT NAME/NO. Autoclub 0789

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH _____

Rush charges authorized by: _____

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Cu, Zn		Notes
B104-26	B104	26	14	1-2-13	1320	Soil	4									Hold
B104-30	B104	30	15	"	1330	Soil	4							X		Hold
B104-35	B104	35	16	"	1335	Soil	4							X		Hold

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Hardenger	SES	1-3-13	0900
Received by:	Nhan Phan	FCBI	1-3-13	0900
Relinquished by:				
Received by:				

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

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 2 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 11, 2013

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 January 3, 2013 from the SOU_0789_20130103, F&BI 301013 project. There are 6 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
SOU0111R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 3, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20130103, F&BI 301013 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
301013-01	B103-02
301013-02	B103-07
301013-03	B103-11
301013-04	B103-16
301013-05	B103-20
301013-06	B103-24
301013-07	B103-29
301013-08	B103-33
301013-09	B103-35
301013-10	B104-04
301013-11	B104-09
301013-12	B104-17
301013-13	B104-22
301013-14	B104-26
301013-15	B104-30
301013-16	B104-35

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B103-11	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/08/13	Lab ID:	301013-03
Date Analyzed:	01/08/13	Data File:	010821.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	100	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B104-17	Client:	SoundEarth Strategies
Date Received:	01/03/13	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/08/13	Lab ID:	301013-12
Date Analyzed:	01/08/13	Data File:	010822.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	101	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20130103, F&BI 301013
Date Extracted:	01/08/13	Lab ID:	03-0010 mb
Date Analyzed:	01/08/13	Data File:	010820.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

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

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	<0.03
Tetrachloroethene	<0.025

Date of Report: 01/11/13
Date Received: 01/03/13
Project: SOU_0789_20130103, F&BI 301013

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

Laboratory Code: 301059-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	45	10-138
Chloroethane	mg/kg (ppm)	2.5	<0.5	91	10-176
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	64	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	72	10-156
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	73	19-140
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	79	25-135
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	77	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	70	10-156
Trichloroethene	mg/kg (ppm)	2.5	<0.03	67	21-139
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	47	20-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	81	78	22-139	4
Chloroethane	mg/kg (ppm)	2.5	92	89	20-153	3
1,1-Dichloroethene	mg/kg (ppm)	2.5	103	94	47-128	9
Methylene chloride	mg/kg (ppm)	2.5	94	98	42-132	4
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	102	100	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	100	99	68-115	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	107	103	72-113	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	103	101	56-135	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	109	107	62-131	2
Trichloroethene	mg/kg (ppm)	2.5	106	104	68-114	2
Tetrachloroethene	mg/kg (ppm)	2.5	105	102	72-114	3

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

301013

SAMPLE CHAIN OF CUSTODY

ME 01/03/13

VS3

Send Report To Rob Roberts
Company SES
Address 2811 Fairview Ave E Suite 2000
City, State, ZIP Seattle WA 98102
Phone # 206-306-1900 Fax # 206 306-1907

SAMPLERS (signature)

PROJECT NAME/NO.: Antech 0789

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	RCRA-8 Metals	Cyanide	Lead	cVOC's	#-per RR 1/8/13 Notes MK
B103-02	B103	02	01 A-D	1-2-13	0915	Soil	4							X			Hold
B103-07		07	02		0920	Soil	4							X		X	~~Hold~~
B103-11		11	03		0930	Soil	4							X		X	Hold
B103-16		16	04		0935	Soil	4							X		X	~~Hold~~
B103-20		20	05		0945	Soil	4							X			Hold
B103-24		24	06		0950	Soil	4							X		X	~~Hold~~
B103-29		29	07		0955	Soil	4							X			Hold
B103-33		33	08		1000	Soil	4										Hold
B103-35		35	09		1005	Soil	4									X	~~Hold~~
B104-04	B104	04	10		1250	Soil	4									X	Hold
B104-09		09	11		1300	Soil	4									X	~~Hold~~
B104-17		17	12		1310	Soil	4									X	Hold
B104-22		22	13		1315	Soil	4									X	~~Hold~~

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A Hardaya	SES	1-3-13	0900
Received by:	Nhan Phan	FEBT	1-3-13	0900
Relinquished by:				
Received by:				

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

Samples received at 2 °C

301013

SAMPLE CHAIN OF CUSTODY

ME 01/03/13

VS3

Page # 2 of 2

Send Report To

Company

Address See Page 1

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO.
Antek
0789

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cPAH's		Notes
B104-26	B104	26	14	1-2-13	1320	Soil	4									Hold
B104-30	B104	30	15	"	1330	Soil	4							X		Hold
B104-35	B104	35	16	"	1335	Soil	4							X		Hold

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert A. Hardenger	SES	1-3-13	0900
Received by:		Nhan Phan	FcBT	1-3-13	0900
Relinquished by:					
Received by:					

Samples received at 2 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

December 28, 2012

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 December 21, 2012 from the SOU_0789_20121221, F&BI 212391 project. There are 15 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
SOU1228R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 21, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20121221, F&BI 212391 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
212391-01	B101-03
212391-02	B101-07
212391-03	B101-11
212391-04	B101-15
212391-05	B101-19
212391-06	B101-23
212391-07	B101-28
212391-08	B102-05
212391-09	B102-10
212391-10	B102-15
212391-11	B102-20
212391-12	B102-25
212391-13	B102-30
212391-14	B102-35
212391-15	B101-31
212391-16	B101-34

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B101-07	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-02
Date Analyzed:	12/26/12	Data File:	122622.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	96	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B101-15	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-04
Date Analyzed:	12/26/12	Data File:	122623.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	97	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B101-23	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-06
Date Analyzed:	12/26/12	Data File:	122624.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

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

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B101-28	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-07
Date Analyzed:	12/26/12	Data File:	122625.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	98	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B102-10	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-09
Date Analyzed:	12/26/12	Data File:	122626.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	97	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B102-15	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-10
Date Analyzed:	12/26/12	Data File:	122627.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	99	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B102-20	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-11
Date Analyzed:	12/26/12	Data File:	122628.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	98	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B102-25	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-12
Date Analyzed:	12/26/12	Data File:	122629.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B102-30	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-13
Date Analyzed:	12/26/12	Data File:	122630.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B102-35	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-14
Date Analyzed:	12/26/12	Data File:	122631.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	98	50	150

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B101-34	Client:	SoundEarth Strategies
Date Received:	12/21/12	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	212391-16
Date Analyzed:	12/26/12	Data File:	122632.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

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

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20121221, F&BI 212391
Date Extracted:	12/26/12	Lab ID:	02-2315 mb
Date Analyzed:	12/26/12	Data File:	122612.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	98	50	150

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	<0.03
Tetrachloroethene	<0.025

Date of Report: 12/28/12
Date Received: 12/21/12
Project: SOU_0789_20121221, F&BI 212391

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

Laboratory Code: 212402-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	26	10-91
Chloroethane	mg/kg (ppm)	2.5	<0.5	40	10-101
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	45	11-103
Methylene chloride	mg/kg (ppm)	2.5	<0.5	54	14-128
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	54	13-112
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	57	23-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	62	25-120
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	62	22-124
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	59	27-112
Trichloroethene	mg/kg (ppm)	2.5	<0.03	58	30-112
Tetrachloroethene	mg/kg (ppm)	2.5	<0.03	63	32-107

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	84	73	42-107	14
Chloroethane	mg/kg (ppm)	2.5	81	74	50-115	9
1,1-Dichloroethene	mg/kg (ppm)	2.5	102	91	65-110	11
Methylene chloride	mg/kg (ppm)	2.5	106	97	62-119	9
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	104	95	71-113	9
1,1-Dichloroethane	mg/kg (ppm)	2.5	103	94	76-109	9
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	105	96	77-110	9
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	104	94	80-109	10
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	109	100	72-116	9
Trichloroethene	mg/kg (ppm)	2.5	100	91	72-107	9
Tetrachloroethene	mg/kg (ppm)	2.5	105	99	77-110	6

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

212391

SAMPLE CHAIN OF CUSTODY ME 12/21/12

USB

Send Report To Rob Roberts

Company SES

Address 2811 Fairview ave E Suite 2000

City, State, ZIP Seattle WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. Aulick 0789

PO #

REMARKS

GEMS Y / N

Page # 1 of 2

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cVOC's		Notes (X - per RR 12/26/12 MG)
B101-05	B101	05	01A-D	12-21-12	0935	Soil	4									Hold
B101-08		08	02		0940	Soil	4							X		Hold
B101-11		11	03		0950	Soil	4									Hold
B101-15		15	04		0955	Soil	4							X		Hold
B101-19		19	05		1000	Soil	4									Hold
B101-23		23	06		1010	Soil	4							X		Hold
B101-28		28	07		1015	Soil	4							X		Hold
B102-05	B102	05	08		1245	Soil	4									Hold
B102-10		10	09		1250	Soil	4							X		Hold
B102-15		15	10		1300	Soil	4							X		Hold
B102-20			11		1305	Soil	4							X		Hold
B102-25			12		1310	Soil	4							X		Hold
B102-30			13		1315	Soil	4							X		Hold

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Warren Rakiewicz	SES	12/21/12	1400
Received by:		Nhan Phan	FEBI	12/21/12	1400
Relinquished by:					
Received by:			Samples received at 4 °C		

FORMS\COC\SESGEMSR1.DOC (Revision 1)

212391

SAMPLE CHAIN OF CUSTODY

ME 12/21/12

VS3

Page # 2 of 2

Send Report To

Company See fax !

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO.: Antech 0789

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	CVOC'S		Notes
B102-35	B102	35	14A-D	12-21-12	1320	Soil	4							X		Hold
B101-31			15	12-21-12	1025	Soil	4								*	Added at lab
B101-34			16	12-21-12	1030	Soil	4							X		(NP) 12/21/12

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Warren Rajkovich	SES	12/21/12	1400
Received by:		Nhan Phan	FeBI	12/21/12	1400
Relinquished by:					
Received by:					

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

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

December 27, 2012

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 December 20, 2012 from the SOU_0789_20121220, F&BI 212363 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
SOU1227R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 20, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20121220, F&BI 212363 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
212363-01	P101-02
212363-02	P102-02
212363-03	P102-04
212363-04	P102-05
212363-05	P103-02
212363-06	P103-04
212363-07	P103-06
212363-08	P104-02
212363-09	P104-04
212363-10	P105-02
212363-11	P105-04
212363-12	P105-06
212363-13	P106-01
212363-14	P107-01

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P101-02	Client:	SoundEarth Strategies
Date Received:	12/20/12	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	212363-01
Date Analyzed:	12/21/12	Data File:	122111.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	96	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P102-05	Client:	SoundEarth Strategies
Date Received:	12/20/12	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	212363-04
Date Analyzed:	12/21/12	Data File:	122115.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	98	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P103-06	Client:	SoundEarth Strategies
Date Received:	12/20/12	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	212363-07
Date Analyzed:	12/21/12	Data File:	122116.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	96	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P104-04	Client:	SoundEarth Strategies
Date Received:	12/20/12	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	212363-09
Date Analyzed:	12/21/12	Data File:	122117.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

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

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P105-06	Client:	SoundEarth Strategies
Date Received:	12/20/12	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	212363-12
Date Analyzed:	12/21/12	Data File:	122118.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

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

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P106-01	Client:	SoundEarth Strategies
Date Received:	12/20/12	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	212363-13
Date Analyzed:	12/21/12	Data File:	122119.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

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

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P107-01	Client:	SoundEarth Strategies
Date Received:	12/20/12	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	212363-14
Date Analyzed:	12/21/12	Data File:	122120.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	98	65	139

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	<0.03
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20121220, F&BI 212363
Date Extracted:	12/21/12	Lab ID:	02-2309 mb
Date Analyzed:	12/21/12	Data File:	122109.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	98	65	139

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	<0.03
Tetrachloroethene	<0.025

Date of Report: 12/27/12
Date Received: 12/20/12
Project: SOU_0789_20121220, F&BI 212363

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

Laboratory Code: 212363-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	86	10-138
Chloroethane	mg/kg (ppm)	2.5	<0.5	83	10-176
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	96	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	89	10-156
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	86	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	90	19-140
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	87	25-135
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	94	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	87	10-156
Trichloroethene	mg/kg (ppm)	2.5	<0.03	84	21-139
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	94	20-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	93	95	22-139	2
Chloroethane	mg/kg (ppm)	2.5	93	92	20-153	1
1,1-Dichloroethene	mg/kg (ppm)	2.5	99	99	47-128	0
Methylene chloride	mg/kg (ppm)	2.5	93	94	42-132	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	93	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	95	97	68-115	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	93	72-113	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	97	99	56-135	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	93	96	62-131	3
Trichloroethene	mg/kg (ppm)	2.5	86	89	68-114	3
Tetrachloroethene	mg/kg (ppm)	2.5	94	98	72-114	4

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

212363

SAMPLE CHAIN OF CUSTODY

ME 12/20/12

VSY

Send Report To Rob Roberts

Company SES

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. Antech 0789

PO #

REMARKS

GEMS Y / N

Page # 1 of 2

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cyanide		Notes
P101-02	P101	02	01A-D	12-20-12	0935	Soil	4							X		X-per RL 12/20/12 mc. Hold
P102-02	P102	02	02		0945	Soil	4									Hold
P102-04		04	03		0950	Soil	4									Hold
P102-05		05	04		1000	Soil	4							X		Hold
P103-02	P103	02	05		1010	Soil	4									Hold
P103-04		04	06		1015	Soil	4									Hold
P103-06		06	07		1020	Soil	4							X		Hold
P104-02	P104	02	08		1035	Soil	4									Hold
P104-04	P104	04	09		1040	Soil	4							X		Hold
P105-02	P105	02	10		1100	Soil	4									Hold
P105-04		04	11		1105	Soil	4									Hold
P105-06		06	12		1110	Soil	4							X		Hold
P106-01	P106	01	13		1210	Soil	4							X		Hold

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Hansburger	SES	12-20-12	1315
Received by:	Michael Erdahl	FEBruya	1	1
Relinquished by:				
Received by:		Samples received at 4 °C		

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

212363

SAMPLE CHAIN OF CUSTODY

ME 12/20/12

VS4

Send Report To [redacted]

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature) [redacted]

PROJECT NAME/NO. Antwin 0785

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	Cu, Cr		Notes
P107-01	P107	01	14 A-D	12-20-12	1220	Soil	4							X		~~LAB~~

ANALYSES REQUESTED

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [redacted]	Robert A. Hardman	SES	12-20-12	1315
Received by: [redacted]	Michael Echl	FB	1	1
Relinquished by:		Samples received at		4 or
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 25, 2012

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 17, 2012 from the SOU_0789_20120117, F&BI 201188 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
SOU0125R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 17, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120117, F&BI 201188 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201188-01	MW05-20120117
201188-02	MW04-20120117
201188-03	MW01-20120117
201188-04	MW99-20120117

The 8260C vinyl chloride concentrations were flagged due to hydrochloric acid preservation per EPA SW-846 table 4-1.

All other quality control requirements were acceptable.

Date of Report: 01/25/12
Date Received: 01/17/12
Project: SOU_0789_20120117, F&BI 201188
Date Extracted: 01/19/12
Date Analyzed: 01/20/12

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
MW01-20120117 201188-03	<50	<250	104
Method Blank 02-091 MB2	<50	<250	102

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW05-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/18/12	Lab ID:	201188-01
Date Analyzed:	01/19/12	Data File:	201188-01.039
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	107	60	125
Indium	102	60	125
Holmium	102	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Arsenic	5.31
Selenium	3.55
Silver	<1
Cadmium	<1
Barium	22.6
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW04-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/18/12	Lab ID:	201188-02
Date Analyzed:	01/19/12	Data File:	201188-02.040
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	109	60	125
Indium	108	60	125
Holmium	107	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	18.0
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	4.33
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW01-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/18/12	Lab ID:	201188-03
Date Analyzed:	01/19/12	Data File:	201188-03.041
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	110	60	125
Indium	109	60	125
Holmium	109	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.58
Arsenic	1.43
Selenium	<1
Silver	<1
Cadmium	<1
Barium	3.94
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW99-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/18/12	Lab ID:	201188-04
Date Analyzed:	01/19/12	Data File:	201188-04.042
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	110	60	125
Indium	107	60	125
Holmium	105	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	18.6
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	4.65
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/18/12	Lab ID:	I2-56 mb
Date Analyzed:	01/19/12	Data File:	I2-56 mb.026
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	109	60	125
Indium	107	60	125
Holmium	105	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 01/25/12
Date Received: 01/17/12
Project: SOU_0789_20120117, F&BI 201188
Date Extracted: 01/20/12
Date Analyzed: 01/24/12

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Dissolved Mercury
MW05-20120117 201188-01	<0.1
MW04-20120117 201188-02	<0.1
MW01-20120117 201188-03	<0.1
MW99-20120117 201188-04	<0.1
Method Blank	<0.1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW05-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/20/12	Lab ID:	201188-01
Date Analyzed:	01/20/12	Data File:	012015.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

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

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2 pr	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	3.3	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/20/12	Lab ID:	201188-02
Date Analyzed:	01/20/12	Data File:	012016.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

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

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2 pr	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	110	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/20/12	Lab ID:	201188-03
Date Analyzed:	01/20/12	Data File:	012017.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	103	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99-20120117	Client:	SoundEarth Strategies
Date Received:	01/17/12	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/20/12	Lab ID:	201188-04
Date Analyzed:	01/20/12	Data File:	012018.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

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

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2 pr	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	120	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120117, F&BI 201188
Date Extracted:	01/20/12	Lab ID:	02-0054 mb
Date Analyzed:	01/20/12	Data File:	012012.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	101	60	133

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

Date of Report: 01/25/12
Date Received: 01/17/12
Project: SOU_0789_20120117, F&BI 201188

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	103	107	63-142	4

Date of Report: 01/25/12
Date Received: 01/17/12
Project: SOU_0789_20120117, F&BI 201188

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201189-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	ug/L (ppb)	20	<1	97	99	67-132	2
Arsenic	ug/L (ppb)	10	<1	106	107	56-167	1
Selenium	ug/L (ppb)	5	<1	105	108	54-170	3
Silver	ug/L (ppb)	5	<1	95	97	66-121	2
Cadmium	ug/L (ppb)	5	<1	102	103	86-118	1
Barium	ug/L (ppb)	50	13.0	102 b	106 b	63-133	4 b
Lead	ug/L (ppb)	10	1.16	96	98	76-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	101	66-135
Arsenic	ug/L (ppb)	10	104	55-128
Selenium	ug/L (ppb)	5	104	59-134
Silver	ug/L (ppb)	5	103	64-136
Cadmium	ug/L (ppb)	5	104	66-135
Barium	ug/L (ppb)	50	104	66-133
Lead	ug/L (ppb)	10	101	67-135

Date of Report: 01/25/12
Date Received: 01/17/12
Project: SOU_0789_20120117, F&BI 201188

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Laboratory Code: 201188-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	ug/L (ppb)	0.5	<0.1	103	106	48-160	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	ug/L (ppb)	0.5	105	79-126

Date of Report: 01/25/12
Date Received: 01/17/12
Project: SOU_0789_20120117, F&BI 201188

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

Laboratory Code: 201188-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	96	10-172
Chloromethane	ug/L (ppb)	50	<10	91	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	94	36-166
Bromomethane	ug/L (ppb)	50	<1	93	47-169
Chloroethane	ug/L (ppb)	50	<1	98	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	99	44-165
Acetone	ug/L (ppb)	250	<10	96	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	93	60-136
Methylene chloride	ug/L (ppb)	50	<5	89	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	102	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	91	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	97	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	103	71-127
Chloroform	ug/L (ppb)	50	<1	94	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	110	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	92	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	102	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	108	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	100	56-152
Benzene	ug/L (ppb)	50	<0.35	104	76-125
Trichloroethene	ug/L (ppb)	50	3.3	97	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	99	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	99	61-150
Dibromomethane	ug/L (ppb)	50	<1	97	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	112	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	101	72-132
Toluene	ug/L (ppb)	50	<1	101	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	100	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	96	68-131
2-Hexanone	ug/L (ppb)	250	<10	105	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	101	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	100	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	98	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	69-134
Chlorobenzene	ug/L (ppb)	50	<1	94	77-122
Ethylbenzene	ug/L (ppb)	50	<1	103	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	95	73-137
m,p-Xylene	ug/L (ppb)	100	<2	106	69-135
o-Xylene	ug/L (ppb)	50	<1	100	68-137
Styrene	ug/L (ppb)	50	<1	100	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	100	65-142
Bromoform	ug/L (ppb)	50	<1	106	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	107	58-144
Bromobenzene	ug/L (ppb)	50	<1	105	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	108	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	92	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	96	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	106	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	109	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	97	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	97	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	104	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	96	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	100	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	97	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	93	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	77	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	91	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	89	60-143
Naphthalene	ug/L (ppb)	50	<1	84	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	97	69-148

Date of Report: 01/25/12
Date Received: 01/17/12
Project: SOU_0789_20120117, F&BI 201188

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	98	98	25-158	0
Chloromethane	ug/L (ppb)	50	96	97	45-156	1
Vinyl chloride	ug/L (ppb)	50	100	102	50-154	2
Bromomethane	ug/L (ppb)	50	99	102	55-143	3
Chloroethane	ug/L (ppb)	50	100	109	58-146	9
Trichlorofluoromethane	ug/L (ppb)	50	98	96	50-150	2
Acetone	ug/L (ppb)	250	95	95	60-155	0
1,1-Dichloroethene	ug/L (ppb)	50	94	94	67-136	0
Methylene chloride	ug/L (ppb)	50	83	85	39-148	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	107	110	64-147	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	95	96	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	93	96	79-121	3
2,2-Dichloropropane	ug/L (ppb)	50	109	112	55-143	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	111	80-123	4
Chloroform	ug/L (ppb)	50	96	98	80-121	2
2-Butanone (MEK)	ug/L (ppb)	250	112	112	57-149	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	90	92	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	104	105	83-130	1
1,1-Dichloropropene	ug/L (ppb)	50	112	112	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	102	103	75-158	1
Benzene	ug/L (ppb)	50	109	110	69-134	1
Trichloroethene	ug/L (ppb)	50	100	101	80-120	1
1,2-Dichloropropane	ug/L (ppb)	50	102	105	77-123	3
Bromodichloromethane	ug/L (ppb)	50	99	102	81-133	3
Dibromomethane	ug/L (ppb)	50	100	102	82-125	2
4-Methyl-2-pentanone	ug/L (ppb)	250	115	116	70-140	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	110	113	82-132	3
Toluene	ug/L (ppb)	50	103	106	72-122	3
trans-1,3-Dichloropropene	ug/L (ppb)	50	103	105	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	98	100	75-124	2
2-Hexanone	ug/L (ppb)	250	105	105	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	102	106	76-126	4
Tetrachloroethene	ug/L (ppb)	50	106	109	76-121	3
Dibromochloromethane	ug/L (ppb)	50	101	104	84-133	3
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	102	105	82-125	3
Chlorobenzene	ug/L (ppb)	50	98	99	83-114	1
Ethylbenzene	ug/L (ppb)	50	107	109	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	97	99	84-127	2
m,p-Xylene	ug/L (ppb)	100	109	112	83-125	3
o-Xylene	ug/L (ppb)	50	103	106	86-121	3
Styrene	ug/L (ppb)	50	102	103	85-127	1
Isopropylbenzene	ug/L (ppb)	50	101	104	87-122	3
Bromoform	ug/L (ppb)	50	107	111	74-136	4
n-Propylbenzene	ug/L (ppb)	50	110	112	74-126	2
Bromobenzene	ug/L (ppb)	50	109	112	80-121	3
1,3,5-Trimethylbenzene	ug/L (ppb)	50	111	113	80-126	2
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	93	94	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	94	95	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	109	111	77-127	2
4-Chlorotoluene	ug/L (ppb)	50	110	113	78-128	3
tert-Butylbenzene	ug/L (ppb)	50	101	103	85-127	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	99	101	82-125	2
sec-Butylbenzene	ug/L (ppb)	50	106	108	80-125	2
p-Isopropyltoluene	ug/L (ppb)	50	98	100	82-127	2
1,3-Dichlorobenzene	ug/L (ppb)	50	101	105	85-116	4
1,4-Dichlorobenzene	ug/L (ppb)	50	99	102	84-121	3
1,2-Dichlorobenzene	ug/L (ppb)	50	96	99	85-116	3
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	79	78	57-141	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	97	98	72-130	1
Hexachlorobutadiene	ug/L (ppb)	50	96	93	53-141	3
Naphthalene	ug/L (ppb)	50	87	88	64-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	100	102	65-136	2

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

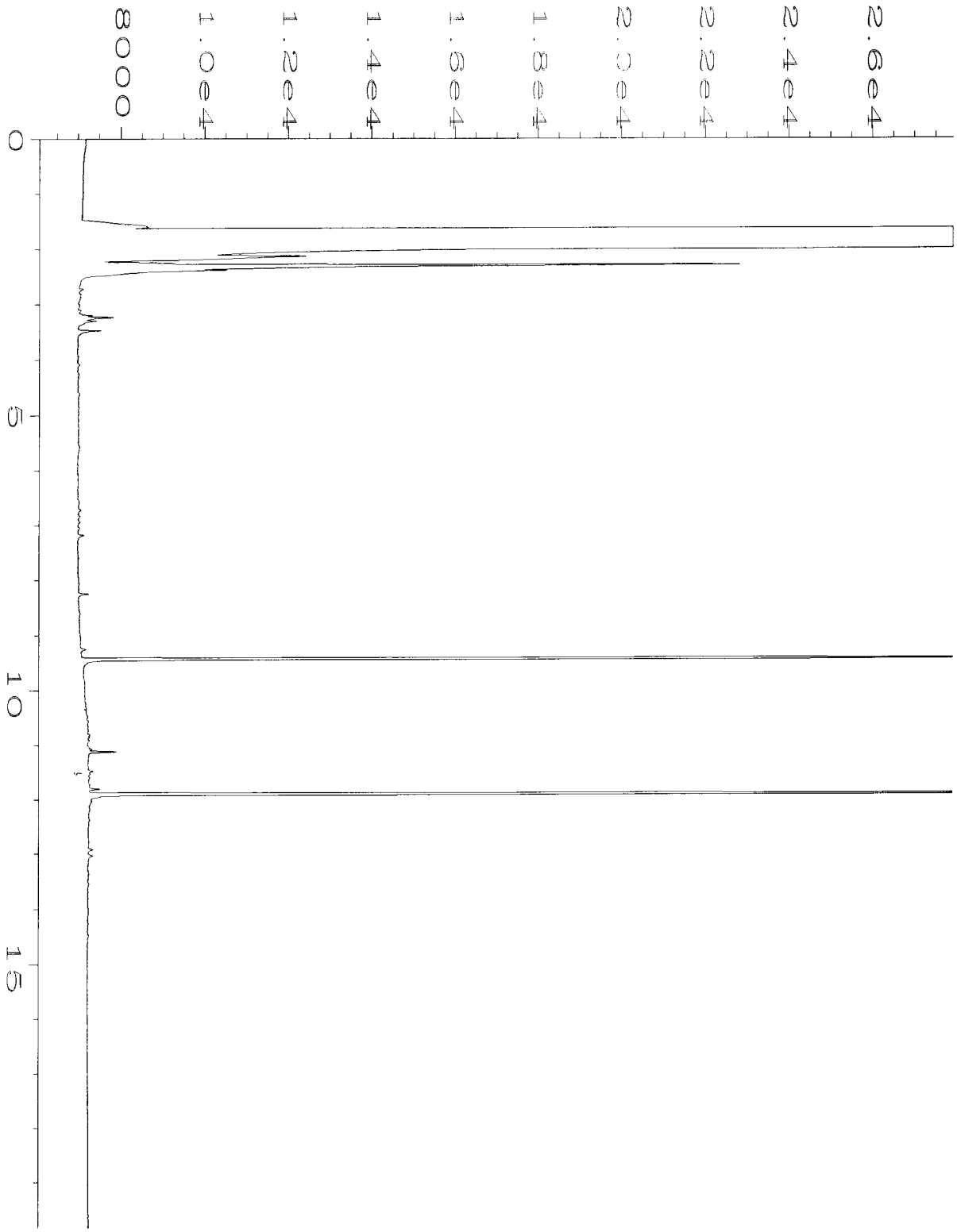
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

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

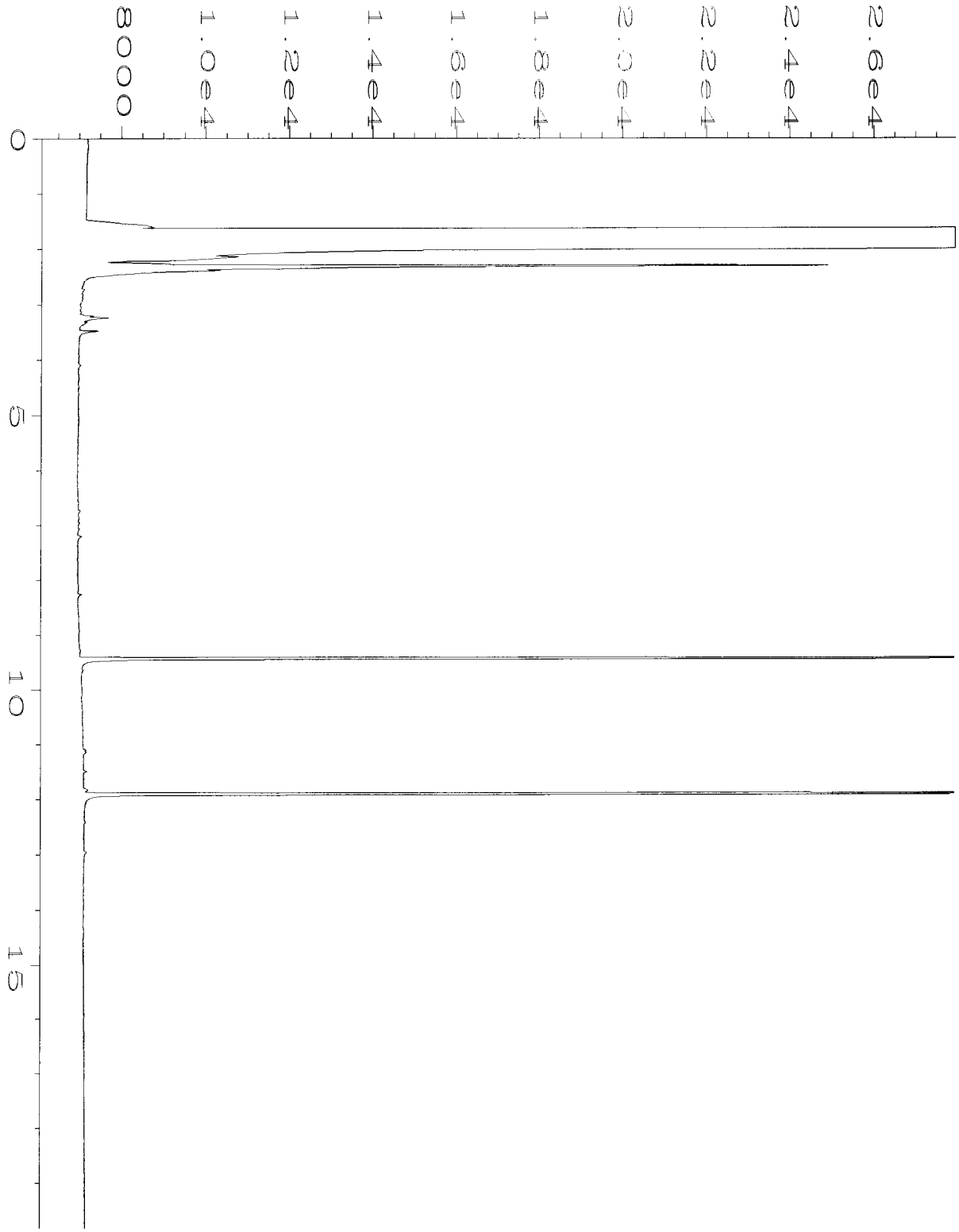
vo - The value reported fell outside the control limits established for this analyte.

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



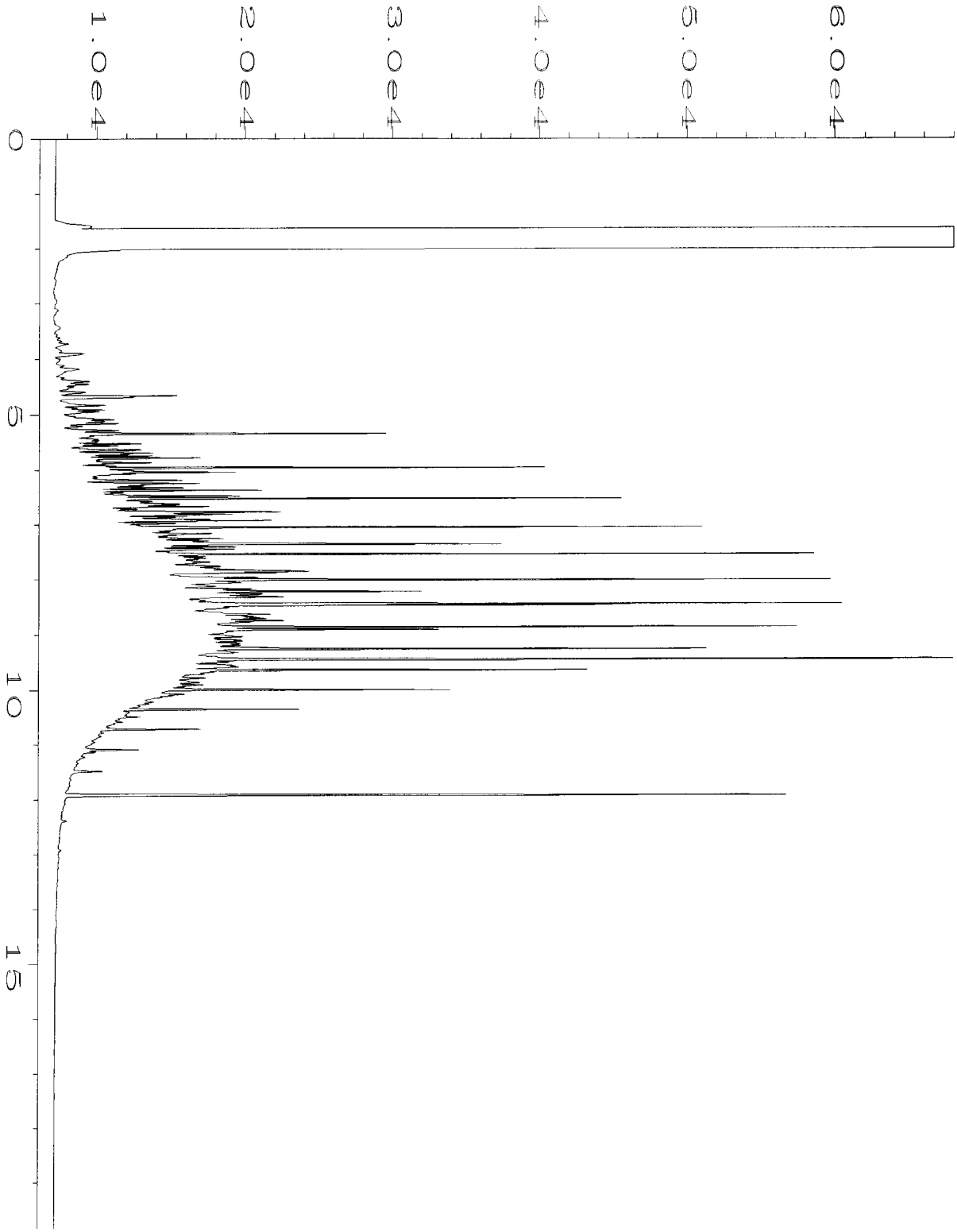
Data File Name : C:\HPCHEM\1\DATA\01-20-12\010F0301.D
Operator : ML
Instrument : GC1
Sample Name : 201188-03
Run Time Bar Code:
Acquired on : 20 Jan 12 11:51 AM
Report Created on: 23 Jan 12 09:42 AM

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 3
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\01-20-12\006F0301.D
Operator : ML
Instrument : GC1
Sample Name : 02-091 mb2
Run Time Bar Code:
Acquired on : 20 Jan 12 10:04 AM
Report Created on: 23 Jan 12 09:42 AM

Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 3
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\1\DATA\01-20-12\003F0201.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 WADF 37-06B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 20 Jan 12 09:38 AM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Jan 12 09:42 AM	Analysis Method	: TPHD.MTH

201188

SAMPLE CHAIN OF CUSTODY

ME 01-17-12 AI3/V2/Ca

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature) Will Ca

PROJECT NAME/NO. AU TECH 0789

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260B	SVOC's by 8270	RCRA-8 Metals			Notes
MW05-20120117	MW05		01A-E	1/17/12	1244	H_2O	5				X		X			
MW04-20120117	MW04		02A-E	1/17/12	1403	H_2O	5				X		X			
MW01-20120117	MW01		03A-G	1/17/12	1510	H_2O	7	X			X		X			
MW99-20120117	MW04		04A-E	1/17/12	1411	H_2O	5				X		X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Will Ca	WILL CAMARDA	SES	1/17/12	1557
Received by: Nhan Phan	Nhan Phan	FEBT	1/17/12	1557
Relinquished by:				
Received by:				

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

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 3, 2012

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 January 5, 2012 from the SOU_0789_20120105, F&BI 201034 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
SOU0203R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 5, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120105, F&BI 201034 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201034 -01	P07-02
201034 -02	P08-02
201034 -03	P09-02
201034 -04	P10-0.5
201034 -05	P10-02
201034 -06	P10-04
201034 -07	P11-02
201034 -08	P11-04
201034 -09	P12-02
201034 -10	P12-03
201034 -11	P13-02
201034 -12	P13-04

The samples P08-02 and P09-02 were sent to Amtest for cyanide analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

Date of Report: 02/03/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034
Date Extracted: 01/17/12
Date Analyzed: 01/18/12

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
P10-02 201034-05	<0.1
Method Blank	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	P10-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/17/12	Lab ID:	201034-05 1/5
Date Analyzed:	01/17/12	Data File:	011710.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	88	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.019
Anthracene	<0.01
Fluoranthene	0.023
Pyrene	0.028
Benz(a)anthracene	0.013
Chrysene	0.015
Benzo(a)pyrene	0.015
Benzo(b)fluoranthene	0.016
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	0.015
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	0.013

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	P12-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/17/12	Lab ID:	201034-09 1/5
Date Analyzed:	01/17/12	Data File:	011712.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	86	50	150
Benzo(a)anthracene-d12	82	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.012
Acenaphthylene	0.016
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	0.064
Anthracene	0.013
Fluoranthene	0.15
Pyrene	0.18
Benz(a)anthracene	0.070
Chrysene	0.11
Benzo(a)pyrene	0.13
Benzo(b)fluoranthene	0.13
Benzo(k)fluoranthene	0.046
Indeno(1,2,3-cd)pyrene	0.12
Dibenz(a,h)anthracene	0.018
Benzo(g,h,i)perylene	0.14

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/17/12	Lab ID:	02-0092 mb 1/5
Date Analyzed:	01/17/12	Data File:	011709.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	50	150
Benzo(a)anthracene-d12	84	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 02/03/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 201148-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	0.125	<0.1	114	118	45-162	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	0.125	114	63-144

Date of Report: 02/03/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 201034-05 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	99	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	96	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	94	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	97	37-137
Phenanthrene	mg/kg (ppm)	0.17	0.019	92	45-124
Anthracene	mg/kg (ppm)	0.17	<0.01	90	32-124
Fluoranthene	mg/kg (ppm)	0.17	0.023	94	50-125
Pyrene	mg/kg (ppm)	0.17	0.028	91	41-135
Benz(a)anthracene	mg/kg (ppm)	0.17	0.013	88	23-144
Chrysene	mg/kg (ppm)	0.17	0.015	93	45-122
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	0.016	87	31-144
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	94	45-130
Benzo(a)pyrene	mg/kg (ppm)	0.17	0.015	89	39-128
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	0.015	86	28-146
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	99	46-129
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	0.013	90	37-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	99	99	61-115	0
Acenaphthylene	mg/kg (ppm)	0.17	96	95	63-110	1
Acenaphthene	mg/kg (ppm)	0.17	96	96	60-115	0
Fluorene	mg/kg (ppm)	0.17	97	97	59-116	0
Phenanthrene	mg/kg (ppm)	0.17	96	93	60-113	3
Anthracene	mg/kg (ppm)	0.17	88	86	56-103	2
Fluoranthene	mg/kg (ppm)	0.17	97	94	60-116	3
Pyrene	mg/kg (ppm)	0.17	90	89	60-116	1
Benz(a)anthracene	mg/kg (ppm)	0.17	87	87	53-109	0
Chrysene	mg/kg (ppm)	0.17	96	97	61-116	1
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	105	106	57-118	1
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	100	96	61-118	4
Benzo(a)pyrene	mg/kg (ppm)	0.17	87	85	53-108	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	95	95	46-127	0
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	112	107	55-121	5
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	100	99	56-118	1

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

201034

SAMPLE CHAIN OF CUSTODY

ME 01-05-12 VS3 / A04

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E. Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. Hutch 0789-

PO #

REMARKS X- per RRI 1/5/12 MA

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	PAH's	PCBs	Notes
P07-02	P07	02	01 A-F	1-5-12	0840	Soil	6	X			X		X	X		Hold
P08-02	P08	02	02 A-F		0910	Soil	6	X					X			Hold
P09-02	P09	02	03 A-E		0950	Soil	5				X		X			Hold
P10-0.5	P10	0.5	04		1000	Soil	1						X	X	X	Hold
P10-02	|	02	05 A-E		1005	Soil	5							⊗		Hold
P10-04	|	04	06		1010	Soil	5				X					Hold
P11-02	P11	02	07		1045	Soil	5									Hold
P11-04	P11	04	08		1110	Soil	5				X					Hold
P12-02	P12	02	09		1115	Soil	5						X	⊗		Hold
P12-03	P12	03	10		1120	Soil	5									Hold
P13-02	P13	02	11		1125	Soil	5				X		X			Hold
P13-04	P13	04	12 A-D		1130	Soil	4									Hold

ANALYSES REQUESTED

CYANIDE

Hg

⊗ - Per Rob R. 01/16/12 @

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Hasberger	SES	1-5-12	1215
Received by:	Jon Shimazu	FBI	1-5-12	12:15
Relinquished by:				
Received by:				

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

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 16, 2012

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 5, 2012 from the SOU_0789_20120105, F&BI 201034 project. There are 28 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
SOU0116R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 5, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120105, F&BI 201034 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201034-01	P07-02
201034-02	P08-02
201034-03	P09-02
201034-04	P10-0.5
201034-05	P10-02
201034-06	P10-04
201034-07	P11-02
201034-08	P11-04
201034-09	P12-02
201034-10	P12-03
201034-11	P13-02
201034-12	P13-04

All quality control requirements were acceptable.

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034
Date Extracted: 01/06/12
Date Analyzed: 01/08/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
P07-02 201034-01	<50	<250	111
P08-02 201034-02	<50	<250	110
Method Blank 02-037 MB	<50	<250	108

Analysis For Total Metals By EPA Method 200.8

Client ID:	P07-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-01
Date Analyzed:	01/06/12	Data File:	201034-01.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Indium	87	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	18.6
Arsenic	1.47
Selenium	<1
Silver	<1
Cadmium	<1
Barium	44.3
Lead	172

Analysis For Total Metals By EPA Method 200.8

Client ID:	P08-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-02
Date Analyzed:	01/06/12	Data File:	201034-02.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	79	60	125
Indium	80	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	8.75
Arsenic	1.36
Selenium	<1
Silver	<1
Cadmium	<1
Barium	30.1
Lead	1.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	P09-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-03
Date Analyzed:	01/06/12	Data File:	201034-03.021
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	86	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	15.0
Arsenic	3.11
Selenium	<1
Silver	<1
Cadmium	<1
Barium	79.4
Lead	4.48

Analysis For Total Metals By EPA Method 200.8

Client ID:	P10-0.5	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-04
Date Analyzed:	01/06/12	Data File:	201034-04.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Indium	85	60	125
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	16.7
Arsenic	7.90
Selenium	<1
Silver	<1
Cadmium	<1
Barium	191
Lead	71.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	P12-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-09
Date Analyzed:	01/06/12	Data File:	201034-09.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	88	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	12.3
Arsenic	12.2
Selenium	<1
Silver	<1
Cadmium	<1
Barium	161
Lead	193

Analysis For Total Metals By EPA Method 200.8

Client ID:	P13-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-11
Date Analyzed:	01/06/12	Data File:	201034-11.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	83	60	125
Indium	84	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	12.4
Arsenic	16.0
Selenium	<1
Silver	<1
Cadmium	1.37
Barium	163
Lead	296

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/05/12	Lab ID:	I2-18 mb
Date Analyzed:	01/06/12	Data File:	I2-18.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034
Date Extracted: 01/06/12
Date Analyzed: 01/06/12

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
P07-02 201034-01	<0.1
P08-02 201034-02	<0.1
P09-02 201034-03	<0.1
P10-0.5 201034-04	0.28
P12-02 201034-09	0.12
P13-02 201034-11	0.18
Method Blank	<0.1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P07-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/09/12	Lab ID:	201034-01
Date Analyzed:	01/09/12	Data File:	010911.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P09-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/09/12	Lab ID:	201034-03
Date Analyzed:	01/09/12	Data File:	010912.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	104	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P10-04	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/09/12	Lab ID:	201034-06
Date Analyzed:	01/09/12	Data File:	010913.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P11-04	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/09/12	Lab ID:	201034-08
Date Analyzed:	01/09/12	Data File:	010914.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	104	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P13-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/09/12	Lab ID:	201034-11
Date Analyzed:	01/09/12	Data File:	010915.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/09/12	Lab ID:	02-0043 mb
Date Analyzed:	01/09/12	Data File:	010908.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034
Date Extracted: 01/10/12
Date Analyzed: 01/11/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR PCBs REPORTED AS AROCLORS USING EPA METHOD 8082A

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Aroclor 1221	1232	1016	1242	1248	1254	1260	Surrogate (% Rec.) (Limit 50-150)
P10-0.5 201034-04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	69
Method Blank 02-063 MB	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	92

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	P07-02	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-01 1/5
Date Analyzed:	01/06/12	Data File:	010618.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	100	50	150
Benzo(a)anthracene-d12	100	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	P10-0.5	Client:	SoundEarth Strategies
Date Received:	01/05/12	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	201034-04 1/5
Date Analyzed:	01/06/12	Data File:	010624.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	50	150
Benzo(a)anthracene-d12	82	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.027
Acenaphthylene	0.079
Acenaphthene	0.012
Fluorene	0.032
Phenanthrene	0.37
Anthracene	0.059
Fluoranthene	0.30
Pyrene	0.41
Benz(a)anthracene	0.15
Chrysene	0.22
Benzo(a)pyrene	0.24
Benzo(b)fluoranthene	0.25
Benzo(k)fluoranthene	0.082
Indeno(1,2,3-cd)pyrene	0.21
Dibenz(a,h)anthracene	0.044
Benzo(g,h,i)perylene	0.22

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120105, F&BI 201034
Date Extracted:	01/06/12	Lab ID:	02-0020 mb2 1/5
Date Analyzed:	01/06/12	Data File:	010608.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	99	50	150
Benzo(a)anthracene-d12	106	35	159

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 201036-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	92	91	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	93	79-144

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201037-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	18.7	111 b	106 b	51-132	5 b
Arsenic	mg/kg (ppm)	10	4.45	102 b	88 b	44-151	15 b
Selenium	mg/kg (ppm)	5	<1	86	86	52-128	0
Silver	mg/kg (ppm)	10	<1	104	98	69-125	6
Cadmium	mg/kg (ppm)	10	<1	107	99	83-120	8
Barium	mg/kg (ppm)	50	61.8	144 b	112 b	47-147	25 b
Lead	mg/kg (ppm)	50	12.7	108 b	101 b	65-126	7 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	114	79-125
Arsenic	mg/kg (ppm)	10	88	80-120
Selenium	mg/kg (ppm)	5	88	81-121
Silver	mg/kg (ppm)	10	97	84-117
Cadmium	mg/kg (ppm)	10	99	89-116
Barium	mg/kg (ppm)	50	99	88-113
Lead	mg/kg (ppm)	50	103	81-120

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 201037-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	0.125	<0.1	115	115	45-162	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	0.125	102	63-144

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

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

Laboratory Code: 201034-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	38	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	61	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	62	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	69	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	72	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	72	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	75	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	74	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	77	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	77	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	80	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	79	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	81	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	81	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	81	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	81	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	82	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	81	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	79	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	81	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	83	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	84	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	83	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	82	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	92	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	86	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	82	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	83	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	81	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	89	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	85	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	80	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	84	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	85	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	82	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	86	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	81	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	87	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	90	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	84	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	90	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	86	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	88	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	84	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	89	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	81	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	81	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	88	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	87	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	88	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	87	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	82	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	83	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	81	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	80	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	76	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	83	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	69	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	93	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	88	20-144

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	47	47	10-146	0
Chloromethane	mg/kg (ppm)	2.5	68	69	27-133	1
Vinyl chloride	mg/kg (ppm)	2.5	75	76	22-139	1
Bromomethane	mg/kg (ppm)	2.5	73	75	38-114	3
Chloroethane	mg/kg (ppm)	2.5	75	77	20-153	3
Trichlorofluoromethane	mg/kg (ppm)	2.5	77	76	10-196	1
Acetone	mg/kg (ppm)	12.5	85	86	52-141	1
1,1-Dichloroethene	mg/kg (ppm)	2.5	83	78	47-128	6
Methylene chloride	mg/kg (ppm)	2.5	81	82	42-132	1
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	88	88	60-123	0
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	88	86	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	90	90	68-115	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	94	92	57-133	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	97	97	72-113	0
Chloroform	mg/kg (ppm)	2.5	93	91	66-120	2
2-Butanone (MEK)	mg/kg (ppm)	12.5	96	98	57-123	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	90	87	56-135	3
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	93	94	62-131	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	98	96	69-128	2
Carbon tetrachloride	mg/kg (ppm)	2.5	92	92	60-139	0
Benzene	mg/kg (ppm)	2.5	94	93	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	97	96	68-114	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	98	96	72-127	2
Bromodichloromethane	mg/kg (ppm)	2.5	96	93	72-130	3
Dibromomethane	mg/kg (ppm)	2.5	95	94	70-120	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	101	102	45-145	1
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	101	99	75-136	2
Toluene	mg/kg (ppm)	2.5	96	94	66-126	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	98	95	72-132	3
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	95	93	75-113	2
2-Hexanone	mg/kg (ppm)	12.5	101	100	33-152	1
1,3-Dichloropropane	mg/kg (ppm)	2.5	97	96	72-130	1
Tetrachloroethene	mg/kg (ppm)	2.5	97	95	72-114	2
Dibromochloromethane	mg/kg (ppm)	2.5	100	97	74-125	3
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	100	97	74-132	3
Chlorobenzene	mg/kg (ppm)	2.5	93	92	76-111	1
Ethylbenzene	mg/kg (ppm)	2.5	99	97	64-123	2
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	94	92	69-135	2
m,p-Xylene	mg/kg (ppm)	5	101	99	78-122	2
o-Xylene	mg/kg (ppm)	2.5	107	104	77-124	3
Styrene	mg/kg (ppm)	2.5	98	94	74-126	4
Isopropylbenzene	mg/kg (ppm)	2.5	106	102	76-127	4
Bromoform	mg/kg (ppm)	2.5	101	99	56-132	2
n-Propylbenzene	mg/kg (ppm)	2.5	105	103	74-124	2
Bromobenzene	mg/kg (ppm)	2.5	99	96	72-122	3
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	106	103	76-126	3
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	96	93	56-143	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	94	92	61-137	2
2-Chlorotoluene	mg/kg (ppm)	2.5	103	101	74-121	2
4-Chlorotoluene	mg/kg (ppm)	2.5	104	101	75-122	3
tert-Butylbenzene	mg/kg (ppm)	2.5	108	105	73-130	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	105	103	76-125	2
sec-Butylbenzene	mg/kg (ppm)	2.5	104	102	71-130	2
p-Isopropyltoluene	mg/kg (ppm)	2.5	98	96	70-132	2
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	95	94	75-121	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	94	93	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	93	93	76-121	0
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	83	82	61-136	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	93	91	70-129	2
Hexachlorobutadiene	mg/kg (ppm)	2.5	81	83	50-153	2
Naphthalene	mg/kg (ppm)	2.5	99	95	60-125	4
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	97	92	62-130	5

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Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 201018-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	<0.1	<0.1	nm
Aroclor 1260	mg/kg (ppm)	<0.1	<0.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	94	100	60-142	6
Aroclor 1260	mg/kg (ppm)	0.8	100	98	63-144	2

Date of Report: 01/16/12
Date Received: 01/05/12
Project: SOU_0789_20120105, F&BI 201034

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 201011-01 1/250 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Naphthalene	mg/kg (ppm)	4.2	4.1	2
Acenaphthylene	mg/kg (ppm)	<0.5	<0.5	nm
Acenaphthene	mg/kg (ppm)	<0.5	<0.5	nm
Fluorene	mg/kg (ppm)	1.8	1.8	0
Phenanthrene	mg/kg (ppm)	4.5	4.3	5
Anthracene	mg/kg (ppm)	<0.5	4.4	nm
Fluoranthene	mg/kg (ppm)	<0.5	<0.5	nm
Pyrene	mg/kg (ppm)	<0.5	<0.5	nm
Benz(a)anthracene	mg/kg (ppm)	<0.5	<0.5	nm
Chrysene	mg/kg (ppm)	<0.5	<0.5	nm
Benzo(b)fluoranthene	mg/kg (ppm)	<0.5	<0.5	nm
Benzo(k)fluoranthene	mg/kg (ppm)	<0.5	<0.5	nm
Benzo(a)pyrene	mg/kg (ppm)	<0.5	<0.5	nm
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	<0.5	<0.5	nm
Dibenz(a,h)anthracene	mg/kg (ppm)	<0.5	<0.5	nm
Benzo(g,h,i)perylene	mg/kg (ppm)	<0.5	<0.5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	102	104	61-115	2
Acenaphthylene	mg/kg (ppm)	0.17	99	97	63-110	2
Acenaphthene	mg/kg (ppm)	0.17	101	100	60-115	1
Fluorene	mg/kg (ppm)	0.17	99	100	59-116	1
Phenanthrene	mg/kg (ppm)	0.17	101	100	60-113	1
Anthracene	mg/kg (ppm)	0.17	95	93	56-103	2
Fluoranthene	mg/kg (ppm)	0.17	96	99	60-116	3
Pyrene	mg/kg (ppm)	0.17	94	93	60-116	1
Benz(a)anthracene	mg/kg (ppm)	0.17	89	90	53-109	1
Chrysene	mg/kg (ppm)	0.17	99	98	61-116	1
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	94	94	57-118	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	99	100	61-118	1
Benzo(a)pyrene	mg/kg (ppm)	0.17	89	86	53-108	3
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	100	96	46-127	4
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	117	109	55-121	7
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	103	98	56-118	5

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

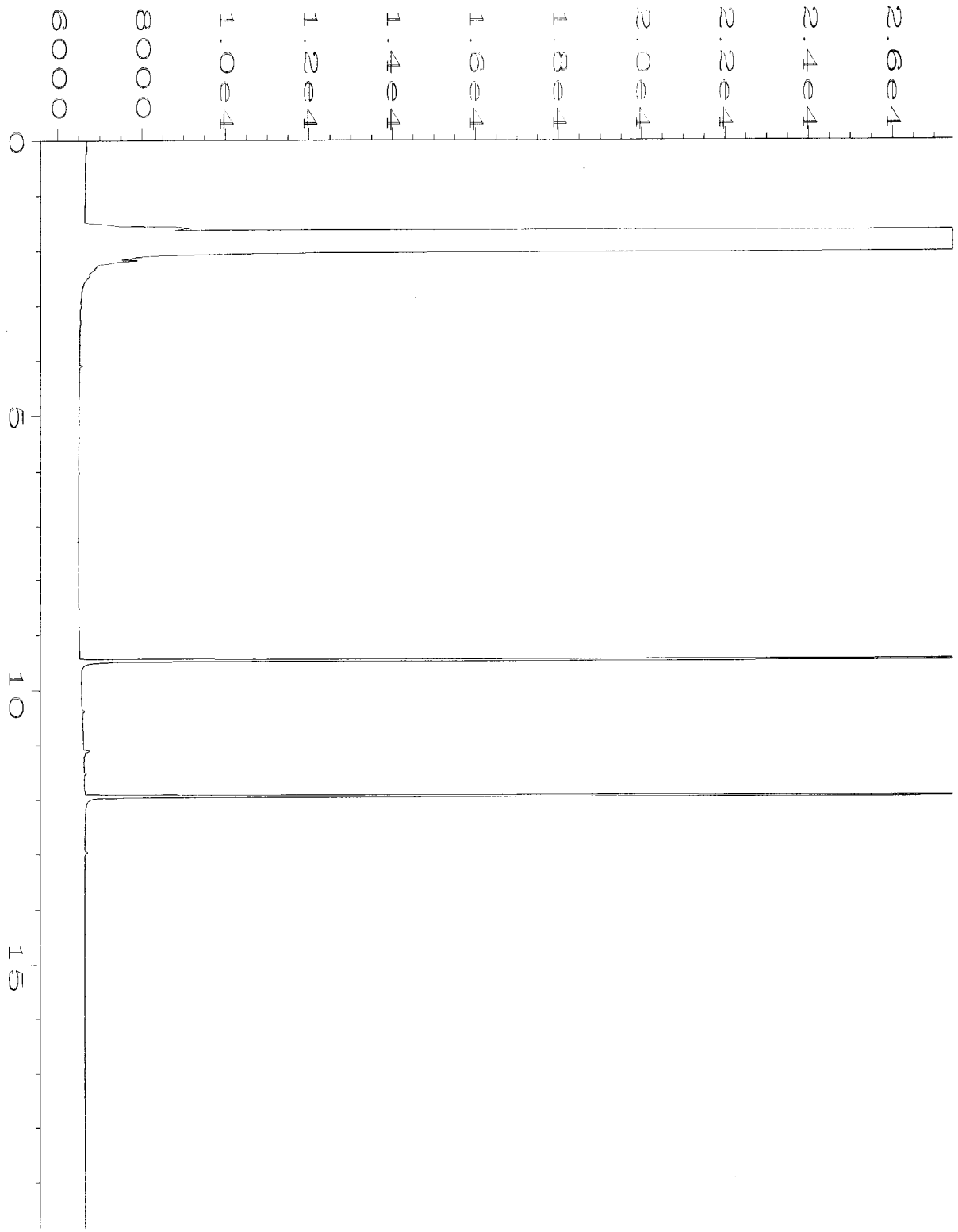
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

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

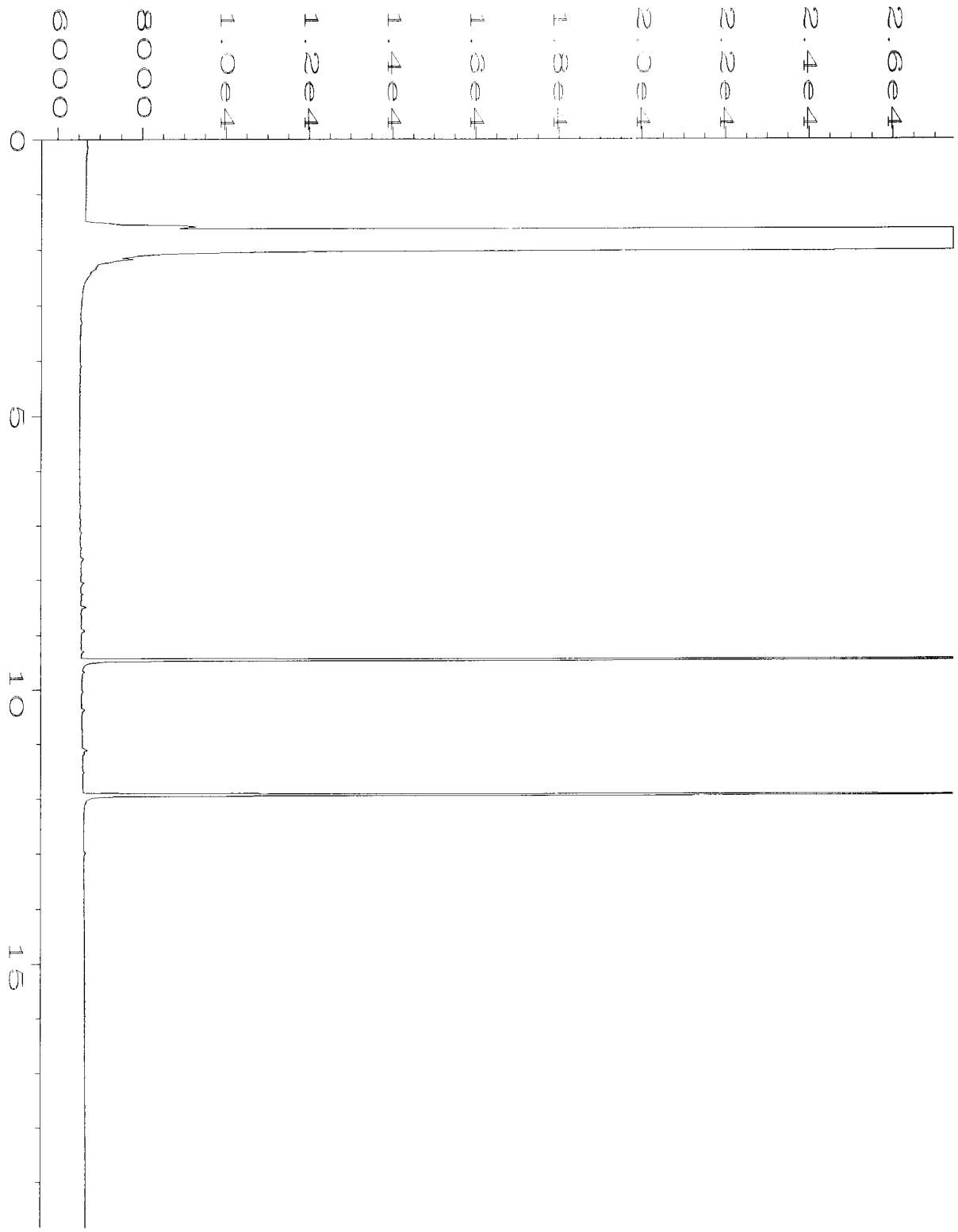
vo - The value reported fell outside the control limits established for this analyte.

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



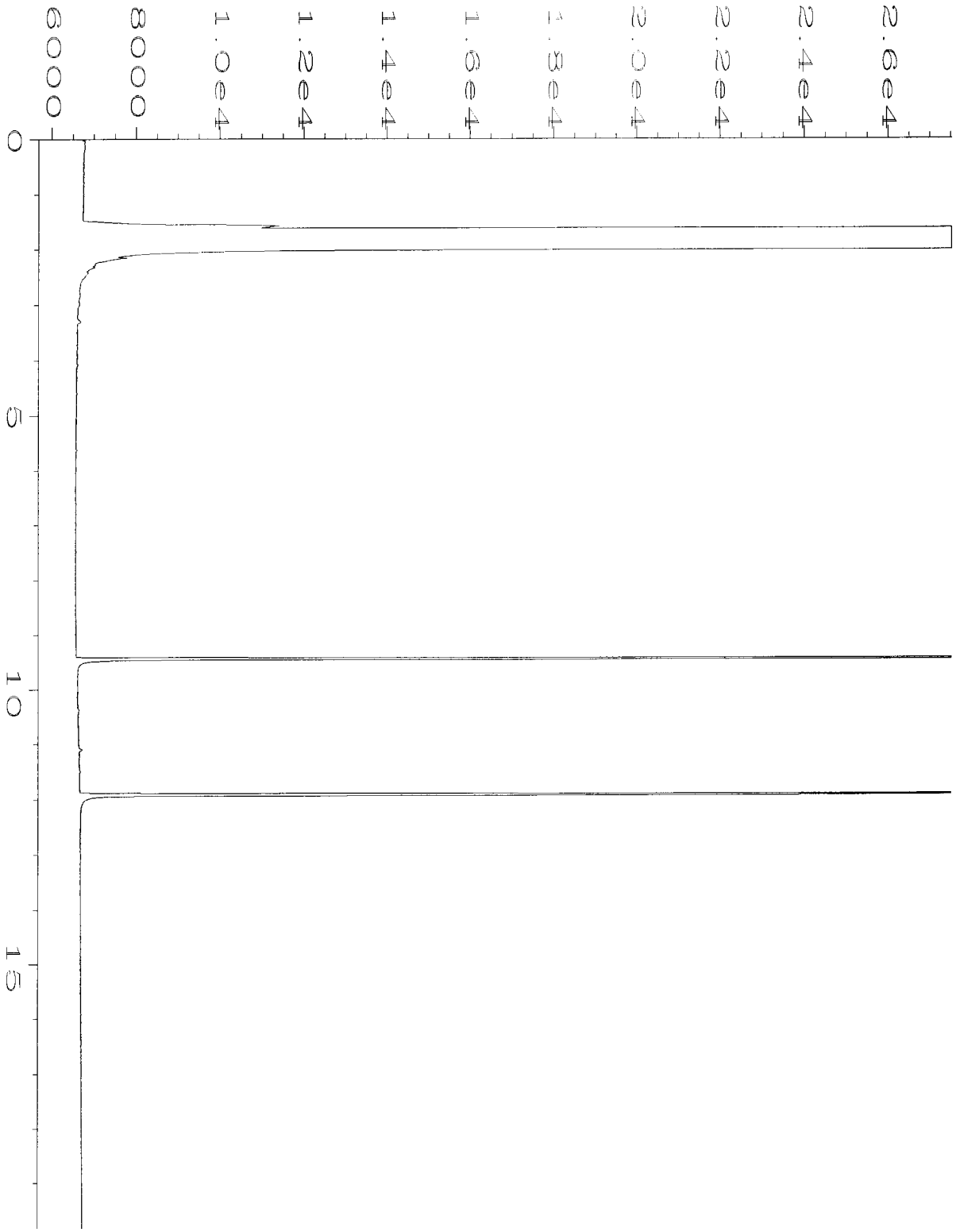
Data File Name : C:\HPCHEM\1\DATA\01-06-12\036F1101.D
Operator : ML
Instrument : GC1
Sample Name : 201034-01
Run Time Bar Code:
Acquired on : 08 Jan 12 01:49 AM
Report Created on: 09 Jan 12 08:58 AM

Page Number : 1
Vial Number : 36
Injection Number : 1
Sequence Line : 11
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



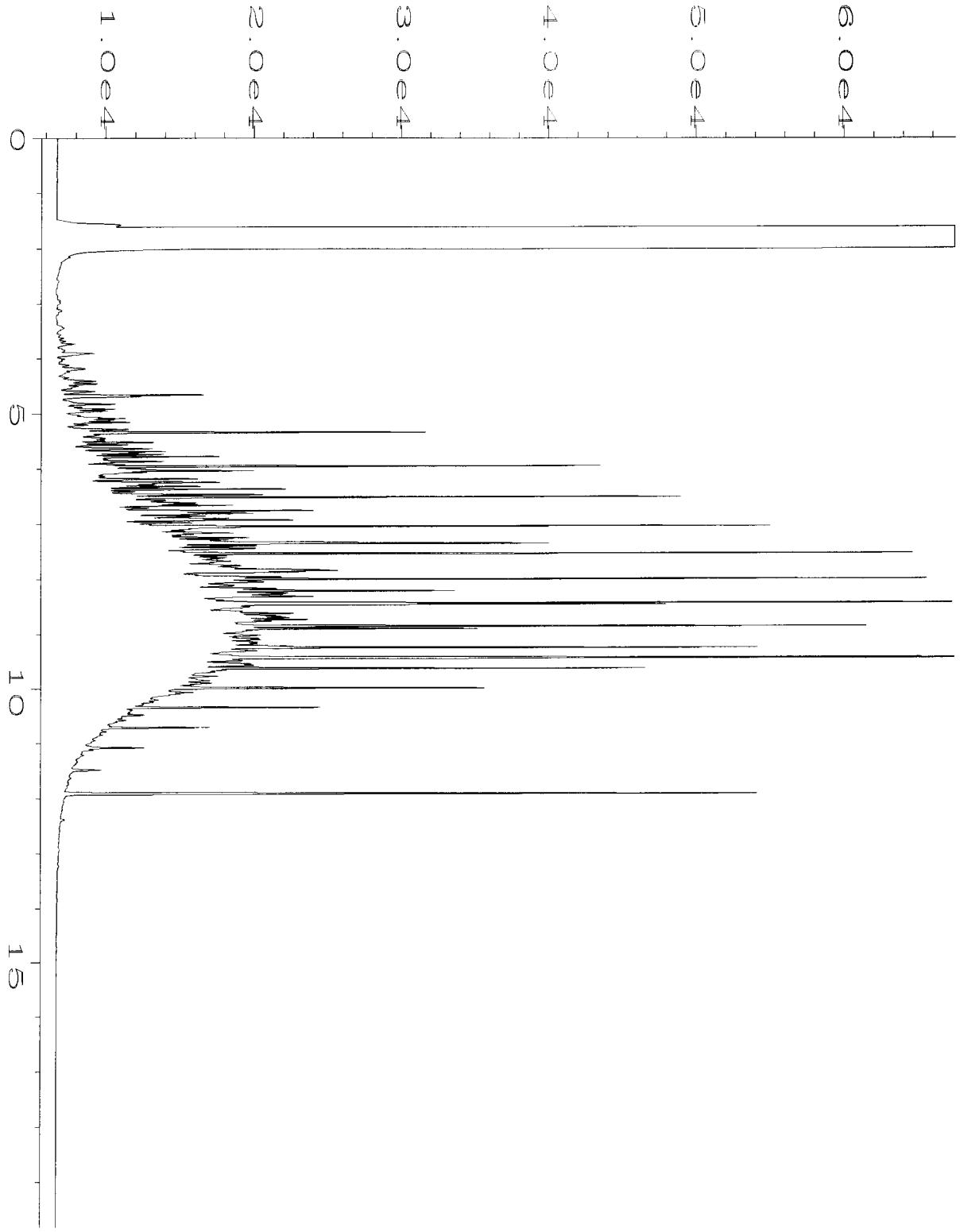
Data File Name : C:\HPCHEM\1\DATA\01-06-12\037F1101.D
Operator : ML
Instrument : GC1
Sample Name : 201034-02
Run Time Bar Code:
Acquired on : 08 Jan 12 02:16 AM
Report Created on: 09 Jan 12 08:58 AM

Page Number : 1
Vial Number : 37
Injection Number : 1
Sequence Line : 11
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : C:\HPCHEM\1\DATA\01-06-12\010F0501.D
Operator : ML
Instrument : GC1
Sample Name : 02-037 mb
Run Time Bar Code:
Acquired on : 06 Jan 12 02:33 PM
Report Created on: 09 Jan 12 08:58 AM

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\1\DATA\01-06-12\003F0401.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 WADF 37-06B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 06 Jan 12 02:06 PM	Instrument Method	: TPHD.MTH
Report Created on	: 09 Jan 12 08:58 AM	Analysis Method	: TPHD.MTH

201034

SAMPLE CHAIN OF CUSTODY

ME 01-05-12 VS3 / A04

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. Antech 0789

PO #

REMARKS X- per RRI 1/6/12 MC

GEMS Y / N

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	PAHs	PCBs	Notes
P07-02	P07	02	01 A-F	1-5-12	0840	Soil	6	X			X		X	X		Hold
P08-02	P08	02	02 A-F		0910	Soil	6	X					X			Hold
P09-02	P09	02	03 A-E		0950	Soil	5				X		X			Hold
P10-0.5	P10	0.5	04		1000	Soil	1						X	X	X	Hold
P10-02		02	05 A-E		1005	Soil	5									Hold
P10-04		04	06		1010	Soil	5				X					Hold
P11-02	P11	02	07		1015	Soil	5									Hold
P11-04	P11	04	08		1110	Soil	5				X					Hold
P12-02	P12	02	09		1115	Soil	5						X			Hold
P12-03	P12	03	10		1120	Soil	5									Hold
P13-02	P13	02	11		1125	Soil	5				X		X			Hold
P13-04	P13	04	12 A-D		1130	Soil	4									Hold

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Harsberger	SES	1-5-12	1215
Received by:	Jon Shimazu	FBI	1-5-12	12:15
Relinquished by:				
Received by:				

Samples received at 4 °C

201035

SAMPLE CHAIN OF CUSTODY ME 01-05-12

A02

Page # 1 of 1

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. AvTech 0789

PO #

REMARKS X-per RR 1/5/12 MG

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	PAH's	PCBs	Notes
Bldg03 Compressor oil	Building	—	01	1-5-12	1020	Product Pad	1								X	Hold
Bldg01 Compressor oil	Building	—	02	1-5-12	1035 ~~1025~~	Product	1								X	~~Hold~~

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Hansberger	SES	1-5-12	1215
Received by:	Jon Shinmon	FBI	1	1
Relinquished by:				
Received by:				

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

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

January 16, 2012

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on January 4, 2012 from the SOU_0789_20120104, F&BI 201018 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
SOU0116R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 4, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120104, F&BI 201018 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
201018-01	P01-04
201018-02	P01-09
201018-03	P02-1.5
201018-04	P02-04
201018-05	P02-07
201018-06	P02-10
201018-07	P03-04
201018-08	P03-08
201018-09	P03-12
201018-10	P04-02
201018-11	P04-04
201018-12	P04-08
201018-13	P04-12
201018-14	P04-15
201018-15	P05-02
201018-16	P05-04
201018-17	P05-08
201018-18	P05-13
201018-19	P06-02
201018-20	P06-04
201018-21	P06-08
201018-22	P06-10

All quality control requirements were acceptable.

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018
Date Extracted: 01/06/12
Date Analyzed: 01/06/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
P04-08 201018-12	<0.02	<0.02	<0.02	<0.06	<2	93
P04-15 201018-14	<0.02	<0.02	<0.02	<0.06	<2	94
P05-08 201018-17	<0.02	<0.02	<0.02	<0.06	<2	92
P06-08 201018-21	<0.02	<0.02	<0.02	<0.06	<2	97
Method Blank 02-0033 MB	<0.02	<0.02	<0.02	<0.06	<2	87

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018
Date Extracted: 01/06/12
Date Analyzed: 01/06/12

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
P02-1.5 201018-03	<50	<250	93
P03-04 201018-07	<50	<250	94
P04-15 201018-14	<50	<250	96
P05-08 201018-17	<50	<250	93
P06-08 201018-21	<50	<250	94
Method Blank 02-036 MB	<50	<250	96

Analysis For Total Metals By EPA Method 200.8

Client ID:	P01-04	Client:	SoundEarth Strategies
Date Received:	01/04/12	Project:	SOU_0789_20120104, F&BI 201018
Date Extracted:	01/06/12	Lab ID:	201018-01
Date Analyzed:	01/06/12	Data File:	201018-01.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	89	60	125
Indium	88	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	10.6
Arsenic	1.31
Selenium	<1
Silver	<1
Cadmium	<1
Barium	29.7
Lead	1.41

Analysis For Total Metals By EPA Method 200.8

Client ID:	P02-1.5	Client:	SoundEarth Strategies
Date Received:	01/04/12	Project:	SOU_0789_20120104, F&BI 201018
Date Extracted:	01/06/12	Lab ID:	201018-03
Date Analyzed:	01/06/12	Data File:	201018-03.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Indium	86	60	125
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	5.08
Arsenic	1.52
Selenium	<1
Silver	<1
Cadmium	<1
Barium	13.5
Lead	1.20

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120104, F&BI 201018
Date Extracted:	01/05/12	Lab ID:	I2-18 mb
Date Analyzed:	01/06/12	Data File:	I2-18.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	84	60	125
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018
Date Extracted: 01/06/12
Date Analyzed: 01/06/12

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
P01-04 201018-01	<0.1
P02-1.5 201018-03	<0.1
Method Blank	<0.1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P01-04	Client:	SoundEarth Strategies
Date Received:	01/04/12	Project:	SOU_0789_20120104, F&BI 201018
Date Extracted:	01/09/12	Lab ID:	201018-01
Date Analyzed:	01/09/12	Data File:	010909.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P02-1.5	Client:	SoundEarth Strategies
Date Received:	01/04/12	Project:	SOU_0789_20120104, F&BI 201018
Date Extracted:	01/09/12	Lab ID:	201018-03
Date Analyzed:	01/09/12	Data File:	010910.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789_20120104, F&BI 201018
Date Extracted:	01/09/12	Lab ID:	02-0043 mb
Date Analyzed:	01/09/12	Data File:	010908.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018
Date Extracted: 01/10/12
Date Analyzed: 01/11/12

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR PCBs REPORTED AS AROCLORS
USING EPA METHOD 8082A**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Aroclor 1221	1232	1016	1242	1248	1254	1260	Surrogate (% Rec.) (Limit 50-150)
P03-04 201018-07	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	85
Method Blank 02-063 MB	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	92

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018

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

Laboratory Code: 201036-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	90	69-120
Toluene	mg/kg (ppm)	0.5	93	70-117
Ethylbenzene	mg/kg (ppm)	0.5	94	65-123
Xylenes	mg/kg (ppm)	1.5	94	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 201039-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	98	99	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 201037-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	18.7	111 b	106 b	51-132	5 b
Arsenic	mg/kg (ppm)	10	4.45	102 b	88 b	44-151	15 b
Selenium	mg/kg (ppm)	5	<1	86	86	52-128	0
Silver	mg/kg (ppm)	10	<1	104	98	69-125	6
Cadmium	mg/kg (ppm)	10	<1	107	99	83-120	8
Barium	mg/kg (ppm)	50	61.8	144 b	112 b	47-147	25 b
Lead	mg/kg (ppm)	50	12.7	108 b	101 b	65-126	7 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	114	79-125
Arsenic	mg/kg (ppm)	10	88	80-120
Selenium	mg/kg (ppm)	5	88	81-121
Silver	mg/kg (ppm)	10	97	84-117
Cadmium	mg/kg (ppm)	10	99	89-116
Barium	mg/kg (ppm)	50	99	88-113
Lead	mg/kg (ppm)	50	103	81-120

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 201037-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	0.125	<0.1	115	115	45-162	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	0.125	102	63-144

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018

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

Laboratory Code: 201034-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	38	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	61	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	62	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	69	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	72	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	72	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	75	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	74	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	77	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	77	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	80	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	79	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	81	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	81	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	81	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	81	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	82	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	81	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	79	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	81	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	83	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	84	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	83	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	82	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	92	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	86	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	82	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	83	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	81	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	89	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	85	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	80	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	84	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	85	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	82	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	86	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	81	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	87	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	90	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	84	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	90	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	86	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	88	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	84	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	89	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	81	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	81	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	88	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	87	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	88	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	87	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	82	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	83	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	81	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	80	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	76	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	83	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	69	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	93	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	88	20-144

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	47	47	10-146	0
Chloromethane	mg/kg (ppm)	2.5	68	69	27-133	1
Vinyl chloride	mg/kg (ppm)	2.5	75	76	22-139	1
Bromomethane	mg/kg (ppm)	2.5	73	75	38-114	3
Chloroethane	mg/kg (ppm)	2.5	75	77	20-153	3
Trichlorofluoromethane	mg/kg (ppm)	2.5	77	76	10-196	1
Acetone	mg/kg (ppm)	12.5	85	86	52-141	1
1,1-Dichloroethene	mg/kg (ppm)	2.5	83	78	47-128	6
Methylene chloride	mg/kg (ppm)	2.5	81	82	42-132	1
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	88	88	60-123	0
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	88	86	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	90	90	68-115	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	94	92	57-133	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	97	97	72-113	0
Chloroform	mg/kg (ppm)	2.5	93	91	66-120	2
2-Butanone (MEK)	mg/kg (ppm)	12.5	96	98	57-123	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	90	87	56-135	3
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	93	94	62-131	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	98	96	69-128	2
Carbon tetrachloride	mg/kg (ppm)	2.5	92	92	60-139	0
Benzene	mg/kg(ppm)	2.5	94	93	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	97	96	68-114	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	98	96	72-127	2
Bromodichloromethane	mg/kg (ppm)	2.5	96	93	72-130	3
Dibromomethane	mg/kg (ppm)	2.5	95	94	70-120	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	101	102	45-145	1
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	101	99	75-136	2
Toluene	mg/kg (ppm)	2.5	96	94	66-126	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	98	95	72-132	3
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	95	93	75-113	2
2-Hexanone	mg/kg (ppm)	12.5	101	100	33-152	1
1,3-Dichloropropane	mg/kg (ppm)	2.5	97	96	72-130	1
Tetrachloroethene	mg/kg (ppm)	2.5	97	95	72-114	2
Dibromochloromethane	mg/kg (ppm)	2.5	100	97	74-125	3
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	100	97	74-132	3
Chlorobenzene	mg/kg (ppm)	2.5	93	92	76-111	1
Ethylbenzene	mg/kg (ppm)	2.5	99	97	64-123	2
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	94	92	69-135	2
m,p-Xylene	mg/kg (ppm)	5	101	99	78-122	2
o-Xylene	mg/kg (ppm)	2.5	107	104	77-124	3
Styrene	mg/kg (ppm)	2.5	98	94	74-126	4
Isopropylbenzene	mg/kg (ppm)	2.5	106	102	76-127	4
Bromoform	mg/kg (ppm)	2.5	101	99	56-132	2
n-Propylbenzene	mg/kg (ppm)	2.5	105	103	74-124	2
Bromobenzene	mg/kg (ppm)	2.5	99	96	72-122	3
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	106	103	76-126	3
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	96	93	56-143	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	94	92	61-137	2
2-Chlorotoluene	mg/kg (ppm)	2.5	103	101	74-121	2
4-Chlorotoluene	mg/kg (ppm)	2.5	104	101	75-122	3
tert-Butylbenzene	mg/kg (ppm)	2.5	108	105	73-130	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	105	103	76-125	2
sec-Butylbenzene	mg/kg (ppm)	2.5	104	102	71-130	2
p-Isopropyltoluene	mg/kg (ppm)	2.5	98	96	70-132	2
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	95	94	75-121	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	94	93	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	93	93	76-121	0
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	83	82	61-136	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	93	91	70-129	2
Hexachlorobutadiene	mg/kg (ppm)	2.5	81	83	50-153	2
Naphthalene	mg/kg (ppm)	2.5	99	95	60-125	4
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	97	92	62-130	5

Date of Report: 01/16/12
Date Received: 01/04/12
Project: SOU_0789_20120104, F&BI 201018

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 201018-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	<0.1	<0.1	nm
Aroclor 1260	mg/kg (ppm)	<0.1	<0.1	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	94	100	60-142	6
Aroclor 1260	mg/kg (ppm)	0.8	100	98	63-144	2

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

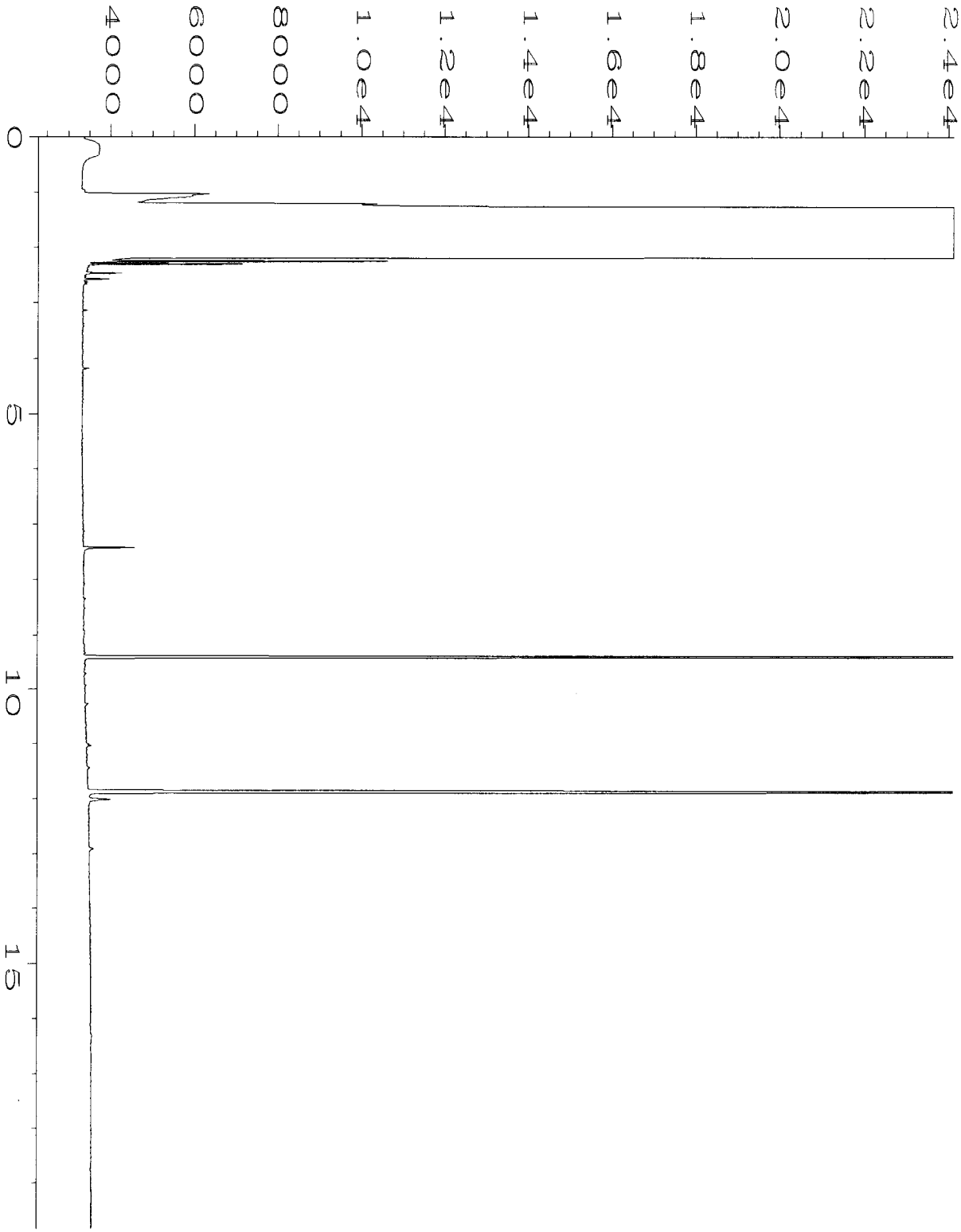
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

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

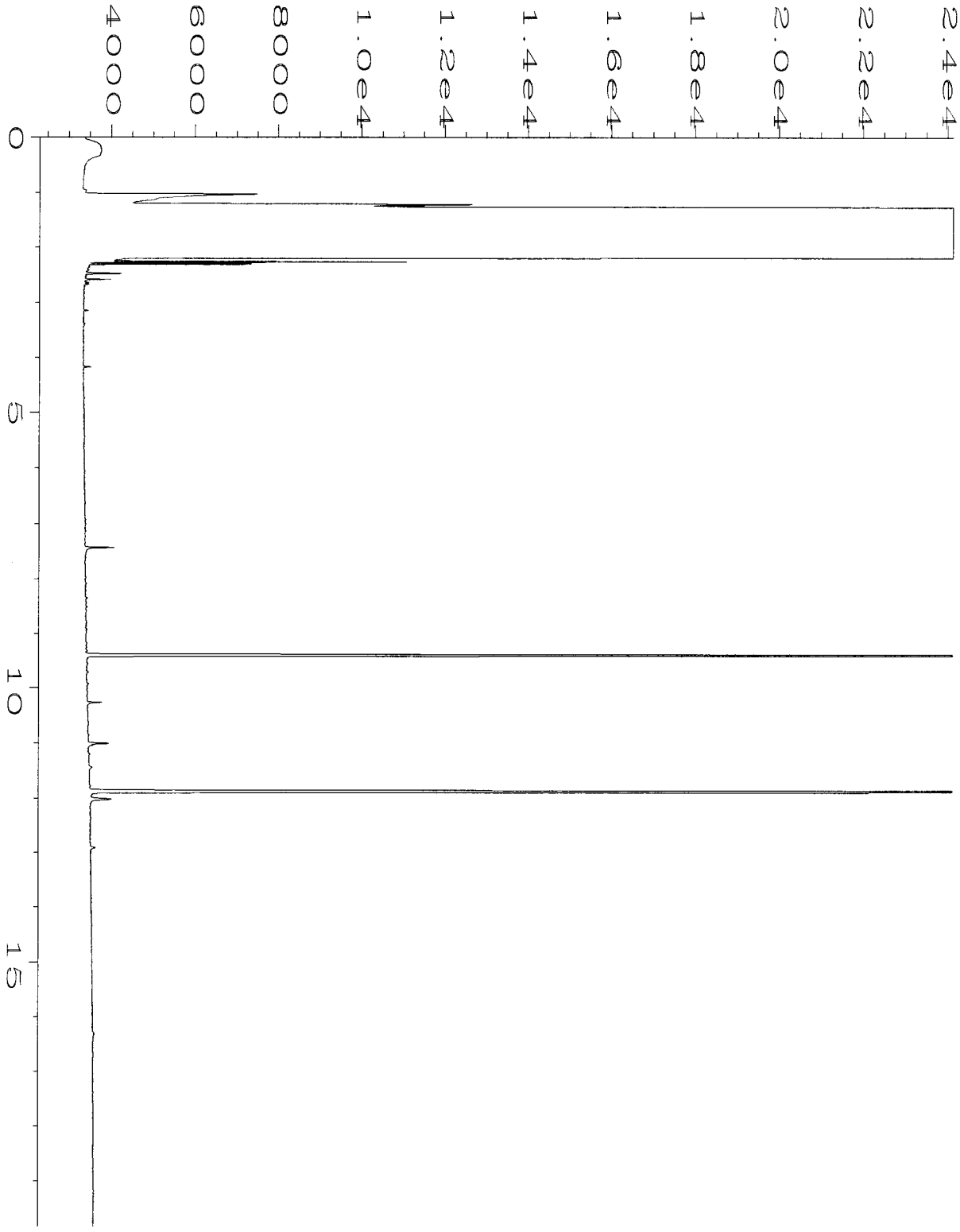
vo - The value reported fell outside the control limits established for this analyte.

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



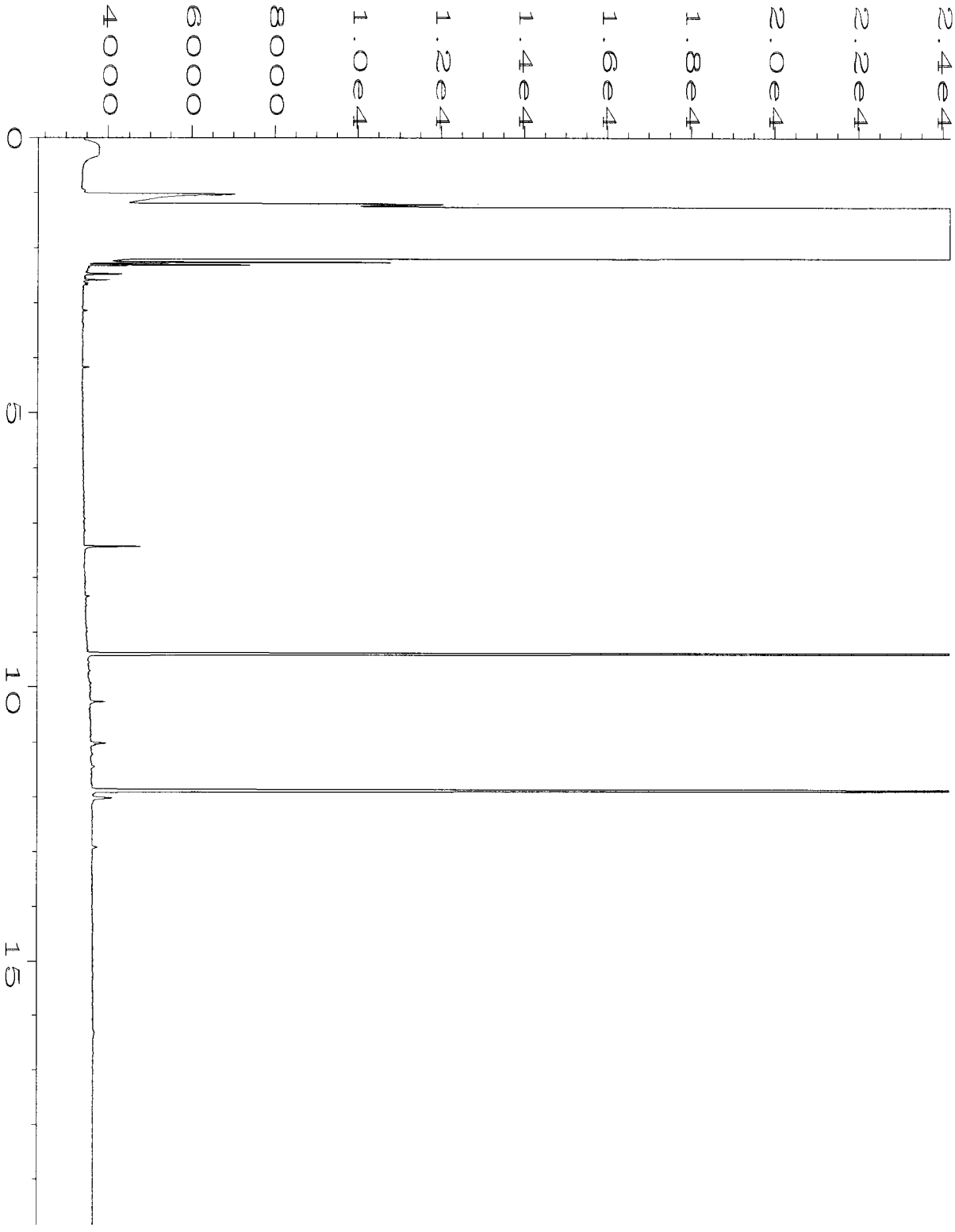
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Run Time Bar Code:
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Report Created on: 09 Jan 12 09:25 AM

Page Number : 1
Vial Number : 25
Injection Number : 1
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Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



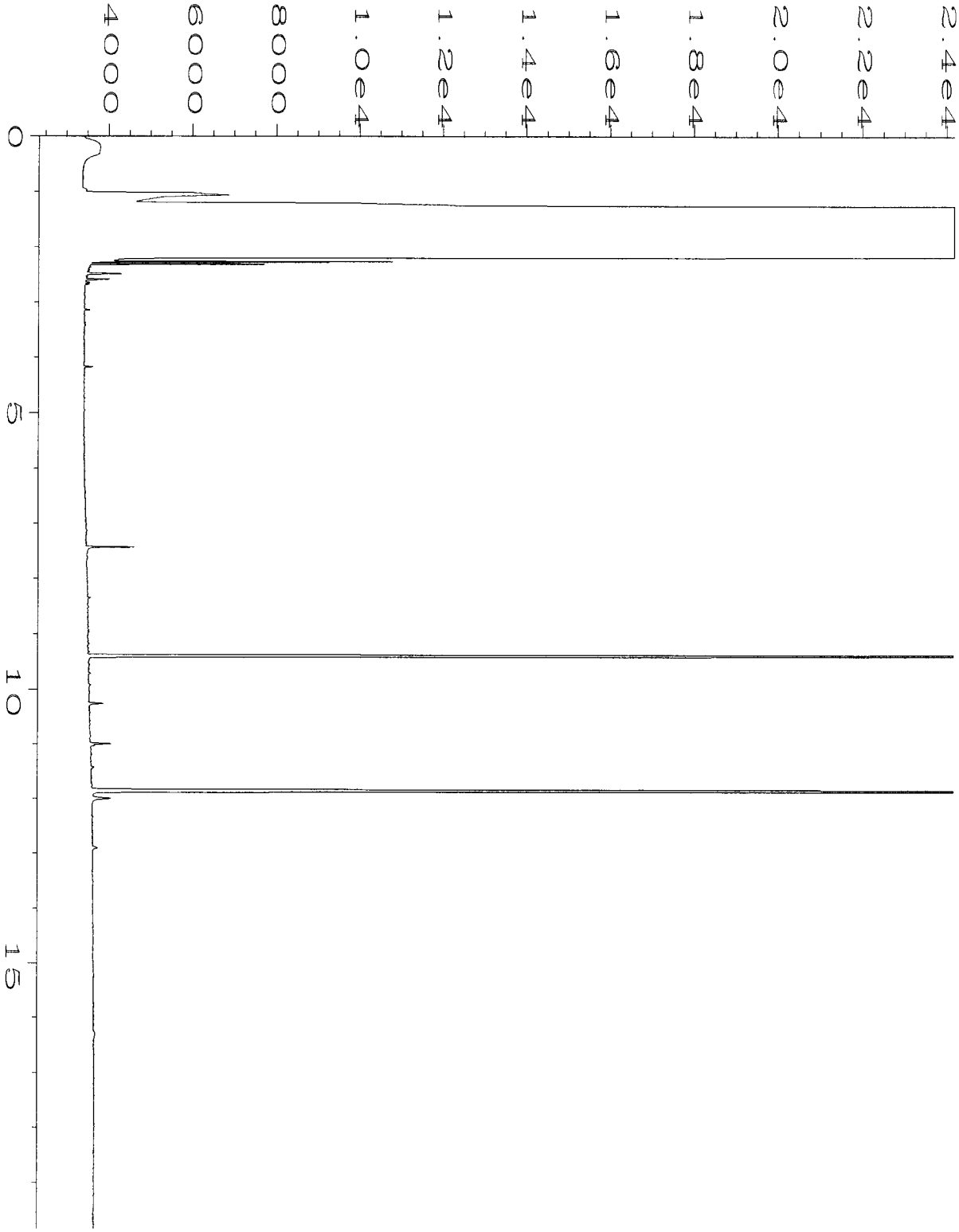
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Instrument : GC#4
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Run Time Bar Code:
Acquired on : 06 Jan 12 09:22 PM
Report Created on: 09 Jan 12 09:27 AM

Page Number : 1
Vial Number : 26
Injection Number : 1
Sequence Line : 9
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



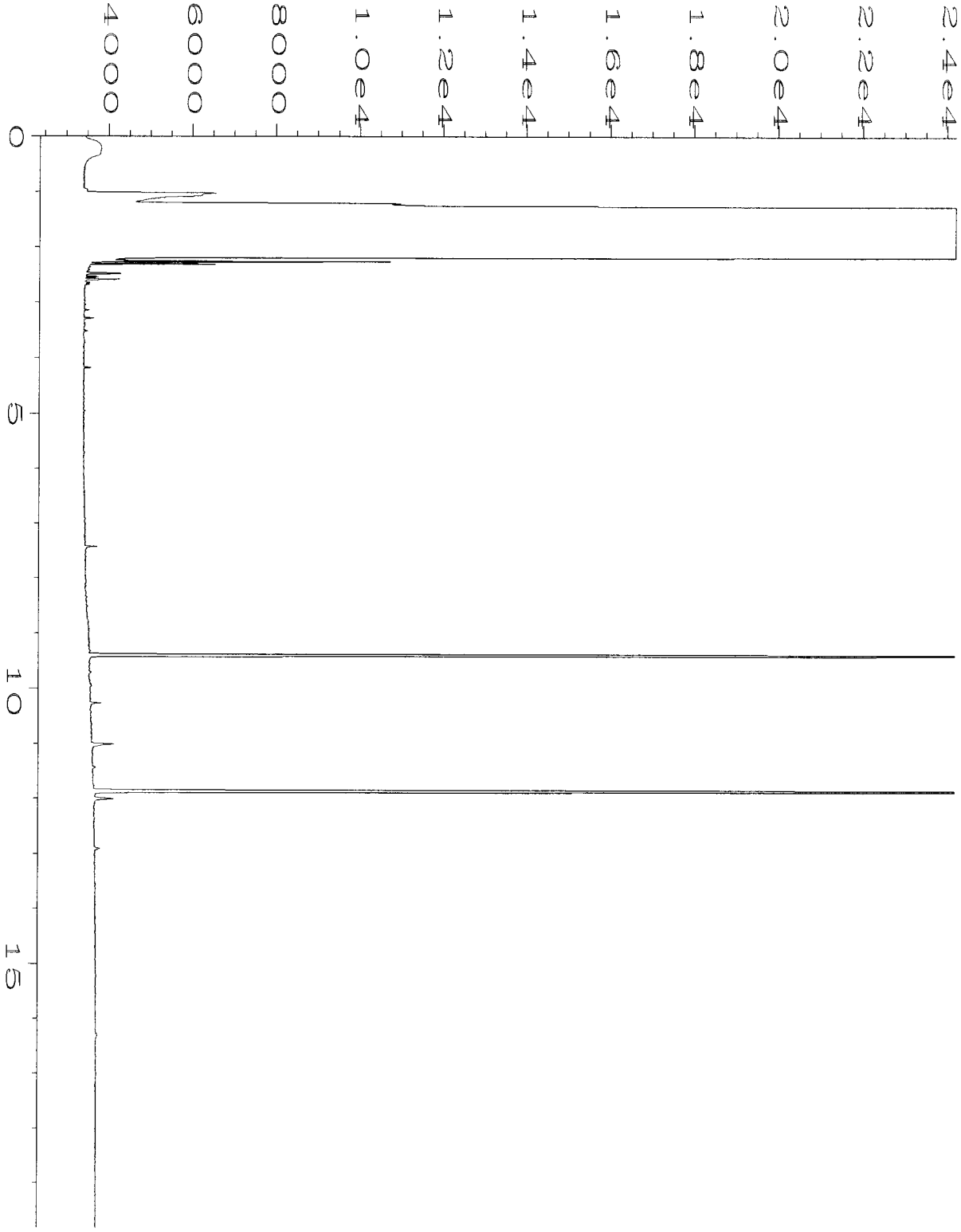
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Instrument : GC#4
Sample Name : 201018-14
Run Time Bar Code:
Acquired on : 06 Jan 12 10:40 PM
Report Created on: 09 Jan 12 09:27 AM

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 11
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



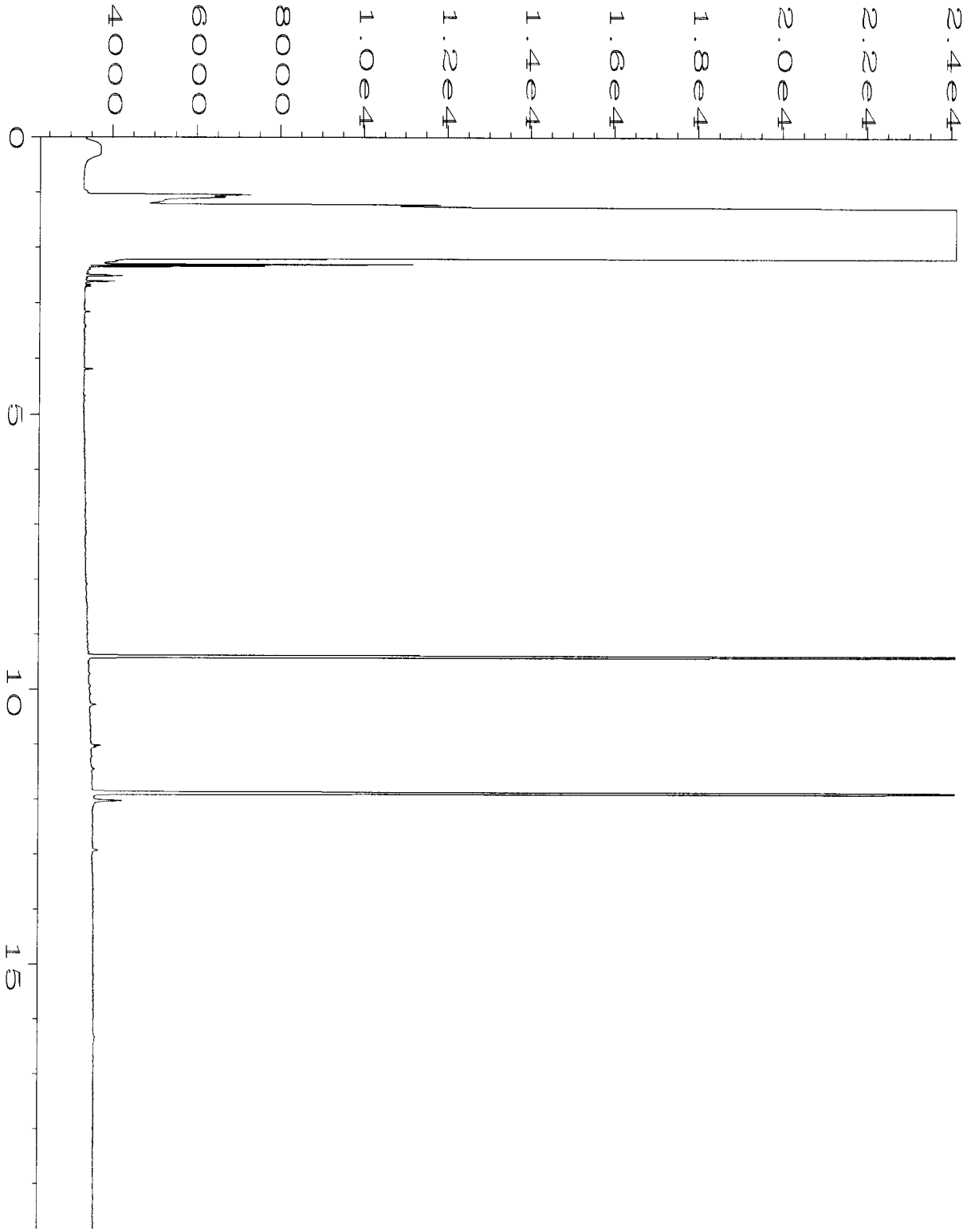
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Run Time Bar Code:
Acquired on : 06 Jan 12 11:06 PM
Report Created on: 09 Jan 12 09:27 AM

Page Number : 1
Vial Number : 28
Injection Number : 1
Sequence Line : 11
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



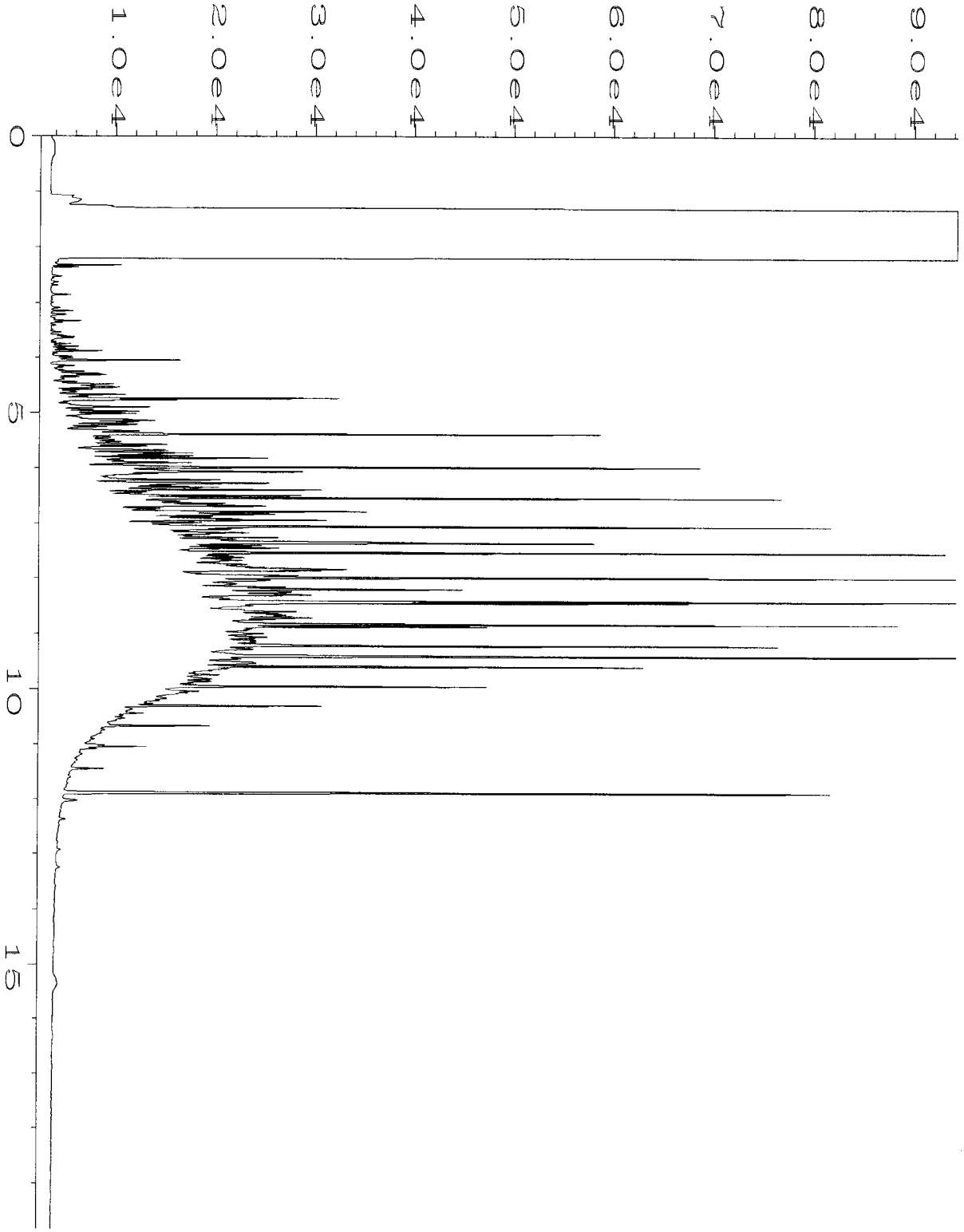
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Operator : ML
Instrument : GC#4
Sample Name : 201018-21
Run Time Bar Code:
Acquired on : 06 Jan 12 11:32 PM
Report Created on: 09 Jan 12 09:27 AM

Page Number : 1
Vial Number : 29
Injection Number : 1
Sequence Line : 11
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name : C:\HPCHEM\4\DATA\01-06-12\015F0901.D
Operator : ML
Instrument : GC#4
Sample Name : 02-036 mb
Run Time Bar Code:
Acquired on : 06 Jan 12 04:37 PM
Report Created on: 09 Jan 12 09:21 AM

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 9
Instrument Method: TPHD.MTH
Analysis Method : TPHD.MTH



Data File Name	: C:\HPCHEM\4\DATA\01-06-12\003F0201.D		
Operator	: ML	Page Number	: 1
Instrument	: GC#4	Vial Number	: 3
Sample Name	: 500 WADF 37-06B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 06 Jan 12 09:03 AM	Instrument Method	: TPHD.MTH
Report Created on	: 09 Jan 12 09:20 AM	Analysis Method	: TPHD.MTH

201018

SAMPLE CHAIN OF CUSTODY

ME 01-04-12 VS3/AQ5

Page # 1 of 2

Send Report To Rob Roberts

Company SES

Address 2811 Fairview Ave E Suite 2000

City, State, ZIP Seattle WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. AuTech 0789

PO #

REMARKS X-analyze as marked per RR 1/5/12 mc

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	PAH	PCBs	Notes
P01-04	P01	04	01 A-E	1-4-12	0805	So.1	5				X		X			Hold
P01-09	P01	09	02 A-E		0820	So.1	5									Hold
P02-1.5	P02	01.5	03		0850	So.1	1	X			X		X			Hold
P02-04	"	04	04 A-E		0855	So.1	5									Hold
P02-07	"	07	05		0900	So.1	5									Hold
P02-10	"	10	06		0905	So.1	5									Hold
P03-04	P03	04	07		0915	So.1	5	X							X	Hold
P03-08	"	08	08		0920	So.1	5									Hold
P03-12	"	12	09		0930	So.1	5									Hold
P04-02	P04	02	10		0945	So.1	1									Hold
P04-04	"	04	11 A-E		0950	So.1	5									Hold
P04-08	"	08	12		1000	So.1	5		X	X						Hold
P04-12	"	12	13		1010	So.1	5									Hold

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robt A. Hansberger	SES	1-4-12	1355
Received by:		Nhan Phan	FeBI	1/4/12	1355
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 4 °C

201018

SAMPLE CHAIN OF CUSTODY

ME 01-04-12

VS3 / A05

Page # 2 of 2

Send Report To

Company

Address See Page 1

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME / NO. Autech 0789

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	RCRA-8 Metals	PAH		Notes
P04-15	P04	15	14A-E	1-4-12	1015	Soil	5	X	X	X						Hold
P05-02	P05	02	15		1025	Soil	1									Hold
P05-04		04	16A-E		1030	Soil	5									Hold
P05-08		08	17		1040	Soil	5	X	X	X						Hold
P05-13		13	18		1050	Soil	5									Hold
P06-02	P06	02	19		1100	Soil	1									Hold
P06-04		04	20A-E		1105	Soil	5									Hold
P06-08		08	21		1125	Soil	5	X	X	X						Hold
P06-10		10	22		1130	Soil	5									Hold

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Robert A. Hughes	SES	1-4-12	1355
Received by:		Nhan Phan	FeBI	1-4-12	1355
Relinquished by:					
Received by:					

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

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 3, 2012

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 1, 2012 from the SOU_0432-004-03_20120501, F&BI 205016 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 1, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0432-004-03_20120501, F&BI 205016 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
205016-01	MW14-20120430
205016-02	MW15-20120430
205016-03	MW11-20120430

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW14-20120430	Client:	SoundEarth Strategies
Date Received:	05/01/12	Project:	SOU_0432-004-03_20120501, F&BI 205016
Date Extracted:	05/01/12	Lab ID:	205016-01
Date Analyzed:	05/01/12	Data File:	050121.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	100	50	150

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW15-20120430	Client:	SoundEarth Strategies
Date Received:	05/01/12	Project:	SOU_0432-004-03_20120501, F&BI 205016
Date Extracted:	05/01/12	Lab ID:	205016-02
Date Analyzed:	05/01/12	Data File:	050122.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	99	50	150

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-20120430	Client:	SoundEarth Strategies
Date Received:	05/01/12	Project:	SOU_0432-004-03_20120501, F&BI 205016
Date Extracted:	05/01/12	Lab ID:	205016-03
Date Analyzed:	05/01/12	Data File:	050123.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	99	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	14
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0432-004-03_20120501, F&BI 205016
Date Extracted:	05/01/12	Lab ID:	02-0694 mb
Date Analyzed:	05/01/12	Data File:	050116.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	98	50	150

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

Date of Report: 05/03/12
Date Received: 05/01/12
Project: SOU_0432-004-03_20120501, F&BI 205016

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

Laboratory Code: 205018-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	91	50-150
Chloroethane	ug/L (ppb)	50	<1	89	50-150
1,1-Dichloroethene	ug/L (ppb)	50	<1	98	50-150
Methylene chloride	ug/L (ppb)	50	<5	94	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	50-150
1,1-Dichloroethane	ug/L (ppb)	50	<1	103	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	98	50-150
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	110	50-150
Trichloroethene	ug/L (ppb)	50	2.0	98	50-150
Tetrachloroethene	ug/L (ppb)	50	<1	101	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	97	98	70-130	1
Chloroethane	ug/L (ppb)	50	94	92	70-130	2
1,1-Dichloroethene	ug/L (ppb)	50	101	103	70-130	2
Methylene chloride	ug/L (ppb)	50	88	87	70-130	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	101	103	70-130	2
1,1-Dichloroethane	ug/L (ppb)	50	106	106	70-130	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	98	99	70-130	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	99	70-130	1
1,1,1-Trichloroethane	ug/L (ppb)	50	109	111	70-130	2
Trichloroethene	ug/L (ppb)	50	102	101	70-130	1
Tetrachloroethene	ug/L (ppb)	50	100	101	70-130	1

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

205016

SAMPLE CHAIN OF CUSTODY

ME 05-01-12 V2

Page # 1 of 1

Send Report To Rob Roberts
Company Sandearth Strategies
Address 2811 Fairview Ave E
City, State, ZIP Seattle, WA 98102
Phone # 206-306-1900 **Fax #** 306-1907

SAMPLERS (signature)

PROJECT NAME/NO. Artech Wallingford

PO # 0432-004-03

REMARKS

GEMS Y / N

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH By Friday

Rush charges authorized by:

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	RCRA-8 Metals	cVOCs by 8260C		Notes
MW14-20120430	MW14	37'	01A-D	4/30/12	1229	H_2O	4							X		
MW15-20120430	MW15	30'	02	↓	1353	↓	↓							X		
MW11-20120430	MW11	47'	03	↓	1457	↓	↓							X		

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		WILL CAMA	SES	5/1/12	
Received by:		ROB ROBERTS	SES	5/1/12	8:00 AM
Relinquished by:		ROB ROBERTS	SES	5/1/12	11:45 AM
Received by:		ERIC FOWLER	FEB	5/1/12	1145

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 1 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 2, 2012

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 26, 2012 from the SOU_0789_20120426, F&BI 204396 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
SOU0502R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 26, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120426, F&BI 204396 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
204396-01	MW06-20120425
204396-02	MW07-20120425
204396-03	MW08-20120425

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW06-20120425	Client:	SoundEarth Strategies
Date Received:	04/26/12	Project:	SOU_0789_20120426, F&BI 204396
Date Extracted:	04/27/30	Lab ID:	204396-01
Date Analyzed:	04/27/12	Data File:	042726.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	3.2	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW07-20120425	Client:	SoundEarth Strategies
Date Received:	04/26/12	Project:	SOU_0789_20120426, F&BI 204396
Date Extracted:	04/27/30	Lab ID:	204396-02
Date Analyzed:	04/27/12	Data File:	042727.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	96	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	12	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	3.3	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW08-20120425	Client:	SoundEarth Strategies
Date Received:	04/26/12	Project:	SOU_0789_20120426, F&BI 204396
Date Extracted:	04/30/12	Lab ID:	204396-03
Date Analyzed:	04/30/12	Data File:	043010.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

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

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	5.9	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20120426, F&BI 204396
Date Extracted:	04/30/12	Lab ID:	02-0690 mb
Date Analyzed:	04/30/12	Data File:	043008.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

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

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20120426, F&BI 204396
Date Extracted:	04/27/30	Lab ID:	02-0686 mb
Date Analyzed:	04/27/12	Data File:	042720.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

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

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

Date of Report: 05/02/12
Date Received: 04/26/12
Project: SOU_0789_20120426, F&BI 204396

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

Laboratory Code: 204366-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	99	50-150
Chloromethane	ug/L (ppb)	50	<10	96	50-150
Vinyl chloride	ug/L (ppb)	50	0.37	100	50-150
Bromomethane	ug/L (ppb)	50	<1	90	50-150
Chloroethane	ug/L (ppb)	50	<1	93	50-150
Trichlorofluoromethane	ug/L (ppb)	50	<1	100	50-150
Acetone	ug/L (ppb)	250	<10	102	50-150
1,1-Dichloroethene	ug/L (ppb)	50	<1	93	50-150
Methylene chloride	ug/L (ppb)	50	<5	91	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	96	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	50-150
1,1-Dichloroethane	ug/L (ppb)	50	<1	101	50-150
2,2-Dichloropropane	ug/L (ppb)	50	<1	79	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	50	5.2	95	50-150
Chloroform	ug/L (ppb)	50	<1	98	50-150
2-Butanone (MEK)	ug/L (ppb)	250	<10	102	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	97	50-150
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	107	50-150
1,1-Dichloropropene	ug/L (ppb)	50	<1	98	50-150
Carbon tetrachloride	ug/L (ppb)	50	<1	103	50-150
Benzene	ug/L (ppb)	50	<0.35	98	50-150
Trichloroethene	ug/L (ppb)	50	1.3	95	50-150
1,2-Dichloropropane	ug/L (ppb)	50	<1	100	50-150
Bromodichloromethane	ug/L (ppb)	50	<1	102	50-150
Dibromomethane	ug/L (ppb)	50	<1	93	50-150
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	104	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	50-150
Toluene	ug/L (ppb)	50	<1	97	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	50-150
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	101	50-150
2-Hexanone	ug/L (ppb)	250	<10	108	50-150
1,3-Dichloropropane	ug/L (ppb)	50	<1	99	50-150
Tetrachloroethene	ug/L (ppb)	50	3.0	94	50-150
Dibromochloromethane	ug/L (ppb)	50	<1	102	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	50-150
Chlorobenzene	ug/L (ppb)	50	<1	96	50-150
Ethylbenzene	ug/L (ppb)	50	<1	101	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	108	50-150
m,p-Xylene	ug/L (ppb)	100	<2	98	50-150
o-Xylene	ug/L (ppb)	50	<1	98	50-150
Styrene	ug/L (ppb)	50	<1	95	50-150
Isopropylbenzene	ug/L (ppb)	50	<1	100	50-150
Bromoform	ug/L (ppb)	50	<1	100	50-150
n-Propylbenzene	ug/L (ppb)	50	<1	94	50-150
Bromobenzene	ug/L (ppb)	50	<1	100	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	92	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	98	50-150
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	99	50-150
2-Chlorotoluene	ug/L (ppb)	50	<1	97	50-150
4-Chlorotoluene	ug/L (ppb)	50	<1	93	50-150
tert-Butylbenzene	ug/L (ppb)	50	<1	97	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	95	50-150
sec-Butylbenzene	ug/L (ppb)	50	<1	97	50-150
p-Isopropyltoluene	ug/L (ppb)	50	<1	97	50-150
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	95	50-150
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	94	50-150
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	99	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	104	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	92	50-150
Hexachlorobutadiene	ug/L (ppb)	50	<1	88	50-150
Naphthalene	ug/L (ppb)	50	<1	104	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	97	50-150

Date of Report: 05/02/12
Date Received: 04/26/12
Project: SOU_0789_20120426, F&BI 204396

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	92	89	70-130	3
Chloromethane	ug/L (ppb)	50	91	91	70-130	0
Vinyl chloride	ug/L (ppb)	50	95	93	70-130	2
Bromomethane	ug/L (ppb)	50	91	86	70-130	6
Chloroethane	ug/L (ppb)	50	89	89	70-130	0
Trichlorofluoromethane	ug/L (ppb)	50	95	93	70-130	2
Acetone	ug/L (ppb)	250	96	93	70-130	3
1,1-Dichloroethene	ug/L (ppb)	50	89	88	70-130	1
Methylene chloride	ug/L (ppb)	50	87	83	70-130	5
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	91	90	70-130	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	89	88	70-130	1
1,1-Dichloroethane	ug/L (ppb)	50	96	95	70-130	1
2,2-Dichloropropane	ug/L (ppb)	50	96	95	70-130	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	91	89	70-130	2
Chloroform	ug/L (ppb)	50	94	91	70-130	3
2-Butanone (MEK)	ug/L (ppb)	250	97	96	70-130	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	88	70-130	3
1,1,1-Trichloroethane	ug/L (ppb)	50	100	98	70-130	2
1,1-Dichloropropene	ug/L (ppb)	50	92	93	70-130	1
Carbon tetrachloride	ug/L (ppb)	50	96	95	70-130	1
Benzene	ug/L (ppb)	50	94	92	70-130	2
Trichloroethene	ug/L (ppb)	50	97	97	70-130	0
1,2-Dichloropropane	ug/L (ppb)	50	94	92	70-130	2
Bromodichloromethane	ug/L (ppb)	50	95	95	70-130	0
Dibromomethane	ug/L (ppb)	50	85	84	70-130	1
4-Methyl-2-pentanone	ug/L (ppb)	250	100	97	70-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	50	97	98	70-130	1
Toluene	ug/L (ppb)	50	92	92	70-130	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	98	98	70-130	0
1,1,2-Trichloroethane	ug/L (ppb)	50	97	93	70-130	4
2-Hexanone	ug/L (ppb)	250	100	98	70-130	2
1,3-Dichloropropane	ug/L (ppb)	50	93	93	70-130	0
Tetrachloroethene	ug/L (ppb)	50	95	90	70-130	5
Dibromochloromethane	ug/L (ppb)	50	98	95	70-130	3
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	97	95	70-130	2
Chlorobenzene	ug/L (ppb)	50	92	90	70-130	2
Ethylbenzene	ug/L (ppb)	50	96	94	70-130	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	101	101	70-130	0
m,p-Xylene	ug/L (ppb)	100	96	95	70-130	1
o-Xylene	ug/L (ppb)	50	95	95	70-130	0
Styrene	ug/L (ppb)	50	100	96	70-130	4
Isopropylbenzene	ug/L (ppb)	50	97	95	70-130	2
Bromoform	ug/L (ppb)	50	98	99	70-130	1
n-Propylbenzene	ug/L (ppb)	50	93	91	70-130	2
Bromobenzene	ug/L (ppb)	50	95	93	70-130	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	94	92	70-130	2
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	85	84	70-130	1
1,2,3-Trichloropropane	ug/L (ppb)	50	91	91	70-130	0
2-Chlorotoluene	ug/L (ppb)	50	92	92	70-130	0
4-Chlorotoluene	ug/L (ppb)	50	90	87	70-130	3
tert-Butylbenzene	ug/L (ppb)	50	95	93	70-130	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	94	93	70-130	1
sec-Butylbenzene	ug/L (ppb)	50	95	93	70-130	2
p-Isopropyltoluene	ug/L (ppb)	50	97	95	70-130	2
1,3-Dichlorobenzene	ug/L (ppb)	50	92	90	70-130	2
1,4-Dichlorobenzene	ug/L (ppb)	50	91	87	70-130	4
1,2-Dichlorobenzene	ug/L (ppb)	50	94	92	70-130	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	97	100	70-130	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	90	90	70-130	0
Hexachlorobutadiene	ug/L (ppb)	50	93	92	70-130	1
Naphthalene	ug/L (ppb)	50	99	100	70-130	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	98	95	70-130	3

Date of Report: 05/02/12
Date Received: 04/26/12
Project: SOU_0789_20120426, F&BI 204396

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

Laboratory Code: 204367-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	77	50-150
Chloromethane	ug/L (ppb)	50	<10	85	50-150
Vinyl chloride	ug/L (ppb)	50	<0.2	89	50-150
Bromomethane	ug/L (ppb)	50	<1	87	50-150
Chloroethane	ug/L (ppb)	50	<1	87	50-150
Trichlorofluoromethane	ug/L (ppb)	50	<1	97	50-150
Acetone	ug/L (ppb)	250	<10	98	50-150
1,1-Dichloroethene	ug/L (ppb)	50	<1	95	50-150
Methylene chloride	ug/L (ppb)	50	<5	90	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	93	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	95	50-150
1,1-Dichloroethane	ug/L (ppb)	50	<1	103	50-150
2,2-Dichloropropane	ug/L (ppb)	50	<1	108	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	50-150
Chloroform	ug/L (ppb)	50	<1	101	50-150
2-Butanone (MEK)	ug/L (ppb)	250	<10	100	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	100	50-150
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	109	50-150
1,1-Dichloropropene	ug/L (ppb)	50	<1	101	50-150
Carbon tetrachloride	ug/L (ppb)	50	<1	107	50-150
Benzene	ug/L (ppb)	50	<0.35	101	50-150
Trichloroethene	ug/L (ppb)	50	<1	99	50-150
1,2-Dichloropropane	ug/L (ppb)	50	<1	102	50-150
Bromodichloromethane	ug/L (ppb)	50	<1	102	50-150
Dibromomethane	ug/L (ppb)	50	<1	92	50-150
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	104	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	106	50-150
Toluene	ug/L (ppb)	50	<1	101	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	106	50-150
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	102	50-150
2-Hexanone	ug/L (ppb)	250	<10	108	50-150
1,3-Dichloropropane	ug/L (ppb)	50	<1	101	50-150
Tetrachloroethene	ug/L (ppb)	50	<1	99	50-150
Dibromochloromethane	ug/L (ppb)	50	<1	96	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	104	50-150
Chlorobenzene	ug/L (ppb)	50	<1	100	50-150
Ethylbenzene	ug/L (ppb)	50	<1	105	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	110	50-150
m,p-Xylene	ug/L (ppb)	100	<2	104	50-150
o-Xylene	ug/L (ppb)	50	<1	103	50-150
Styrene	ug/L (ppb)	50	<1	100	50-150
Isopropylbenzene	ug/L (ppb)	50	<1	106	50-150
Bromoform	ug/L (ppb)	50	<1	92	50-150
n-Propylbenzene	ug/L (ppb)	50	<1	103	50-150
Bromobenzene	ug/L (ppb)	50	<1	101	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	101	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	101	50-150
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	101	50-150
2-Chlorotoluene	ug/L (ppb)	50	<1	103	50-150
4-Chlorotoluene	ug/L (ppb)	50	<1	98	50-150
tert-Butylbenzene	ug/L (ppb)	50	<1	104	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	101	50-150
sec-Butylbenzene	ug/L (ppb)	50	<1	105	50-150
p-Isopropyltoluene	ug/L (ppb)	50	<1	107	50-150
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	100	50-150
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	99	50-150
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	103	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	107	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	98	50-150
Hexachlorobutadiene	ug/L (ppb)	50	<1	102	50-150
Naphthalene	ug/L (ppb)	50	<1	107	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	100	50-150

Date of Report: 05/02/12
Date Received: 04/26/12
Project: SOU_0789_20120426, F&BI 204396

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	80	78	70-130	3
Chloromethane	ug/L (ppb)	50	90	90	70-130	0
Vinyl chloride	ug/L (ppb)	50	107	93	70-130	14
Bromomethane	ug/L (ppb)	50	94	88	70-130	7
Chloroethane	ug/L (ppb)	50	92	89	70-130	3
Trichlorofluoromethane	ug/L (ppb)	50	100	98	70-130	2
Acetone	ug/L (ppb)	250	108	104	70-130	4
1,1-Dichloroethene	ug/L (ppb)	50	102	97	70-130	5
Methylene chloride	ug/L (ppb)	50	98	96	70-130	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	100	97	70-130	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	102	97	70-130	5
1,1-Dichloroethane	ug/L (ppb)	50	108	104	70-130	4
2,2-Dichloropropane	ug/L (ppb)	50	118	113	70-130	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	98	70-130	2
Chloroform	ug/L (ppb)	50	103	101	70-130	2
2-Butanone (MEK)	ug/L (ppb)	250	111	102	70-130	8
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	99	70-130	3
1,1,1-Trichloroethane	ug/L (ppb)	50	113	109	70-130	4
1,1-Dichloropropene	ug/L (ppb)	50	107	104	70-130	3
Carbon tetrachloride	ug/L (ppb)	50	109	106	70-130	3
Benzene	ug/L (ppb)	50	105	101	70-130	4
Trichloroethene	ug/L (ppb)	50	104	100	70-130	4
1,2-Dichloropropane	ug/L (ppb)	50	106	103	70-130	3
Bromodichloromethane	ug/L (ppb)	50	107	103	70-130	4
Dibromomethane	ug/L (ppb)	50	98	93	70-130	5
4-Methyl-2-pentanone	ug/L (ppb)	250	106	103	70-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	50	114	110	70-130	4
Toluene	ug/L (ppb)	50	105	101	70-130	4
trans-1,3-Dichloropropene	ug/L (ppb)	50	113	109	70-130	4
1,1,2-Trichloroethane	ug/L (ppb)	50	106	101	70-130	5
2-Hexanone	ug/L (ppb)	250	112	107	70-130	5
1,3-Dichloropropane	ug/L (ppb)	50	103	101	70-130	2
Tetrachloroethene	ug/L (ppb)	50	103	102	70-130	1
Dibromochloromethane	ug/L (ppb)	50	107	104	70-130	3
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	108	104	70-130	4
Chlorobenzene	ug/L (ppb)	50	100	98	70-130	2
Ethylbenzene	ug/L (ppb)	50	109	104	70-130	5
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	114	110	70-130	4
m,p-Xylene	ug/L (ppb)	100	109	103	70-130	6
o-Xylene	ug/L (ppb)	50	107	104	70-130	3
Styrene	ug/L (ppb)	50	109	105	70-130	4
Isopropylbenzene	ug/L (ppb)	50	109	106	70-130	3
Bromoform	ug/L (ppb)	50	113	108	70-130	5
n-Propylbenzene	ug/L (ppb)	50	106	103	70-130	3
Bromobenzene	ug/L (ppb)	50	105	103	70-130	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	107	104	70-130	3
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	102	99	70-130	3
1,2,3-Trichloropropane	ug/L (ppb)	50	108	99	70-130	9
2-Chlorotoluene	ug/L (ppb)	50	106	102	70-130	4
4-Chlorotoluene	ug/L (ppb)	50	102	99	70-130	3
tert-Butylbenzene	ug/L (ppb)	50	107	103	70-130	4
1,2,4-Trimethylbenzene	ug/L (ppb)	50	108	104	70-130	4
sec-Butylbenzene	ug/L (ppb)	50	109	104	70-130	5
p-Isopropyltoluene	ug/L (ppb)	50	111	107	70-130	4
1,3-Dichlorobenzene	ug/L (ppb)	50	103	99	70-130	4
1,4-Dichlorobenzene	ug/L (ppb)	50	101	99	70-130	2
1,2-Dichlorobenzene	ug/L (ppb)	50	105	103	70-130	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	113	112	70-130	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	106	99	70-130	7
Hexachlorobutadiene	ug/L (ppb)	50	108	101	70-130	7
Naphthalene	ug/L (ppb)	50	114	109	70-130	4
1,2,3-Trichlorobenzene	ug/L (ppb)	50	110	105	70-130	5

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

204396

SAMPLE CHAIN OF CUSTODY

ME 04-26-12

VI

Page # 1 of 1

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave East Suite 2000

City, State, ZIP Seattle, WA 98155

Phone # 206·306·1900 Fax # 206·306·1907

SAMPLERS *(signature)*	
PROJECT NAME/NO. 0789	PO #
REMARKS	GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
								ANALYSES REQUESTED								
MW06-20120425			01 A-D	4/25/12	1042	Water	4				X					
MW07-20120425			02 A-D	" "	1235	water	4				X					
MW08-20120425			03 A-D	" "	1405	water	4				X					

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		RUB RUBERG	SES	4/26/12	15:30
Received by:		Eric Young	FCIB	4/26	1530
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 6 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 3, 2012

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 27, 2012 from the SOU_0789_20120427, F&BI 204409 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
SOU0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 27, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120427, F&BI 204409 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
204409-01	MW12-20120427
204409-02	MW04-20120427
204409-03	MW13-20120427
204409-04	MW03-20120427
204409-05	MW99-20120427

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW12-20120427	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	04/30/12	Lab ID:	204409-01
Date Analyzed:	04/30/12	Data File:	043023.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	106	60	133

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	14
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20120427	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	04/30/12	Lab ID:	204409-02
Date Analyzed:	04/30/12	Data File:	043024.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	106	60	133

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	170 ve
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20120427	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	05/01/12	Lab ID:	204409-02 1/10
Date Analyzed:	05/01/12	Data File:	050121.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<2
Chloroethane	<10
1,1-Dichloroethene	<10
Methylene chloride	<50
trans-1,2-Dichloroethene	<10
1,1-Dichloroethane	<10
cis-1,2-Dichloroethene	<10
1,2-Dichloroethane (EDC)	<10
1,1,1-Trichloroethane	<10
Trichloroethene	170
Tetrachloroethene	<10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW13-20120427	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	05/01/12	Lab ID:	204409-03
Date Analyzed:	05/01/12	Data File:	050120.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	112	57	121
Toluene-d8	110	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.0
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20120427	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	04/30/12	Lab ID:	204409-04
Date Analyzed:	04/30/12	Data File:	043026.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	105	60	133

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	2.2
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	83
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99-20120427	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	04/30/12	Lab ID:	204409-05
Date Analyzed:	04/30/12	Data File:	043027.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	105	60	133

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	180 ve
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99-20120427	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	05/01/12	Lab ID:	204409-05 1/10
Date Analyzed:	05/01/12	Data File:	050122.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	57	121
Toluene-d8	110	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<2
Chloroethane	<10
1,1-Dichloroethene	<10
Methylene chloride	<50
trans-1,2-Dichloroethene	<10
1,1-Dichloroethane	<10
cis-1,2-Dichloroethene	<10
1,2-Dichloroethane (EDC)	<10
1,1,1-Trichloroethane	<10
Trichloroethene	170
Tetrachloroethene	<10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	05/01/12	Lab ID:	02-0693 mb
Date Analyzed:	05/01/12	Data File:	050119.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	112	57	121
Toluene-d8	111	63	127
4-Bromofluorobenzene	103	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20120427, F&BI 204409
Date Extracted:	04/30/12	Lab ID:	02-0689 mb
Date Analyzed:	04/30/12	Data File:	043011.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	105	63	127
4-Bromofluorobenzene	104	60	133

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

Date of Report: 05/03/12
Date Received: 04/27/12
Project: SOU_0789_20120427, F&BI 204409

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

Laboratory Code: 204409-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	90	36-166
Chloroethane	ug/L (ppb)	50	<1	92	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	97	60-136
Methylene chloride	ug/L (ppb)	50	<5	97	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	107	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	108	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	109	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	114	60-146
Trichloroethene	ug/L (ppb)	50	170 ve	79 b	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	103	73-129

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	101	102	50-154	1
Chloroethane	ug/L (ppb)	50	97	98	58-146	1
1,1-Dichloroethene	ug/L (ppb)	50	90	92	67-136	2
Methylene chloride	ug/L (ppb)	50	94	93	39-148	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	101	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	103	104	79-121	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	104	80-123	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	98	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	110	109	83-130	1
Trichloroethene	ug/L (ppb)	50	93	94	80-120	1
Tetrachloroethene	ug/L (ppb)	50	99	98	76-121	1

Date of Report: 05/03/12
Date Received: 04/27/12
Project: SOU_0789_20120427, F&BI 204409

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	107	104	50-154	3
Chloroethane	ug/L (ppb)	50	102	98	58-146	4
1,1-Dichloroethene	ug/L (ppb)	50	105	102	67-136	3
Methylene chloride	ug/L (ppb)	50	104	100	39-148	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	112	108	68-128	4
1,1-Dichloroethane	ug/L (ppb)	50	111	106	79-121	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	114	110	80-123	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	111	108	73-132	3
1,1,1-Trichloroethane	ug/L (ppb)	50	118	115	83-130	3
Trichloroethene	ug/L (ppb)	50	113	110	80-120	3
Tetrachloroethene	ug/L (ppb)	50	109	106	76-121	3

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

204409

SAMPLE CHAIN OF CUSTODY

ME 04/27/12 v2

Page # 1 of 1

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

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

SAMPLERS (signature)

PROJECT NAME/NO. AVTECH 0789

PO #

REMARKS

GEMS Y / N

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	cVOC's by 8260		Notes
MW12-20120427	MW12	42	01A-D	4/27/12	0903	H20	4							X		
MW04-20120427	MW04	39	02	4/27/12	0953									X		
MW13-20120427	MW13	37.5	03	4/27/12	1049									X		
MW03-20120427	MW03	34	04	4/27/12	1215									X		
MW99-20120427	MW04	39	05	4/27/12	0956									X		

WEC

ANALYSES REQUESTED

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	WILL CAMARDA	SES	4/27/12	1350
Received by:	Matt Langstaff	FBI	4/27/12	1350
Relinquished by:				
Received by:				

Samples received at 8 °C

FORMS\COC\SESGEMSR1.DOC (Revision 1)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 3, 2012

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 1, 2012 from the SOU_0789-004_20120501, F&BI 205018 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 1, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120501, F&BI 205018 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
205018-01	MW09-20120501
205018-02	MW05-20120501
205018-03	MW01-20120501
205018-04	MW10-20120501

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW09-20120501	Client:	SoundEarth Strategies
Date Received:	05/01/12	Project:	SOU_0789-004_20120501, F&BI 205018
Date Extracted:	05/01/12	Lab ID:	205018-01
Date Analyzed:	05/01/12	Data File:	050117.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	110	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	98	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	2.0
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW05-20120501	Client:	SoundEarth Strategies
Date Received:	05/01/12	Project:	SOU_0789-004_20120501, F&BI 205018
Date Extracted:	05/01/12	Lab ID:	205018-02
Date Analyzed:	05/01/12	Data File:	050118.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.9
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01-20120501	Client:	SoundEarth Strategies
Date Received:	05/01/12	Project:	SOU_0789-004_20120501, F&BI 205018
Date Extracted:	05/01/12	Lab ID:	205018-03
Date Analyzed:	05/01/12	Data File:	050119.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	101	50	150

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW10-20120501	Client:	SoundEarth Strategies
Date Received:	05/01/12	Project:	SOU_0789-004_20120501, F&BI 205018
Date Extracted:	05/01/12	Lab ID:	205018-04
Date Analyzed:	05/01/12	Data File:	050120.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	101	50	150

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20120501, F&BI 205018
Date Extracted:	05/01/12	Lab ID:	02-0694 mb
Date Analyzed:	05/01/12	Data File:	050116.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	98	50	150

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

Date of Report: 05/03/12
Date Received: 05/01/12
Project: SOU_0789-004_20120501, F&BI 205018

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

Laboratory Code: 205018-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	91	50-150
Chloroethane	ug/L (ppb)	50	<1	89	50-150
1,1-Dichloroethene	ug/L (ppb)	50	<1	98	50-150
Methylene chloride	ug/L (ppb)	50	<5	94	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	50-150
1,1-Dichloroethane	ug/L (ppb)	50	<1	103	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	98	50-150
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	110	50-150
Trichloroethene	ug/L (ppb)	50	2.0	98	50-150
Tetrachloroethene	ug/L (ppb)	50	<1	101	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	97	98	70-130	1
Chloroethane	ug/L (ppb)	50	94	92	70-130	2
1,1-Dichloroethene	ug/L (ppb)	50	101	103	70-130	2
Methylene chloride	ug/L (ppb)	50	88	87	70-130	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	101	103	70-130	2
1,1-Dichloroethane	ug/L (ppb)	50	106	106	70-130	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	98	99	70-130	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	99	70-130	1
1,1,1-Trichloroethane	ug/L (ppb)	50	109	111	70-130	2
Trichloroethene	ug/L (ppb)	50	102	101	70-130	1
Tetrachloroethene	ug/L (ppb)	50	100	101	70-130	1

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

205018

SAMPLE CHAIN OF CUSTODY HE 05-01-12 V2

Page # 1 of 1

Send Report To Rob Roberts
Company SoundEarth Strategies
Address 2811 Fairview Ave E, Suite 2000
City, State, ZIP Seattle, WA 98102
Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO.: AVTECH 0789-004

PO #:

REMARKS:

GEMS Y / N

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH FRIDAY

Rush charges authorized by:

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOCs by 8260	SVOC's by 8270	RCRA-8 Metals	cVOCs by 8260C		Notes
MW09 - 20120501	~~MW09~~ MW09	26'	01 A-D	5/1/12	0952	H_2O	4							X		
MW05 - 20120501	MW05	26'	02	5/1/12	1043	H_2O	4							X		
MW01 - 20120501	MW01	30'	03	5/1/12	1135	H_2O	4							X		
MW10 - 20120501	MW10	25'	04	5/1/12	1244	H_2O	4							X		

WBC

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Will Camarda	SES	5/1/12	1333
Received by:		Nhan Phan	FEBT	5/1/12	1333
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 7 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 15, 2012

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 8, 2012 from the SOU_0789-004_20120508, F&BI 205103 project. There are 12 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
SOU0515R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 8, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120508, F&BI 205103 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
205103 -01	MW13-20120507
205103 -02	MW11-20120508
205103 -03	MW03-20120508

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW03-20120508	Client:	SoundEarth Strategies
Date Received:	05/08/12	Project:	SOU_0789-004_20120508, F&BI 205103
Date Extracted:	05/09/12	Lab ID:	205103-03
Date Analyzed:	05/09/12	Data File:	205103-03.022
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	89	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.69
Arsenic	1.44
Selenium	<1
Silver	<1
Cadmium	<1
Barium	11.9
Lead	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20120508, F&BI 205103
Date Extracted:	05/09/12	Lab ID:	I2-298 mb
Date Analyzed:	05/09/12	Data File:	I2-298 mb.020
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	91	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 05/15/12
Date Received: 05/08/12
Project: SOU_0789-004_20120508, F&BI 205103
Date Extracted: 05/08/12
Date Analyzed: 05/09/12

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Dissolved Mercury
MW03-20120508 205103-03	<0.1
Method Blank	<0.1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW13-20120507	Client:	SoundEarth Strategies
Date Received:	05/08/12	Project:	SOU_0789-004_20120508, F&BI 205103
Date Extracted:	05/09/12	Lab ID:	205103-01
Date Analyzed:	05/10/12	Data File:	050935.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	104	60	133

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	2.0
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-20120508	Client:	SoundEarth Strategies
Date Received:	05/08/12	Project:	SOU_0789-004_20120508, F&BI 205103
Date Extracted:	05/09/12	Lab ID:	205103-02
Date Analyzed:	05/10/12	Data File:	050936.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	103	60	133

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	29
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03-20120508	Client:	SoundEarth Strategies
Date Received:	05/08/12	Project:	SOU_0789-004_20120508, F&BI 205103
Date Extracted:	05/09/12	Lab ID:	205103-03
Date Analyzed:	05/10/12	Data File:	050937.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	103	60	133

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	1.9
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	64
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	SOU_0789-004_20120508, F&BI 205103
Date Extracted:	05/09/12	Lab ID:	02-0776 mb
Date Analyzed:	05/09/12	Data File:	050910.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	103	60	133

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

Date of Report: 05/15/12
Date Received: 05/08/12
Project: SOU_0789-004_20120508, F&BI 205103

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 205103-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	ug/L (ppb)	20	1.69	101	98	71-130	3
Arsenic	ug/L (ppb)	10	1.44	109	104	51-167	5
Selenium	ug/L (ppb)	5	<1	110	103	41-185	7
Silver	ug/L (ppb)	5	<1	98	94	73-114	4
Cadmium	ug/L (ppb)	5	<1	103	100	86-115	3
Barium	ug/L (ppb)	50	11.9	104 b	99 b	75-127	5 b
Lead	ug/L (ppb)	10	<1	102	99	85-115	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	96	80-119
Arsenic	ug/L (ppb)	10	104	81-118
Selenium	ug/L (ppb)	5	102	77-124
Silver	ug/L (ppb)	5	104	85-116
Cadmium	ug/L (ppb)	5	103	86-118
Barium	ug/L (ppb)	50	104	85-116
Lead	ug/L (ppb)	10	106	84-120

Date of Report: 05/15/12
Date Received: 05/08/12
Project: SOU_0789-004_20120508, F&BI 205103

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED MERCURY USING EPA METHOD 1631E

Laboratory Code: 205103-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	ug/L (ppb)	0.5	<0.1	95	99	78-124	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	ug/L (ppb)	0.5	95	78-123

Date of Report: 05/15/12
Date Received: 05/08/12
Project: SOU_0789-004_20120508, F&BI 205103

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

Laboratory Code: 205103-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	108	36-166
Chloroethane	ug/L (ppb)	50	<1	113	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	107	60-136
Methylene chloride	ug/L (ppb)	50	<5	100	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	104	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	104	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	1.9	106	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	103	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	107	60-146
Trichloroethene	ug/L (ppb)	50	64	108 b	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	102	73-129

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	94	100	50-154	6
Chloroethane	ug/L (ppb)	50	97	102	58-146	5
1,1-Dichloroethene	ug/L (ppb)	50	94	100	67-136	6
Methylene chloride	ug/L (ppb)	50	95	99	39-148	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	103	68-128	6
1,1-Dichloroethane	ug/L (ppb)	50	95	102	79-121	7
cis-1,2-Dichloroethene	ug/L (ppb)	50	101	105	80-123	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	101	73-132	3
1,1,1-Trichloroethane	ug/L (ppb)	50	99	101	83-130	2
Trichloroethene	ug/L (ppb)	50	93	99	80-120	6
Tetrachloroethene	ug/L (ppb)	50	101	107	76-121	6

Data Qualifiers & Definitions

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

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

205103

SAMPLE CHAIN OF CUSTODY

ME 05/08/12 V2/AI 3

Page # 1 of 1

Send Report To Rob Roberts
Company SoundEarth Strategies
Address 2811 Fairview Ave E, suite 2000
City, State, ZIP Seattle, WA 98102
Phone # 306-1900 **Fax #** 306-1907

SAMPLERS (signature)

PROJECT NAME/NO. AVTECH 0789-004

PO #

REMARKS please filter and preserve mw03-20120508 poly bottle

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 5 days
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	CVOC's by 8260C	RCRA - 8 Metals				Notes
mw13-20120507	01A-D	05/7/12	1247	H_2O	4							X					
mw11-20120508	02A-D	5/8/12	0937	H_2O	4							X					
mw03-20120508	03A-E	5/8/12	1005	H_2O	5							X	X				FILTER

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	WILL CAMARDA	SES	5/8/12	1118
Received by:	Michele Costales Poyer	FEBI	5/8/12	1118
Relinquished by:				
Received by:				

Samples received at _____ °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 3, 2012

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 27, 2012 from the SOU_0789_20120427, F&BI 204410 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
SOU0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 27, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120427, F&BI 204410 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
204410-01	B19-35
204410-02	B19-40
204410-03	B19-45
204410-04	B20-25
204410-05	B20-30
204410-06	B20-35

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B19-35	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204410
Date Extracted:	04/30/12	Lab ID:	204410-01
Date Analyzed:	05/01/12	Data File:	043033.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	107	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20120427, F&BI 204410
Date Extracted:	04/30/12	Lab ID:	02-0691 mb
Date Analyzed:	04/30/12	Data File:	043022.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	107	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 05/03/12
Date Received: 04/27/12
Project: SOU_0789_20120427, F&BI 204410

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 204394-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	41	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	64	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	66	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	70	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	78	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	73	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	68	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	69	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	70	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	67	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	71	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	69	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	70	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	70	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	74	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	70	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	70	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	69	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	68	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	68	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	66	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	71	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	72	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	72	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	75	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	73	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	67	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	71	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	66	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	73	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	68	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	63	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	68	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	68	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	67	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	68	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	68	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	68	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	69	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	70	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	69	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	71	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	66	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	67	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	67	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	62	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	67	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	67	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	67	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	67	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	67	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	66	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	68	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	67	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	65	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	65	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	59	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	70	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	68	20-144

Date of Report: 05/03/12
Date Received: 04/27/12
Project: SOU_0789_20120427, F&BI 204410

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	68	51	10-146	29 vo
Chloromethane	mg/kg (ppm)	2.5	91	80	27-133	13
Vinyl chloride	mg/kg (ppm)	2.5	93	83	22-139	11
Bromomethane	mg/kg (ppm)	2.5	98	91	38-114	7
Chloroethane	mg/kg (ppm)	2.5	100	92	20-153	8
Trichlorofluoromethane	mg/kg (ppm)	2.5	102	93	10-196	9
Acetone	mg/kg (ppm)	12.5	95	97	52-141	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	110	104	47-128	6
Methylene chloride	mg/kg (ppm)	2.5	114	112	42-132	2
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	101	99	60-123	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	109	107	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	112	115	68-115	3
2,2-Dichloropropane	mg/kg (ppm)	2.5	125	121	57-133	3
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	110	111	72-113	1
Chloroform	mg/kg (ppm)	2.5	109	110	66-120	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	110	110	57-123	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	109	110	56-135	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	118	120	62-131	2
1,1-Dichloropropene	mg/kg (ppm)	2.5	112	113	69-128	1
Carbon tetrachloride	mg/kg (ppm)	2.5	112	115	60-139	3
Benzene	mg/kg (ppm)	2.5	108	109	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	98	100	68-114	2
1,2-Dichloropropane	mg/kg (ppm)	2.5	110	111	72-127	1
Bromodichloromethane	mg/kg (ppm)	2.5	113	114	72-130	1
Dibromomethane	mg/kg (ppm)	2.5	111	114	70-120	3
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	111	113	45-145	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	119	120	75-136	1
Toluene	mg/kg (ppm)	2.5	103	105	66-126	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	113	115	72-132	2
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	101	103	75-113	2
2-Hexanone	mg/kg (ppm)	12.5	104	104	33-152	0
1,3-Dichloropropane	mg/kg (ppm)	2.5	103	105	72-130	2
Tetrachloroethene	mg/kg (ppm)	2.5	101	102	72-114	1
Dibromochloromethane	mg/kg (ppm)	2.5	107	109	74-125	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	106	108	74-132	2
Chlorobenzene	mg/kg (ppm)	2.5	103	103	76-111	0
Ethylbenzene	mg/kg (ppm)	2.5	106	107	64-123	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	105	107	69-135	2
m,p-Xylene	mg/kg (ppm)	5	106	108	78-122	2
o-Xylene	mg/kg (ppm)	2.5	108	111	77-124	3
Styrene	mg/kg (ppm)	2.5	107	109	74-126	2
Isopropylbenzene	mg/kg (ppm)	2.5	108	110	76-127	2
Bromoform	mg/kg (ppm)	2.5	108	109	56-132	1
n-Propylbenzene	mg/kg (ppm)	2.5	105	107	74-124	2
Bromobenzene	mg/kg (ppm)	2.5	106	108	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	105	107	76-126	2
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	101	102	56-143	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	99	100	61-137	1
2-Chlorotoluene	mg/kg (ppm)	2.5	105	107	74-121	2
4-Chlorotoluene	mg/kg (ppm)	2.5	105	108	75-122	3
tert-Butylbenzene	mg/kg (ppm)	2.5	104	107	73-130	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	105	107	76-125	2
sec-Butylbenzene	mg/kg (ppm)	2.5	101	104	71-130	3
p-Isopropyltoluene	mg/kg (ppm)	2.5	104	106	70-132	2
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	102	104	75-121	2
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	101	102	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	99	76-121	2
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	93	97	61-136	4
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	105	70-129	5
Hexachlorobutadiene	mg/kg (ppm)	2.5	94	103	50-153	9
Naphthalene	mg/kg (ppm)	2.5	109	112	60-125	3
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	104	107	62-130	3

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

204410 ME 04/27/12 VSI

Page 1 of 1

Send Report To Rob Roberts
Company SES
Address 2811 Fairview ave E Suite 2000
City, State, ZIP Seattle WA 98102
Phone # 206 306-1900 Fax # 206-306-1907

SAMPLERS (signature)
PROJECT NAME/NO. Hotels 0789
PO #
REMARKS
GEMS Y / N

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
								ANALYSES REQUESTED								✱-per QA 4/30/12 MN
B19-35	B19	35	01A-D	4-27-12	0850	Soil	4				✱					Hold
B19-40	↓	40	02	↓	0905	Soil	4									Hold
B19-45		45	03		0925	Soil	4									Hold
B20-25	B20	25	04		1235	Soil	4									Hold
B20-30	↓	30	05		1245	Soil	4									Hold
B20-35	↓	35	06	↓	1255	Soil	4									Hold

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Robert A. Hutchinson	SES	4-27-12	1350
Received by:	Matt Snyder	FEDEX	4/27/12	1350
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

Samples received at 8 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 3, 2012

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 27, 2012 from the SOU_0789_20120427, F&BI 204405 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
SOU0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 27, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789_20120427, F&BI 204405 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
204405-01	B17-35
204405-02	B17-40
204405-03	B17-45
204405-04	B17-50
204405-05	B18-30
204405-06	B18-35
204405-07	B18-40
204405-08	B18-45
204405-09	P14-04
204405-10	P14-06
204405-11	P15-02

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B18-30	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204405
Date Extracted:	04/27/12	Lab ID:	204405-05
Date Analyzed:	04/28/12	Data File:	042737.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	105	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B18-35	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204405
Date Extracted:	04/27/12	Lab ID:	204405-06
Date Analyzed:	04/28/12	Data File:	042738.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	0.032	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B18-45	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204405
Date Extracted:	04/27/12	Lab ID:	204405-08
Date Analyzed:	04/28/12	Data File:	042739.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P14-06	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204405
Date Extracted:	04/27/12	Lab ID:	204405-10
Date Analyzed:	04/28/12	Data File:	042740.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	P15-02	Client:	SoundEarth Strategies
Date Received:	04/27/12	Project:	SOU_0789_20120427, F&BI 204405
Date Extracted:	04/27/12	Lab ID:	204405-11
Date Analyzed:	04/28/12	Data File:	042741.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789_20120427, F&BI 204405
Date Extracted:	04/26/12	Lab ID:	02-0687 mb
Date Analyzed:	04/27/12	Data File:	042715.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 05/03/12
Date Received: 04/27/12
Project: SOU_0789_20120427, F&BI 204405

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 204250-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	18	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	53	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	51	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	64	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	65	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	54	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	73	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	67	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	84	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	80	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	79	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	85	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	73	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	86	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	87	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	87	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	83	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	87	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	83	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	80	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	85	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	80	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	90	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	91	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	89	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	96	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	93	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	87	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	91	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	87	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	89	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	87	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	83	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	92	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	89	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	89	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	90	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	89	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	91	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	94	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	93	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	93	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	92	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	90	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	92	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	91	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	88	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	86	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	90	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	91	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	92	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	90	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	89	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	90	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	89	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	89	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	86	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	86	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	96	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	91	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	102	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	97	20-144

Date of Report: 05/03/12
Date Received: 04/27/12
Project: SOU_0789_20120427, F&BI 204405

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	51	46	10-146	10
Chloromethane	mg/kg (ppm)	2.5	75	71	27-133	5
Vinyl chloride	mg/kg (ppm)	2.5	80	78	22-139	3
Bromomethane	mg/kg (ppm)	2.5	93	88	38-114	6
Chloroethane	mg/kg (ppm)	2.5	97	91	20-153	6
Trichlorofluoromethane	mg/kg (ppm)	2.5	99	93	10-196	6
Acetone	mg/kg (ppm)	12.5	95	95	52-141	0
1,1-Dichloroethene	mg/kg (ppm)	2.5	99	97	47-128	2
Methylene chloride	mg/kg (ppm)	2.5	105	105	42-132	0
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	93	90	60-123	3
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	101	101	67-127	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	102	106	68-115	4
2,2-Dichloropropane	mg/kg (ppm)	2.5	105	103	57-133	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	104	103	72-113	1
Chloroform	mg/kg (ppm)	2.5	103	103	66-120	0
2-Butanone (MEK)	mg/kg (ppm)	12.5	106	107	57-123	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	104	103	56-135	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	110	106	62-131	4
1,1-Dichloropropene	mg/kg (ppm)	2.5	102	101	69-128	1
Carbon tetrachloride	mg/kg (ppm)	2.5	108	105	60-139	3
Benzene	mg/kg (ppm)	2.5	100	101	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	92	92	68-114	0
1,2-Dichloropropane	mg/kg (ppm)	2.5	105	104	72-127	1
Bromodichloromethane	mg/kg (ppm)	2.5	108	107	72-130	1
Dibromomethane	mg/kg (ppm)	2.5	106	106	70-120	0
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	109	109	45-145	0
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	110	109	75-136	1
Toluene	mg/kg (ppm)	2.5	100	100	66-126	0
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	110	111	72-132	1
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	100	100	75-113	0
2-Hexanone	mg/kg (ppm)	12.5	109	108	33-152	1
1,3-Dichloropropane	mg/kg (ppm)	2.5	101	102	72-130	1
Tetrachloroethene	mg/kg (ppm)	2.5	94	94	72-114	0
Dibromochloromethane	mg/kg (ppm)	2.5	107	105	74-125	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	103	101	74-132	2
Chlorobenzene	mg/kg (ppm)	2.5	100	100	76-111	0
Ethylbenzene	mg/kg (ppm)	2.5	103	103	64-123	0
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	103	104	69-135	1
m,p-Xylene	mg/kg (ppm)	5	103	103	78-122	0
o-Xylene	mg/kg (ppm)	2.5	105	106	77-124	1
Styrene	mg/kg (ppm)	2.5	104	105	74-126	1
Isopropylbenzene	mg/kg (ppm)	2.5	105	104	76-127	1
Bromoform	mg/kg (ppm)	2.5	109	107	56-132	2
n-Propylbenzene	mg/kg (ppm)	2.5	103	103	74-124	0
Bromobenzene	mg/kg (ppm)	2.5	104	102	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	103	103	76-126	0
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	104	103	56-143	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	101	100	61-137	1
2-Chlorotoluene	mg/kg (ppm)	2.5	103	103	74-121	0
4-Chlorotoluene	mg/kg (ppm)	2.5	104	103	75-122	1
tert-Butylbenzene	mg/kg (ppm)	2.5	103	103	73-130	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	103	102	76-125	1
sec-Butylbenzene	mg/kg (ppm)	2.5	100	100	71-130	0
p-Isopropyltoluene	mg/kg (ppm)	2.5	102	101	70-132	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	100	100	75-121	0
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	99	98	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	95	95	76-121	0
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	96	97	61-136	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	100	70-129	0
Hexachlorobutadiene	mg/kg (ppm)	2.5	98	97	50-153	1
Naphthalene	mg/kg (ppm)	2.5	109	109	60-125	0
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	102	103	62-130	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

204405

SAMPLE CHAIN OF CUSTODY ME 04/27/12 VS3

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS *(signature)* [redacted] Page # _____ of _____

PROJECT NAME/NO. Antech 0759 | PO #

REMARKS | GEMS Y / N

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
B17-35	B17	35	01A-D	4-26-12	0845	Soil	4									
B17-40		40	02		0900	Soil	4									
B17-45		45	03		0920	Soil	4									
B17-50		50	04		0945	Soil	4									
B18-30	B18	30	05		1250	Soil	4				X					
B18-35		35	06		1300	Soil	4									
B18-40		40	07		1315	Soil	4									
B18-45		45	08		1330	Soil	4				X					
P14-04	P14	04	09		0920	Soil	4									
P14-06	P14	06	10		0925	Soil	4				X					
P15-02	P15	02	11		0945	Soil	4									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Larry Mamba	SES	4/27/12	11:00
Received by:	Matt Laystrom	F+BI Inc	4/27/12	11:00
Relinquished by:				
Received by:				

Samples received at 1 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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e-mail: fbi@isomedia.com

May 3, 2012

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 26, 2012 from the SOU_0789-004_20120426, F&BI 204395 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
SOU0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 26, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120426, F&BI 204395 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
204395-01	B15-20
204395-02	B15-25
204395-03	B15-30
204395-04	B15-35
204395-05	B16-20
204395-06	B16-25
204395-07	B16-30
204395-08	B16-35

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B16-30	Client:	SoundEarth Strategies
Date Received:	04/26/12	Project:	SOU_0789-004_20120426, F&BI 204395
Date Extracted:	04/30/12	Lab ID:	204395-07
Date Analyzed:	05/01/12	Data File:	043032.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20120426, F&BI 204395
Date Extracted:	04/30/12	Lab ID:	02-0691 mb
Date Analyzed:	04/30/12	Data File:	043022.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	107	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 05/03/12
Date Received: 04/26/12
Project: SOU_0789-004_20120426, F&BI 204395

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 204394-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	41	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	64	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	66	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	70	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	78	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	73	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	68	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	69	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	70	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	67	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	71	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	69	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	70	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	70	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	74	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	70	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	70	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	69	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	68	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	68	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	66	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	71	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	72	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	72	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	75	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	73	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	67	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	71	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	66	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	73	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	68	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	63	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	68	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	68	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	67	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	68	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	68	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	68	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	69	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	70	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	69	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	71	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	66	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	67	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	67	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	62	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	67	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	67	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	67	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	67	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	67	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	66	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	68	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	67	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	65	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	65	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	59	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	70	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	68	20-144

Date of Report: 05/03/12
Date Received: 04/26/12
Project: SOU_0789-004_20120426, F&BI 204395

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	68	51	10-146	29 vo
Chloromethane	mg/kg (ppm)	2.5	91	80	27-133	13
Vinyl chloride	mg/kg (ppm)	2.5	93	83	22-139	11
Bromomethane	mg/kg (ppm)	2.5	98	91	38-114	7
Chloroethane	mg/kg (ppm)	2.5	100	92	20-153	8
Trichlorofluoromethane	mg/kg (ppm)	2.5	102	93	10-196	9
Acetone	mg/kg (ppm)	12.5	95	97	52-141	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	110	104	47-128	6
Methylene chloride	mg/kg (ppm)	2.5	114	112	42-132	2
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	101	99	60-123	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	109	107	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	112	115	68-115	3
2,2-Dichloropropane	mg/kg (ppm)	2.5	125	121	57-133	3
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	110	111	72-113	1
Chloroform	mg/kg (ppm)	2.5	109	110	66-120	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	110	110	57-123	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	109	110	56-135	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	118	120	62-131	2
1,1-Dichloropropene	mg/kg (ppm)	2.5	112	113	69-128	1
Carbon tetrachloride	mg/kg (ppm)	2.5	112	115	60-139	3
Benzene	mg/kg (ppm)	2.5	108	109	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	98	100	68-114	2
1,2-Dichloropropane	mg/kg (ppm)	2.5	110	111	72-127	1
Bromodichloromethane	mg/kg (ppm)	2.5	113	114	72-130	1
Dibromomethane	mg/kg (ppm)	2.5	111	114	70-120	3
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	111	113	45-145	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	119	120	75-136	1
Toluene	mg/kg (ppm)	2.5	103	105	66-126	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	113	115	72-132	2
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	101	103	75-113	2
2-Hexanone	mg/kg (ppm)	12.5	104	104	33-152	0
1,3-Dichloropropane	mg/kg (ppm)	2.5	103	105	72-130	2
Tetrachloroethene	mg/kg (ppm)	2.5	101	102	72-114	1
Dibromochloromethane	mg/kg (ppm)	2.5	107	109	74-125	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	106	108	74-132	2
Chlorobenzene	mg/kg (ppm)	2.5	103	103	76-111	0
Ethylbenzene	mg/kg (ppm)	2.5	106	107	64-123	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	105	107	69-135	2
m,p-Xylene	mg/kg (ppm)	5	106	108	78-122	2
o-Xylene	mg/kg (ppm)	2.5	108	111	77-124	3
Styrene	mg/kg (ppm)	2.5	107	109	74-126	2
Isopropylbenzene	mg/kg (ppm)	2.5	108	110	76-127	2
Bromoform	mg/kg (ppm)	2.5	108	109	56-132	1
n-Propylbenzene	mg/kg (ppm)	2.5	105	107	74-124	2
Bromobenzene	mg/kg (ppm)	2.5	106	108	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	105	107	76-126	2
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	101	102	56-143	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	99	100	61-137	1
2-Chlorotoluene	mg/kg (ppm)	2.5	105	107	74-121	2
4-Chlorotoluene	mg/kg (ppm)	2.5	105	108	75-122	3
tert-Butylbenzene	mg/kg (ppm)	2.5	104	107	73-130	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	105	107	76-125	2
sec-Butylbenzene	mg/kg (ppm)	2.5	101	104	71-130	3
p-Isopropyltoluene	mg/kg (ppm)	2.5	104	106	70-132	2
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	102	104	75-121	2
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	101	102	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	99	76-121	2
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	93	97	61-136	4
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	105	70-129	5
Hexachlorobutadiene	mg/kg (ppm)	2.5	94	103	50-153	9
Naphthalene	mg/kg (ppm)	2.5	109	112	60-125	3
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	104	107	62-130	3

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

204395

SAMPLE CHAIN CUSTODY

ME 04-26-12

VC3

Page # 1 of 2

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO. AMLI Avtech 0789-004

PO #

REMARKS

GEMS Y / N

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
B15-20	B15	20	01 A.D	4-25-12	0845	Soil	4									* per RL 4/30/12 mm
B15-25		25	02		0855	Soil	4									
B15-30		30	03		0905	Soil	4									
B15-35		35	04		0915	Soil	4									
B16-20	B16	20	05		1150	Soil	4									
B16-25		25	06		1200	Soil	4				*					
B16-30		30	07		1210	Soil	4									
B16-35		35	08		1225	Soil	4									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Rob Roberts	SES	4/26/12	1530
Received by:	Eric Hamre	F+B	4/26	1530
Relinquished by:				
Received by:		Samples received at 6 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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e-mail: fbi@isomedia.com

May 3, 2012

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 26, 2012 from the SOU_0789-004_20120426, F&BI 204394 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
SOU0503R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 26, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120426, F&BI 204394 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
204394-01	B13-20
204394-02	B13-25
204394-03	B13-35
204394-04	B14-20
204394-05	B14-25
204394-06	B14-30
204394-07	B14-35

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B14-20	Client:	SoundEarth Strategies
Date Received:	04/26/12	Project:	SOU_0789-004_20120426, F&BI 204394
Date Extracted:	04/30/12	Lab ID:	204394-04
Date Analyzed:	04/30/12	Data File:	043030.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	62	142
Toluene-d8	107	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	0.83
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	0.47	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	2.8	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B14-25	Client:	SoundEarth Strategies
Date Received:	04/26/12	Project:	SOU_0789-004_20120426, F&BI 204394
Date Extracted:	04/30/12	Lab ID:	204394-05
Date Analyzed:	04/30/12	Data File:	043031.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20120426, F&BI 204394
Date Extracted:	04/30/12	Lab ID:	02-0691 mb
Date Analyzed:	04/30/12	Data File:	043022.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	107	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 05/03/12
Date Received: 04/26/12
Project: SOU_0789-004_20120426, F&BI 204394

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 204394-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	41	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	64	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	66	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	70	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	78	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	73	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	68	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	69	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	70	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	67	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	71	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	69	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	70	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	70	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	74	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	70	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	70	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	69	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	68	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	68	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	66	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	71	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	72	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	72	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	75	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	73	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	67	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	71	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	66	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	73	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	68	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	63	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	68	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	68	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	67	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	68	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	68	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	68	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	69	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	70	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	69	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	71	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	66	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	67	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	67	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	62	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	67	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	67	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	67	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	67	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	67	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	66	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	68	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	67	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	65	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	65	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	59	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	70	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	68	20-144

Date of Report: 05/03/12
Date Received: 04/26/12
Project: SOU_0789-004_20120426, F&BI 204394

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	68	51	10-146	29 vo
Chloromethane	mg/kg (ppm)	2.5	91	80	27-133	13
Vinyl chloride	mg/kg (ppm)	2.5	93	83	22-139	11
Bromomethane	mg/kg (ppm)	2.5	98	91	38-114	7
Chloroethane	mg/kg (ppm)	2.5	100	92	20-153	8
Trichlorofluoromethane	mg/kg (ppm)	2.5	102	93	10-196	9
Acetone	mg/kg (ppm)	12.5	95	97	52-141	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	110	104	47-128	6
Methylene chloride	mg/kg (ppm)	2.5	114	112	42-132	2
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	101	99	60-123	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	109	107	67-127	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	112	115	68-115	3
2,2-Dichloropropane	mg/kg (ppm)	2.5	125	121	57-133	3
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	110	111	72-113	1
Chloroform	mg/kg (ppm)	2.5	109	110	66-120	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	110	110	57-123	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	109	110	56-135	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	118	120	62-131	2
1,1-Dichloropropene	mg/kg (ppm)	2.5	112	113	69-128	1
Carbon tetrachloride	mg/kg (ppm)	2.5	112	115	60-139	3
Benzene	mg/kg (ppm)	2.5	108	109	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	98	100	68-114	2
1,2-Dichloropropane	mg/kg (ppm)	2.5	110	111	72-127	1
Bromodichloromethane	mg/kg (ppm)	2.5	113	114	72-130	1
Dibromomethane	mg/kg (ppm)	2.5	111	114	70-120	3
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	111	113	45-145	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	119	120	75-136	1
Toluene	mg/kg (ppm)	2.5	103	105	66-126	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	113	115	72-132	2
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	101	103	75-113	2
2-Hexanone	mg/kg (ppm)	12.5	104	104	33-152	0
1,3-Dichloropropane	mg/kg (ppm)	2.5	103	105	72-130	2
Tetrachloroethene	mg/kg (ppm)	2.5	101	102	72-114	1
Dibromochloromethane	mg/kg (ppm)	2.5	107	109	74-125	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	106	108	74-132	2
Chlorobenzene	mg/kg (ppm)	2.5	103	103	76-111	0
Ethylbenzene	mg/kg (ppm)	2.5	106	107	64-123	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	105	107	69-135	2
m,p-Xylene	mg/kg (ppm)	5	106	108	78-122	2
o-Xylene	mg/kg (ppm)	2.5	108	111	77-124	3
Styrene	mg/kg (ppm)	2.5	107	109	74-126	2
Isopropylbenzene	mg/kg (ppm)	2.5	108	110	76-127	2
Bromoform	mg/kg (ppm)	2.5	108	109	56-132	1
n-Propylbenzene	mg/kg (ppm)	2.5	105	107	74-124	2
Bromobenzene	mg/kg (ppm)	2.5	106	108	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	105	107	76-126	2
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	101	102	56-143	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	99	100	61-137	1
2-Chlorotoluene	mg/kg (ppm)	2.5	105	107	74-121	2
4-Chlorotoluene	mg/kg (ppm)	2.5	105	108	75-122	3
tert-Butylbenzene	mg/kg (ppm)	2.5	104	107	73-130	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	105	107	76-125	2
sec-Butylbenzene	mg/kg (ppm)	2.5	101	104	71-130	3
p-Isopropyltoluene	mg/kg (ppm)	2.5	104	106	70-132	2
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	102	104	75-121	2
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	101	102	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	99	76-121	2
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	93	97	61-136	4
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	105	70-129	5
Hexachlorobutadiene	mg/kg (ppm)	2.5	94	103	50-153	9
Naphthalene	mg/kg (ppm)	2.5	109	112	60-125	3
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	104	107	62-130	3

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

204394

SAMPLE CHAIN OF CUSTODY ME 04-26-12

VS3

Send Report To Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO. AMLI Avtech 0789-004 | PO #

REMARKS | GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			* - per QR 4/30/12 Notes
B13-20	B13	20	01 A-D	4-24-12	0940	Soil	4									IN FREEZER AT ESS 4/24/12
B13-25		25	02		0950		4									
B13-35		35	03		1010		4									
B14-20	B14	20	04		1340		4				*					
B14-25		25	05		1355		4				*					
B14-30		30	06		1410		4									
B14-35		35	07		1425		4									

ANALYSES REQUESTED

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Rob Roberts	SES	4/27	15:30
Received by:		Eric Young	F&B	4/26	15:30
Relinquished by:					
Received by:			Samples received at 6 °C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

May 2, 2012

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 24, 2012 from the SOU_0789-004_20120424, F&BI 204346 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
SOU0502R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 24, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004_20120424, F&BI 204346 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
204346-01	B11-20
204346-02	B11-25
204346-03	B11-30
204346-04	B11-35
204346-05	B12-20
204346-06	B12-25
204346-07	B12-30
204346-08	B12-35

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B12-35	Client:	SoundEarth Strategies
Date Received:	04/24/12	Project:	SOU_0789-004_20120424
Date Extracted:	04/27/12	Lab ID:	204346-08
Date Analyzed:	04/30/12	Data File:	043015.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004_20120424
Date Extracted:	04/26/12	Lab ID:	02-0687 mb
Date Analyzed:	04/27/12	Data File:	042715.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	62	142
Toluene-d8	106	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 05/02/12
Date Received: 04/24/12
Project: SOU_0789-004_20120424, F&BI 204346

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 204250-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	18	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	53	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	51	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	64	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	65	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	54	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	73	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	67	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	84	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	80	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	79	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	85	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	73	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	86	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	87	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	87	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	83	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	87	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	83	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	80	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	85	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	80	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	90	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	91	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	89	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	96	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	93	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	87	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	91	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	87	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	89	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	87	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	83	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	92	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	89	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	89	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	90	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	89	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	91	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	94	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	93	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	93	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	92	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	90	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	92	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	91	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	88	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	86	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	90	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	91	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	92	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	90	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	89	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	90	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	89	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	89	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	86	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	86	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	96	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	91	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	102	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	97	20-144

Date of Report: 05/02/12
Date Received: 04/24/12
Project: SOU_0789-004_20120424, F&BI 204346

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	51	46	10-146	10
Chloromethane	mg/kg (ppm)	2.5	75	71	27-133	5
Vinyl chloride	mg/kg (ppm)	2.5	80	78	22-139	3
Bromomethane	mg/kg (ppm)	2.5	93	88	38-114	6
Chloroethane	mg/kg (ppm)	2.5	97	91	20-153	6
Trichlorofluoromethane	mg/kg (ppm)	2.5	99	93	10-196	6
Acetone	mg/kg (ppm)	12.5	95	95	52-141	0
1,1-Dichloroethene	mg/kg (ppm)	2.5	99	97	47-128	2
Methylene chloride	mg/kg (ppm)	2.5	105	105	42-132	0
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	93	90	60-123	3
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	101	101	67-127	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	102	106	68-115	4
2,2-Dichloropropane	mg/kg (ppm)	2.5	105	103	57-133	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	104	103	72-113	1
Chloroform	mg/kg (ppm)	2.5	103	103	66-120	0
2-Butanone (MEK)	mg/kg (ppm)	12.5	106	107	57-123	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	104	103	56-135	1
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	110	106	62-131	4
1,1-Dichloropropene	mg/kg (ppm)	2.5	102	101	69-128	1
Carbon tetrachloride	mg/kg (ppm)	2.5	108	105	60-139	3
Benzene	mg/kg (ppm)	2.5	100	101	68-114	1
Trichloroethene	mg/kg (ppm)	2.5	92	92	68-114	0
1,2-Dichloropropane	mg/kg (ppm)	2.5	105	104	72-127	1
Bromodichloromethane	mg/kg (ppm)	2.5	108	107	72-130	1
Dibromomethane	mg/kg (ppm)	2.5	106	106	70-120	0
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	109	109	45-145	0
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	110	109	75-136	1
Toluene	mg/kg (ppm)	2.5	100	100	66-126	0
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	110	111	72-132	1
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	100	100	75-113	0
2-Hexanone	mg/kg (ppm)	12.5	109	108	33-152	1
1,3-Dichloropropane	mg/kg (ppm)	2.5	101	102	72-130	1
Tetrachloroethene	mg/kg (ppm)	2.5	94	94	72-114	0
Dibromochloromethane	mg/kg (ppm)	2.5	107	105	74-125	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	103	101	74-132	2
Chlorobenzene	mg/kg (ppm)	2.5	100	100	76-111	0
Ethylbenzene	mg/kg (ppm)	2.5	103	103	64-123	0
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	103	104	69-135	1
m,p-Xylene	mg/kg (ppm)	5	103	103	78-122	0
o-Xylene	mg/kg (ppm)	2.5	105	106	77-124	1
Styrene	mg/kg (ppm)	2.5	104	105	74-126	1
Isopropylbenzene	mg/kg (ppm)	2.5	105	104	76-127	1
Bromoform	mg/kg (ppm)	2.5	109	107	56-132	2
n-Propylbenzene	mg/kg (ppm)	2.5	103	103	74-124	0
Bromobenzene	mg/kg (ppm)	2.5	104	102	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	103	103	76-126	0
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	104	103	56-143	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	101	100	61-137	1
2-Chlorotoluene	mg/kg (ppm)	2.5	103	103	74-121	0
4-Chlorotoluene	mg/kg (ppm)	2.5	104	103	75-122	1
tert-Butylbenzene	mg/kg (ppm)	2.5	103	103	73-130	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	103	102	76-125	1
sec-Butylbenzene	mg/kg (ppm)	2.5	100	100	71-130	0
p-Isopropyltoluene	mg/kg (ppm)	2.5	102	101	70-132	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	100	100	75-121	0
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	99	98	74-117	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	95	95	76-121	0
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	96	97	61-136	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	100	70-129	0
Hexachlorobutadiene	mg/kg (ppm)	2.5	98	97	50-153	1
Naphthalene	mg/kg (ppm)	2.5	109	109	60-125	0
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	102	103	62-130	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

204346

SAMPLE CHAIN OF CUSTODY

ME 04/24/12 VS3

Send Report to Rob Roberts

Company SoundEarth Strategies

Address 2811 Fairview Ave E, Suite 200

City, State, ZIP Seattle, WA 98102

Phone # 206-306-1900 Fax # 206-306-1907

SAMPLERS (signature)

PROJECT NAME/NO.: AMLI Avtech 0789-004

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals			Notes
								ANALYSES REQUESTED								
B11-20	B11	20	01A-D	4-23-12	0905	Soil	4									⊗ - per RR email ⊗ 4/24
B11-25		25	02		0915		4									
B11-30		30	03		0925		4									
B11-35		35	04		0935		4									
B12-20	B12	20	05		1410		4									
B12-25		25	06		1420		4									
B12-30		30	07		1440		4									
B12-35		35	08		1450		4				X					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		ROB ROBERTS	SOUNDEARTH	4/24	16:25
Received by:		HONG NGUYEN	FB	4/24	V
Relinquished by:					
Received by:					

Samples received at 14 °C

CARUS CORPORATION
Technology and Quality
Remediation Report

18 October 2013

Customer: Sound Earth Strategies
2811 Fairview Ave East
Seattle, WA 98102

Cc: T. Lizer

Attention: R. Roberts

From: L. Mueller

TECH # 13-178

Subject: RemOx® S ISCO Reagent Groundwater Oxidant Demand

Summary
The average permanganate water oxidant demand (PWOD) for the high permanganate dose at 48 hours was determined to be 0.021 g/L. These values are calculated on a weight as potassium permanganate ($KMnO_4$) per liter of water.

Background
One water sample was received from Sound Earth Strategies from the Avtech project located in Wallingford, Washington on 10 October 2013. The groundwater sample was identified as MW-11. The sample was analyzed for permanganate water oxidant demand. The measurement of the permanganate water oxidant demand is used to estimate the concentration of permanganate that will be consumed by the natural reducing agents as well as the contaminants of concern in the water during a given time period.

Experimental
To determine the permanganate demand of the groundwater, a reaction vessel was filled with 90 mls of groundwater for a low, medium and high concentration of permanganate. At the start of the experimental run, 10 mls of concentrated permanganate solution was introduced to the reaction vessels to achieve a final permanganate concentration of 0.05 g/L (low dose), 0.10 g/L (medium dose), and 0.50 g/L (high dose). The reaction vessels were inverted initially. Residual permanganate (MnO_4^-) was determined at 48 hours.

Results
The permanganate demand is the amount of permanganate consumed in a given amount of time. It should be noted that in a soil or groundwater sample, the oxidation of any compound by permanganate is dependent on the initial dose of permanganate and the reaction time available. As the permanganate dose is increased, the reaction rate and oxidant consumption may also increase. Some compounds that are not typically oxidized by permanganate under low doses can become reactive with permanganate at higher concentrations. Therefore, increasing the permanganate dose to extreme excess could be disadvantageous to a remediation project (e.g., inefficient chemical usage, higher costs, etc.).

The 48-hour PWOD for the low (0.050 g/L), medium (0.10 g/L), and high (0.50 g/L) oxidant doses can be seen in Table 1.

Table 1: Groundwater 48-Hour PWOD for the Low, Medium, and High Permanganate Doses

Sample ID	Low Dose (g/L)	Medium Dose (g/L)	High Dose (g/L)
MW-11	0.009	0.011	0.021

Conclusions

For this application the amount of permanganate needed will be dependent on the reaction time allowed. On average, the groundwater samples had a moderate demand with the 48-hour demand value of 0.021 g/L from the high dose. Generally, remediation sites with groundwater demand values less than 0.25 g/L at 48 hours for the high permanganate dose are favorable for in-situ chemical oxidation with permanganate (see Table 2 for additional information).

Table 2: Correlation of Groundwater Oxidant Demand Results

PWOD (g/L)	Rank	Comment
<0.01	Low	ISCO with MnO_4^- is recommended; PWOD contribution to MnO_4^- demand is low.
0.01-0.10	Moderate	ISCO with MnO_4^- is recommended.
0.10-0.25	Moderately High	ISCO with MnO_4^- is recommended but PWOD will contribute significantly to MnO_4^- demand. Pilot test may help define these demands.
>0.25	High	Pilot testing is highly recommended to determine effective PWOD at the site.

RemOx® ISCO Reagent is a registered trademark of Carus Corporation

CARUS®

CHAIN OF CUSTODY RECORD

*ITEMS LISTED IN RED MUST BE COMPLETED BY CLIENT

CLIENT* SOUND EARTH STRATEGIES	PROJECT NAME AVTECH	SITE LOCATION WALLINGFORD	P.O. NUMBER 132-13
ADDRESS 2811 FAIRVIEW AVE EAST	PHONE NUMBER 206-245-1184	FAX NUMBER 206-306-1967	DATE SHIPPED 10/9/13
CITY STATE ZIP SEATTLE WA 98102	SAMPLER (PLEASE PRINT) ROB ROBERTS		REMOX® ISCO REAGENT ☐ SOLID ☐ LIQUID ☐ EITHER
PROJECT MANAGER ROB ROBERTS	SAMPLER'S SIGNATURE		

SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE SOIL	SAMPLE TYPE GW	SOIL TYPE	# OF CONT	PNOD Soil Demand ASTM D7262-07	for Ground Water						REMARKS
MW11	10/4	12:30		X		4	X							

(FOR LAB USE ONLY)
TECH # 13-178
LOGGED BY: SDO
10-10-2013

TURNAROUND TIME REQUESTED (PLEASE CIRCLE) NORMAL RUSH 1-WEEK
(RUSH IS SUBJECT TO CARUS CORPORATION APPROVAL)

SEND RESULTS TO:

ADDITIONAL COMMENTS: 4 500 mL POLY, NO PRESERV.

RELINQUISHED BY: (SIGNATURE)	DATE 10/9 TIME 9AM	RECEIVED BY: (SIGNATURE)	DATE	TIME	COMMENTS: (FOR LAB USE ONLY)
RELINQUISHED BY: (SIGNATURE)	DATE	RECEIVED AT LAB BY: (SIGNATURE)	DATE	TIME	SAMPLE(S) RECEIVED ON ICE Y OR N BOTTLES RECEIVED IN GOOD CONDITION Y OR N BOTTLES FILLED WITH ADEQUATE VOLUME Y OR N SAMPLES RECEIVED WITHIN HOLD TIME(S) Y OR N

Ship samples to: Carus Corporation, 1500 8th Street, Bldg 45 – Customer Service Lab, LaSalle, IL 61301

Carus Remediation Technologies
Remediation Report

18 May 2012

Customer: Sound Earth Strategies
2811 Fairview Ave East Suite 2000
Seattle, WA 98102

Cc: K. Frasco

Attention: Rob Roberts

From: L. Mueller

TECH # 12-078

Subject: RemOx® S ISCO Reagent Permanganate Natural Oxidant Demand

Summary
The overall average RemOx® S ISCO reagent permanganate natural oxidant demand (PNOD) at 48 hours for the two soil samples was determined to be 0.5 g/kg. The average demands ranged from 0.3 g/kg to 0.7 g/kg. These values are calculated on a weight as potassium permanganate ($KMnO_4$) per dry weight of soil.

Background
Two soil samples were received from Sound Earth Strategies from the Avtech project located in Seattle, WA on May 11, 2012. The soil sample designations were B-14 Saturated Soil and B-18 Saturated Soil. The samples were analyzed for permanganate natural oxidant demand. The measurement of the permanganate natural oxidant demand is used to estimate the concentration of permanganate that will be consumed by the natural reducing agents during a given time period of 48 hours.

Experimental
The samples were analyzed for permanganate natural oxidant demand following ASTM D7262-07 Test Method A. A brief summary is as follows:

To determine the PNOD, the soil was baked at 105°C for 24 hours then allowed to cool to room temperature. The soil was then blended and passed through a U.S. 10 sieve (2 mm). Reactors were loaded with 50 grams of soil and 100 mL of 20 g/L $KMnO_4$ for an initial dose of 40 g/kg $KMnO_4$ on a dry soil weight basis at a 1:2 soil to aqueous reagent ratio. Each soil dose was performed in triplicate. The reaction vessels were inverted once to mix the reagents. Residual permanganate (MnO_4^-) was determined at 48 hours. The demands were calculated on a dry weight basis.

Results
The permanganate demand is the amount of permanganate consumed in a given amount of time. It should be noted that in a soil or groundwater sample, the oxidation of any compound by permanganate is dependent on the initial dose of permanganate and the reaction time available. As the permanganate dose is increased, the reaction rate and oxidant consumption may also

increase. Some compounds that are not typically oxidized by permanganate under low doses can become reactive with permanganate at higher concentrations.
The 48-hour PNOD results can be seen in Table 1 (on a dry soil basis).

Table 1: 48-Hour PNOD *

Soil Sample Identification	Average and Standard Deviation (g/kg)	Replicate 1 (g/kg)	Replicate 2 (g/kg)	Replicate 3 (g/kg)
B-14 Saturated Soil	0.6 ± 0.1	0.5	0.6	0.7
B-18 Saturated Soil	0.4 ± 0.08	0.4	0.4	0.3
Overall Average	0.5			

*Demands were calculated on a weight $KMnO_4$/dry soil weight basis from an initial dose of 40.0 g/kg $KMnO_4$ initial dose at a 1:2 soil to aqueous solution ratio

Conclusions
For this application the amount of permanganate needed will be dependent on the reaction time allowed. On average, the soil samples had a 48-hour permanganate demand value of 0.5 g/kg. The average demands ranged from 0.3 g/kg to 0.7 g/kg. Generally, remediation sites with a soil demand of less than 20.0 g/kg at the time of interest are favorable for *in situ* chemical oxidation with permanganate (see Table 2 for additional information).

Table 2: Correlation of Permanganate Natural Oxidant Demand Results*

PNOD (g/kg)	**Rank**	Comment
<10	Low	ISCO with MnO_4^- is recommended. Soil contribution to MnO_4^- demand is low.
10-20	Moderate	ISCO with MnO_4^- is recommended. Soil contribution to MnO_4^- demand is moderate. Economics should be considered.
>20	High	ISCO with MnO_4^- is technically feasible. Other technologies may provide lower cost alternatives.

*Dry Weight Basis

RemOx® ISCO reagent is a registered trademark of Carus Corporation

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CHAIN OF CUSTODY RECORD

*ITEMS LISTED IN RED MUST BE COMPLETED BY CLIENT

CLIENT* SOUNDEARTH STRATEGIES	PROJECT NAME AVTECH	SITE LOCATION SEATTLE	P.O. NUMBER 0789-004-03
ADDRESS 2811 FAIRVIEW AVE EAST SUITE 2000	PHONE NUMBER 425-985-6253	FAX NUMBER	DATE SHIPPED 5-9-12
CITY STATE ZIP SEATTLE WA 98102	SAMPLER (PLEASE PRINT) WILL CAMARDA		REMOX® ISCO REAGENT ☐ SOLID ☐ LIQUID ☐ EITHER
PROJECT MANAGER ROB ROBERTS	SAMPLER'S SIGNATURE		

SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE SOIL	SAMPLE TYPE GW	SOIL TYPE	# OF CONT	PNOD Soil Demand ASTM D7262-07	REMARKS
B-14 Saturated Soil	4/24/12		X		TILL	2	X	
B-18 Saturated Soil	4/26/12		X		TILL	2	X	

ANALYSIS REQUESTED

(FOR LAB USE ONLY)

TECH # _____

LOGGED BY: _____

TURNAROUND TIME REQUESTED (PLEASE CIRCLE) (RUSH IS SUBJECT TO CARUS CORPORATION APPROVAL) NORMAL RUSH

SEND RESULTS TO: Rob Roberts

ADDITIONAL COMMENTS:

RELINQUISHED BY: (SIGNATURE)	DATE 5/9/12 TIME 0900	RECEIVED BY: (SIGNATURE)	DATE	TIME
RELINQUISHED BY: (SIGNATURE)	DATE	RECEIVED AT LAB BY: (SIGNATURE)	DATE	TIME

COMMENTS: (FOR LAB USE ONLY)

SAMPLE(S) RECEIVED ON ICE	Y OR N
BOTTLES RECEIVED IN GOOD CONDITION	Y OR N
BOTTLES FILLED WITH ADEQUATE VOLUME	Y OR N
SAMPLES RECEIVED WITHIN HOLD TIME(S)	Y OR N

Ship samples to: Carus Corporation, 1500 8th Street, Bldg 45 – Customer Service Lab, LaSalle, IL 61301

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Feb 2 2012
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl

Dear Michael Erdahl:

Enclosed please find the analytical data for your 201034 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
P08-2	Soil	12-A000572	CN, CONV
P09-2	Soil	12-A000573	CN, CONV

Your samples were received on Tuesday, January 17, 2012. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,



Aaron W. Young
Laboratory Manager

Project #: 201034
PO Number: B-517

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: Michael Erdahl
Project Name: 201034
Project #: 201034
PO Number: B-517
All results reported on a dry weight basis.

Date Received: 01/17/12
Date Reported: 2/ 2/12

AMTEST Identification Number **12-A000572**
Client Identification **P08-2**
Sampling Date **01/05/12, 09:10**

Conventionals dry weight

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Cyanide	< 0.054	ug/g		0.05	SW846 9012	SS	01/31/12

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	91.9	%		0.1	SM 2540G	ED	01/20/12

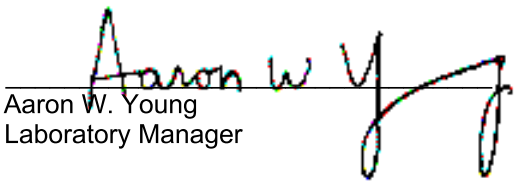
AMTEST Identification Number **12-A000573**
Client Identification **P09-2**
Sampling Date **01/05/12, 09:50**

Conventionals dry weight

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Cyanide	< 0.053	ug/g		0.05	SW846 9012	SS	01/31/12

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	93.5	%		0.1	SM 2540G	ED	01/20/12



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 12-A000572 to 12-A000573

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
12-A000573	Total Cyanide	ug/g	< 0.05	< 0.05	
12-A000355	Total Solids	%	13.8	13.6	1.5
12-A000539	Total Solids	%	0.5	0.6	18.
12-A000573	Total Solids	%	93.5	93.4	0.11

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
12-A000573	Total Cyanide	ug/g	< 0.05	0.56	0.50	112.00 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Total Cyanide	ug/g	0.10	0.094	94.0 %

BLANKS

ANALYTE	UNITS	RESULT
Total Cyanide	ug/g	< 0.05
Total Solids	%	< 0.1

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER

PROJECT NAME/NO. 201034

PO # B-517

REMARKS

Please Email Results
merdahl@friedmanandbruya.com

Page # _____ of _____

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH _____
Rush charges authorized by: _____

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Oil and Grease	EPH	VPH	Nitrate	Sulfate	Alkalinity	Cyan. dc				Notes
P08-2	572	1/5/12	09:10									X				
P09-2	573	"	09:50									X				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	1/17/12	09:30
Received by:					
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Kurt Johnson, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 17, 2013

Rob Roberts, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Roberts:

Included are the results from the testing of material submitted on July 11, 2013 from the SOU_0789-004-09_20130711, F&BI 307149 project. There are 12 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
SOU0717R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 11, 2013 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0789-004-09_20130711, F&BI 307149 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
307149 -01	MW04-20130710
307149 -02	MW05-20130710
307149 -03	MW06-20130711
307149 -04	MW07-20130111
307149 -05	MW09-20130710
307149 -06	MW11-20130710
307149 -07	MW12-20130710
307149 -08	MW13-20130710

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04-20130710	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-01
Date Analyzed:	07/11/13	Data File:	071125.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	98	60	133

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	150
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW05-20130710	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-02
Date Analyzed:	07/11/13	Data File:	071118.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	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.9
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW06-20130711	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-03
Date Analyzed:	07/11/13	Data File:	071119.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	101	60	133

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	3.2
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW07-20130111	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-04
Date Analyzed:	07/11/13	Data File:	071120.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	103	60	133

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	11
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW09-20130710	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-05
Date Analyzed:	07/11/13	Data File:	071121.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	100	60	133

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	36
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-20130710	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-06
Date Analyzed:	07/11/13	Data File:	071122.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

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	56
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW12-20130710	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-07
Date Analyzed:	07/11/13	Data File:	071123.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	99	60	133

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	10
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW13-20130710	Client:	SoundEarth Strategies
Date Received:	07/11/13	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	307149-08
Date Analyzed:	07/11/13	Data File:	071124.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	99	60	133

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	37
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	Not Applicable	Project:	SOU_0789-004-09_20130711, F&BI 307149
Date Extracted:	07/11/13	Lab ID:	03-1310 mb
Date Analyzed:	07/11/13	Data File:	071115.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 07/17/13
Date Received: 07/11/13
Project: SOU_0789-004-09_20130711, F&BI 307149

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 307149-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	92	36-166
Chloroethane	ug/L (ppb)	50	<1	99	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	98	60-136
Methylene chloride	ug/L (ppb)	50	<5	82	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	98	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	60-146
Trichloroethene	ug/L (ppb)	50	37	98 b	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	97	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	93	85	50-154	9
Chloroethane	ug/L (ppb)	50	98	92	58-146	6
1,1-Dichloroethene	ug/L (ppb)	50	111	92	67-136	19
Methylene chloride	ug/L (ppb)	50	85	78	39-148	9
trans-1,2-Dichloroethene	ug/L (ppb)	50	98	92	68-128	6
1,1-Dichloroethane	ug/L (ppb)	50	98	90	79-121	9
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	90	80-123	11
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	88	73-132	11
1,1,1-Trichloroethane	ug/L (ppb)	50	98	90	83-130	9
Trichloroethene	ug/L (ppb)	50	100	90	80-120	11
Tetrachloroethene	ug/L (ppb)	50	92	90	76-121	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 – More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc – The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j – The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

307149

SAMPLE CHAIN OF CUSTODY ME 07-11-13

U3

Send Report To Rob Roberts

Company Sound Earth Strategies

Address 2811 Fairview Avenue East, Suite 2000

City, State, ZIP Seattle, WA 98102

Phone # 206.306.1900 Fax # 206.306.1907

SAMPLERS (signature) L. Namba N. Kis-Young

PROJECT NAME/NO. Artech - Wallingford 0789-004-09

PO #

REMARKS

GEMS Y / N

Page # 1 of 1

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	VOC's by 8260	SVOC's by 8270	RCRA-8 Metals	CVOC by 8260C		Notes
MW04-20130710	MW04	39	01A-D	07/10/13	1830	water	4							✓		
MW05-20130710	MW05	26	02	07/10/13	1518	Water	4							✓		
MW06-20130711	MW06	35	03	07/11/13	1336	Water	4							✓		
MW07-20130711	MW07	43	04	07/11/13	1236	Water	4							✓		
MW09-20130710	MW09	28	05	07/10/13	1431	Water	4							✓		
MW11-20130710	MW11	46	06	07/10/13	1632	Water	4							✓		
MW12-20130710	MW12	36	07	07/10/13	1943	Water	4							✓		
MW13-20130710	MW13	39	08	07/10/13	1735	Water	4							✓		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Larry Namba	SES	07/11/13	1428
Received by:		HONG NGUYEN	FBI	"	"
Relinquished by:					
Received by:					

FORMS\COC\SESGEMSR1.DOC (Revision 1)

Samples received at 9 °C

APPENDIX D
VAPOR INTRUSION EVALUATION

SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

M E M O R A N D U M

TO: AMLI Residential Partners **DATE**: December 15, 2013

FROM: Suzy Stumpf and Rob Roberts, SoundEarth Strategies, Inc.

SUBJECT: Vapor Intrusion Evaluation

SoundEarth Strategies, Inc. (SoundEarth) has performed this vapor intrusion evaluation for the Avtech Corporation property located at 3400 Wallingford Avenue North in Seattle, Washington (the Property), on behalf of AMLI Residential Partners. This memorandum was prepared to evaluate the potential on- and off-Property vapor intrusion risk from the trichloroethylene (TCE) groundwater plume associated with the historical operations at the Property. This evaluation provides a Tier 1 Assessment in accordance with Washington State Department of Ecology's (Ecology) *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*, published as draft in October 2009. Based on the existing groundwater analytical data and vapor intrusion modeling, the groundwater contamination located beneath the Property does not pose a risk to off-Property vapor intrusion, and the future remediation of soil and groundwater beneath the Property would eliminate future vapor intrusion risks.

VAPOR INTRUSION EVALUATION

As part of the Tier I Assessment the existing groundwater data was compared to the groundwater screening levels protective of indoor air based on Ecology's draft guidance and updated in Ecology's cleanup levels and risk calculations (CLARC) database in September 2012. The network of groundwater monitoring wells both on and off the Property is shown on Figure 1. Groundwater samples were collected in April, July, and October 2013, and TCE was detected in 9 out of 15 monitoring wells. The maximum concentration detected was 290 micrograms per liter (µg/L) in MW04. The groundwater screening level of 1.5 µg/L for TCE was calculated based on the updates to the CLARC database and Equation 1 from Ecology's draft guidance document. Based on a groundwater screening level of 1.5 µg/L, the following monitoring wells exceed the groundwater screening level protective of indoor air: MW03, MW04, MW05, MW06, MW07, MW09, MW11, MW12, and MW13.

Ecology's draft guidance document recommends the Johnson and Ettinger Model (JE Model) as a resource for predicting the concentration of contaminants in indoor air by using site-specific parameters. The JE Model is a screening-level tool that incorporates both advection and diffusion mechanisms to estimate the transport of contaminant vapors from subsurface soils or groundwater into indoor air spaces. SoundEarth focused the on-Property vapor intrusion modeling on MW04 since this well has the highest detections of TCE in groundwater beneath the Property. The off-Property vapor intrusion evaluation for the commercial restaurant was focused on monitoring wells MW11, located near the northern property boundary, and MW12, located upgradient of the restaurant.

The JE Model input is based on site-specific parameters from boring logs and the highest detected historical TCE groundwater concentration to evaluate the worst case scenario. The parameters input to the advanced groundwater JE Model are presented below in Table 1. The remaining parameters used in the model were the default and chemical-specific parameters.

Table 1. Input Parameters for the Advanced Groundwater Screening Johnson and Ettinger Model

Input Parameter/Units	Parameter Value for MW04	Parameter Value for MW11	Parameter Value for MW12	Source
Initial Groundwater Concentration (µg/L)	Chemical specific	Chemical specific	Chemical specific	Maximum detected concentration measured in MW04 and MW12 from Site Figure
Average Soil Temp	11	11	11	EPA default value for Washington State (EPA 2004)
Depth below grade to water table (cm)	1,127	1,311	975	Site-specific value based on soil boring for respective soil borings
Depth below grade to bottom of enclosed space floor (cm)	15	15	15	EPA default value for slab-on-grade (EPA 2004)
Thickness of soil stratum A (cm)	823	1,311	975	Site-specific value based on soil boring for respective soil borings
Soil type	Sandy Loam	Sandy Loam	Sandy Loam	Site-specific value based on respective soil borings and JE Model
Dry bulk density (g/cm^3)	1.62	1.62	1.62	Recommended average value for specific soil type from EPA (2004a)
Total soil porosity (unit less)	0.387	0.387	0.387	Recommended average value for specific soil type from EPA (2004)
Soil water-filled porosity (cm^3/cm^3)	0.103	0.103	0.103	Recommended average value for specific soil type from EPA (2004)
Thickness of soil stratum B (cm)	304			Site-specific value based on soil boring for MW04 and JE Model
Soil type	Sand			Site-specific value based on soil boring for MW04
Dry bulk density (g/cm^3)	1.66			Recommended average value for specific soil type from EPA (2004)
Total soil porosity (unit less)	0.375			Recommended average value for specific soil type from EPA (2004)
Soil water-filled porosity (cm^3/cm^3)	0.054			Recommended average value for specific soil type from EPA (2004)
Floor-wall seam gap (cm)	0.1	0.1	0.1	Default value (EPA 2004)
Input Parameter/Units	**Parameter Value for MW04**	**Parameter Value for MW11**	**Parameter Value for MW12**	**Source**

Building air exchange rate per hour	2	2	2	Default value for commercial buildings (MDEQ 1998)
Soil-building pressure differential ($g/cm\text{-}s^2$)	40	40	40	EPA default value (EPA 2004)
Enclosed space floor thickness (cm)	10	10	10	Default value for slab-on-grade (EPA 2004)
Enclosed space floor length (cm)	5,334	1,905	1,905	Building dimensions measured from Figure 1. On-Property, only the North Block building from Parcel 3 was used for building size. Off-Property, only the restaurant footprint was used for building size.
Enclosed space floor width (cm)	3,353	1,143	1,143	Same note as above.
Enclosed space floor height (cm)	244	244	244	EPA default value for single story building (EPA 2004)

NOTES:
°C = degrees Celsius
µg/L = micrograms per liter
cm = centimeter
cm^3/cm^3 = cubic centimer per cubic centimeter
EPA = U.S. Environmental Protection Agency
g/cm^3 = gram per centime cubed
$g/cm\text{-}s^2$= gram per centimeter per second squared
MDEQ = Michigan Department of Environmental Quality

The maximum historical groundwater concentrations collected from MW04, MW11, and MW12 were used for the vapor intrusion modeling for a conservative evaluation of vapor migration. The screening evaluation consists of comparing the modeled indoor air concentrations to Washington State Model Toxics Control Act (MTCA) Method B Air Screening Levels.

Table 2. Estimated Indoor Air Concentrations Calculated from Actual Groundwater Concentration

Monitoring Well	Date of Sample Collection	Highest Detected Groundwater Concentration (µg/L)	Estimated Indoor Air Concentration (µg/m³)	MTCA Method B Screening Level for Indoor Air (µg/m³)
MW04	4/24/2013	290	0.502	0.37
MW11	1/11/2013	78	0.166	0.37
MW12	4/27/2012	14	0.031	0.37

NOTES:
µg/L= micrograms per liter
µg/m³= micrograms per cubic meter

INDOOR AIR EXPOSURE EVALUATION

The on-Property evaluation for MW04 estimates an indoor air TCE concentration of 0. micrograms per cubic meter (µg/m³), which exceeds the MTCA Method B screening level of 0.37 µg/m³ by 1.3 times. However, the future redevelopment of the Property and building design features, which are discussed in more detail below, will eliminate soil vapor as a potential medium of concern. The off-Property

evaluation from MW11 and MW12 estimated a TCE indoor air concentration of 0.166 and 0.031 µg/m^3, respectively, which is below the MTCA screening level.

The JE Model is a conservative screening tool and may result in the overestimation of indoor air concentrations based on groundwater concentrations. The model assumes that contaminant concentrations are evenly distributed beneath the foundation, vapors enter the building through floor penetrations or cracks in the concrete foundation or walls, and diffusion is the main transport mechanism for soil gas. The MTCA Method B screening level for a residential exposure is considered conservative since the receptors for both on- and off-Property are commercial workers and the exposure duration will be significantly less than a residential exposure.

Redevelopment of the Site will result in the mass excavation of TCE-impacted soil, which will remove most of the TCE mass in the soil. Once soil removal is completed, groundwater treatment will commence. Source removal via excavation and the treatment of dissolved-phase groundwater plume will significantly reduce TCE beneath the Property over the next 1 to 3 years, with most of the groundwater plume being treated before the building is occupied.

Building design features, such as the construction of one to two levels of subgrade parking and the operation of an active ventilation system in the parking garage, provide some engineering control should any contaminated soil gas infiltrate the 4-inch concrete floor slab. The exchange of air in the parking garage is intended to mitigate carbon monoxide and is helpful in reducing any potential vapors in the parking garage.

REFERENCES

Michigan Department of Environmental Quality (MDEQ). 1998. Part 213, Risk-Based Screening Levels (RBSLs) for Groundwater and Soil Volatilization to Indoor Air. Storage Tank Division. Operational Memorandum No. 4, Attachment 8. June 12, 1998.

U.S. Environmental Protection Agency (EPA). 2004. Johnson and Ettinger *User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings.* EPA Contract Number 68-W-02-33. Revised February.

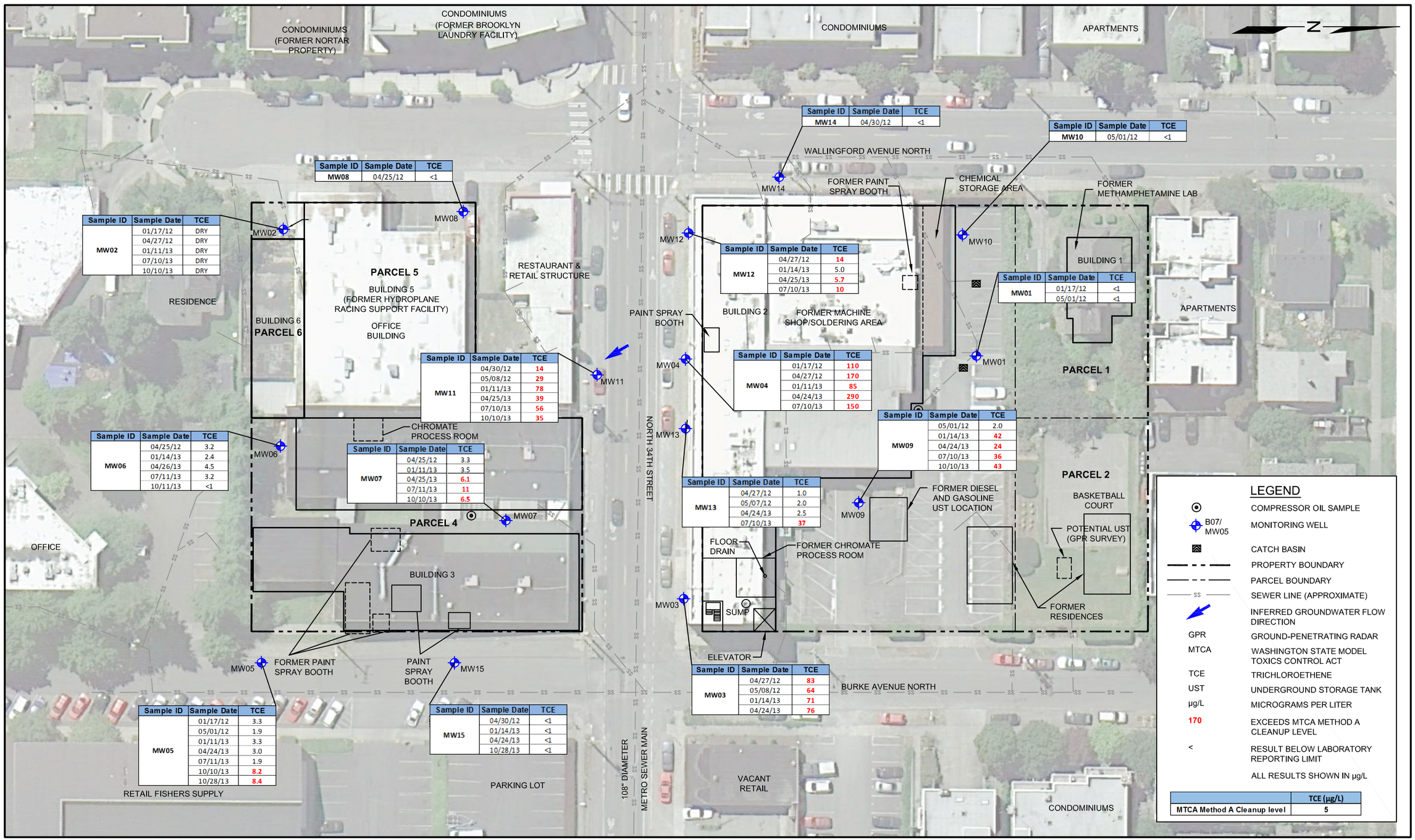
_____. 2013. Integrated Risk Information System. Available at http://www.epa.gov/iris/.

Washington State Department of Ecology (Ecology). 2009. *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*. Review Draft. October.

_____. 2012. *Trichloroethylene Toxicity Information and MTCA Cleanup Levels (TCE)*. CLARC Guidance, Trichlorethylene. September. https://fortress.wa.gov/ecy/clarc/FocusSheets/TCE%20PCE%20Oct%202004%20Final.pdf

Attachment: Figure 1 Groundwater TCE Results

SES:syh



SoundEarth Strategies
WWW.SOUNDEARTHINC.COM

DATE: 12/18/13
DRAWN BY: JQC
CHECKED BY: CER
CAD FILE: 0789-004_2013_Q4GD_TCE

PROJECT NAME: AVTECH PROPERTY
PROJECT NUMBER: 0789-004
STREET ADDRESS: 3400 WALLINGFORD AVENUE NORTH
CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET

FIGURE 1
GROUNDWATER TCE RESULTS

1/15/2014
P:\0789 AMLI RESIDENTIAL\0789-004 AMLI AVTECH\TECHNICAL\GRAPHICS\2013\2013 VI MEMO\0789-004-2013_Q4GD_TCE_VI MEMO (1).DWG
SOUNDEARTHINC.COM

APPENDIX E
SIMPLIFIED TERRESTRIAL ECOLOGICAL EVALUATION

Washington State Department of Ecology
Toxics Cleanup Program

Table 749-1

Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).	
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.	5
Area (acres) / Points: 0.25 or less / 4; 0.5 / 5; 1.0 / 6; 1.5 / 7; 2.0 / 8; 2.5 / 9; 3.0 / 10; 3.5 / 11; 4.0 or more / 12	
2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1	3
3)[a] Enter a score in the box to the right for the habitat quality of the site, using the following rating system[b]. High=1, Intermediate=2, Low=3	3
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.[c]	2
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	4
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.	12

Notes for Table 749-1

[a] It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

[b] **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

> **Low:** Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.