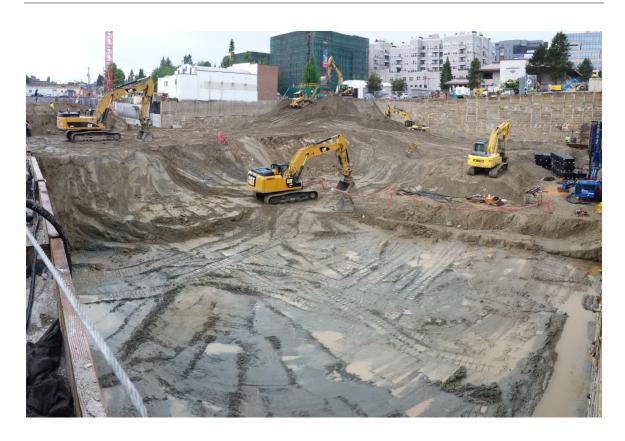
CLEANUP ACTION REPORT



Property:

SKS Shell Station Site 3901 Southwest Alaska Street Seattle, Washington

Report Date:

October 20, 2016

Prepared for:

LMI West Seattle Holdings, LLC 1325 Fourth Avenue, Suite 1700 Seattle, Washington

Cleanup Action Report

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Excavation Laboratory Analytical Results
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Friedman & Bruya, Inc. #504059

Friedman & Bruya, Inc. #504219

Friedman & Bruya, Inc. #504270

Friedman & Bruya, Inc. #504311

Friedman & Bruya, Inc. #504332

Friedman & Bruya, Inc. #504429 and amended

Friedman & Bruya, Inc. #504459 and amended

Friedman & Bruya, Inc. #504514

Friedman & Bruya, Inc. #504531

Friedman & Bruya, Inc. #504542

Friedman & Bruya, Inc. #504574

Friedman & Bruya, Inc. #505009

Friedman & Bruya, Inc. #505034 and additional

Friedman & Bruya, Inc. #505159

Friedman & Bruya, Inc. #505163

Friedman & Bruya, Inc. #505195

Friedman & Bruya, Inc. #505212

Friedman & Bruya, Inc. #505407

Friedman & Bruya, Inc. #505424

Friedman & Bruya, Inc. #505460

Friedman & Bruya, Inc. #505496

Friedman & Bruya, Inc. #505501

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Friedman & Bruya, Inc. #504058

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Friedman & Bruya, Inc. #504241 Friedman & Bruya, Inc. #504310

ACRONYMS AND ABBREVIATIONS

ACM asbestos-containing material

AEI Affordable Environmental, Inc.

bgs below ground surface

BTEX benzene, toluene, ethylbenzene, and total xylenes

CAP Cleanup Action Plan

CAR Cleanup Action Report

CDF controlled density fill

Chinn Construction, LLC

CMP Construction Management Plan

COC chemical of concern

CUL cleanup level

Division Seven Waterproofing

DRPH diesel-range petroleum hydrocarbons

Ecology Washington State Department of Ecology

Elk Heights Excavation LLC

EPA U.S. Environmental Protection Agency

Erickson Logging disposal facility

F&BI Friedman & Bruya, Inc.

Filco Environmental Tank Services

GPS global positioning system

GRPH gasoline-range petroleum hydrocarbons

HASP Health and Safety Plan

Huling property Huling Chevrolet garage and auto body shop

ICC International Code Council

ACRONYMS AND ABBREVIATIONS (CONTINUED)

Kennedy property Howden-Kennedy Funeral Home

Lennar Multifamily Communities, LLC

LEL lower explosive limit

MTCA Washington State Model Toxics Control Act

NAVD88 North American Vertical Datum 1988

NIOSH National Institute for Occupational Safety and Health

NWTPH Northwest Total Petroleum Hydrocarbon

ORPH oil-range petroleum hydrocarbons

OSHA Occupational Safety and Health Administration

PCS petroleum-contaminated soil

PID photoionization detector

PPCD Prospective Purchaser Consent Decree

ROW right-of-way

the Site includes soil and groundwater contaminated with gasoline- and diesel-range

petroleum hydrocarbons, and benzene, toluene, ethylbenzene, and total xylenes beneath the SKS Shell Property, limited portions of the north-adjoining Southwest Alaska Street right-of-way, and the east-adjoining Fauntleroy Way

Southwest right-of-way

SKS Shell Property the property located at 3901 Southwest Alaska Street, Seattle, Washington

SoundEarth Strategies, Inc.

UST underground storage tank

VCP Voluntary Cleanup Program

WAC Washington Administrative Code

Whittaker Property collectively, the Huling Brothers property, Kennedy property, and SKS Shell

Property

1.0 INTRODUCTION

SoundEarth Strategies, Inc. (SoundEarth) has prepared this Cleanup Action Report (CAR) for the SKS Shell Station Site consisting of the property located at 3901 Southwest Alaska Street in Seattle, Washington (the SKS Shell Property) and anywhere contamination originating on or from the SKS Shell Property has come to be located (the Site). The location of the SKS Shell Property is shown on Figure 1. The Site is part of the larger Whittaker Property redevelopment, which includes the immediately adjacent Huling and Kennedy properties, and SKS Shell Property. The parcels that make up the Whittaker Property are shown on Figure 2. This CAR was prepared pursuant to Prospective Purchaser Consent Decree (PPCD) #13-2-27556-2, effective July 29, 2013, with the Washington State Department of Ecology (Ecology).

The Site is defined by the full lateral and vertical extent of contamination exceeding applicable cleanup levels (CULs) that has resulted from releases of petroleum hydrocarbons at the SKS Shell Property. Based on the information gathered to date, chemicals of concern (COCs) identified in soil and groundwater at the Site include gasoline-range petroleum hydrocarbons (GRPH); diesel-range petroleum hydrocarbons (DRPH); and benzene, toluene, ethylbenzene, and total xylenes (BTEX) beneath the SKS Shell Property, limited portions of the north-adjoining Southwest Alaska Street right-of-way (ROW), and the east-adjoining Fauntleroy Way Southwest ROW, and limited portions of the west-adjacent Kennedy property and south-adjacent alley (Figure 2).

1.1 PURPOSE AND OBJECTIVE

Cleanup activities were performed under the PPCD in accordance with the Ecology-approved Cleanup Action Plan (CAP) dated June 16, 2014 (SoundEarth 2014b) following public comment. All cleanup activities were performed in compliance with Washington State Model Toxics Control Act (MTCA) under the supervision of Ecology. The purpose of the cleanup activities performed to date was to remove all soil contamination on or beneath the SKS Shell Property concurrent with excavation and construction activities related to the Whittaker Property redevelopment, and to initiate proposed groundwater treatment for the adjacent right-of-ways. The objective of this CAR is to (1) document field activities that were conducted as part of the cleanup action described in the Cleanup Action Plan, dated June 16, 2014 (SoundEarth 2014b), and the Construction Management Plan (CMP), dated January 2, 2015 (SoundEarth 2015), and (2) describe remaining compliance groundwater monitoring and treatment which may be necessary to achieve the established cleanup standards.

1.2 REPORT ORGANIZATION

This CAR is organized into the following sections:

- Section 2.0, Site Background. This section discusses the Site location and description, the land use history of the Site and surrounding parcels, and the previous investigations conducted at the Site.
- Section 3.0, Selected Cleanup Action and Standards. This section provides a summary of the selected cleanup action and the cleanup standards, including the remediation levels for the Site.
- Section 4.0, Cleanup Action Implementation. This section describes the components of the cleanup activities performed to date, including site demolition, monitoring well decommissioning, shoring installation, and soil excavation.

- Section 5.0, Compliance Monitoring. This section describes the protection, performance, and confirmational monitoring that was conducted as part of the cleanup activities performed to date. This section also includes a discussion of performance soil sampling results.
- Section 6.0, Planned Actions. This section presents remaining work which may be required under the selected remedy as detailed in the CAP that may be necessary to reduce COCs below applicable cleanup levels and accomplish goals for groundwater.
- Section 7.0, Conclusions. This section presents the conclusions based on the results of the cleanup action.
- Section 8.0. Limitations. This section discusses document limitations.
- Section 9.0, References. This section lists references cited in this document.

2.0 SITE BACKGROUND

This section provides a description of the Site features and location; a summary of the land use history of the SKS Shell Property; and a summary of previous investigations conducted for the Site. Additional background, including historical land use of surrounding parcels, geologic and hydrogeologic setting, and details of previous environmental investigations, is provided in the Remedial Investigation and Feasibility Study (SoundEarth 2014c) and the Phase I Environmental Site Assessment (SoundEarth 2014d).

2.1 PROPERTY LOCATION AND DESCRIPTION

The Site is defined by the nature and extent of contamination originating from the releases of hazardous substances on and beneath the SKS Shell Property, as discussed in Section 1.0 above. The SKS Shell Property and adjoining properties, including the ROW, affected by the release(s) from the SKS Shell Property are described in Sections 2.1.1 and 2.1.2 and presented on Figure 2.

2.1.1 SKS Shell Property

The SKS Shell Property is located on a 0.14-acre parcel (King County parcel no. 6126600495) within the West Seattle Triangle urban neighborhood. The SKS Shell Property was occupied by a gasoline station from 1934 to 2013 and is surrounded by commercial businesses and parking lots. The SKS Shell Property and the petroleum-impacted adjoining ROWs are described in the following sections and are presented on Figure 2.

Potable water and sewer service was provided to the SKS Shell Property by Seattle Public Utilities. Puget Sound Energy provides natural gas, and Seattle City Light provides electricity to the SKS Shell Property.

2.1.2 Fauntleroy Way Southwest and Southwest Alaska Street Rights-of-Way

According to the City of Seattle Arterial Classifications Zoning Map, the Fauntleroy Way Southwest ROW is zoned as a principal arterial and the Southwest Alaska Street ROW is zoned as an arterial street. The Fauntleroy Way Southwest ROW is comprised of six through lanes and the Southwest Alaska Street ROW is comprised of four through lanes.

A 15-inch-diameter concrete sewer line and 6-foot City of Seattle electrical utilidor are located beneath the Southwest Alaska Street ROW. A 15-inch-diameter concrete sewer line and a water line are located beneath the Fauntleroy Way Southwest ROW.

2.2 LAND USE HISTORY

The historical uses of the SKS Shell Property and adjoining development properties are summarized below. Figure 3 presents current and historical features for the Property and surrounding area.

2.2.1 SKS Shell Property

This SKS Shell Property was developed as a gasoline station and an automotive repair facility in 1934. Successive oil companies retailing gasoline products at the SKS Shell Property include Gilmore Red Lion in the 1930s, Mobil Oil in the 1940s, Texaco in the 1950s, Atlantic Richfield in the 1960s, Arco from 1975 to 1995, Texaco from approximately 1998 to 2004, and Shell from 2004 to 2013.

In 1950, the original 1934 gasoline fueling pump equipment from the Gilmore operations was removed, and two 4,000-gallon underground storage tanks (USTs; UST-A and UST-B) were installed. The pump island and service station office were removed in 1961 and replaced with a new and relocated pump island. An additional 8,000-gallon UST was installed in 1974 (UST04). The two 1950-vintage USTs were removed in 1984 and replaced with one 10,000-gallon UST and two 12,000-gallon USTs (UST01 through UST03). Leaded gasoline, unleaded gasoline, and diesel fuel have been used and stored in various USTs at the SKS Shell Property.

In July 2013, the gasoline station closed and remaining fuel was removed from the USTs. The four USTs (UST01 through UST04) and associated piping and dispensers were removed in December 2013. These USTs appeared to be in good condition, with no holes or other obvious indications of a recent release observed. SoundEarth prepared and submitted a UST removal report to Ecology in January 3, 2014 (SoundEarth 2014a). No excavation of petroleum-contaminated soil (PCS) was conducted at the time of the UST removal. However, PCS was identified in auger cuttings and approximately 172 tons of auger cuttings drilled from the adjacent Fauntleroy Way Southwest ROW were removed and disposed of off-site. The auger borings were required for installation of H-pile beams as part of a shoring system for the UST excavation as well as the future development excavation. Shoring installation also required the decommissioning of monitoring well MW-2. Details of the UST decommissioning are discussed in Section 4.2 below and presented in the Underground Storage Tank Removal and Assessment Report (SoundEarth 2014a).

The building was demolished in November 2014 as part of redevelopment activities associated with the Whittaker Property. During the demolition, three hydraulic hoists were discovered beneath the building. The hoists were decommissioned and removed from the Property.

2.2.2 Adjoining Development Properties

Huling Chevrolet. In 1929, the Huling property was undeveloped except for a small residential structure near the southwest corner. Historical street grading profiles indicate that approximately 9 feet of fill was placed on the south end of the property near Southwest Edmunds Street.

A real estate office was constructed on the northern portion of the property in 1950. The office was initially heated by a stove and was converted to electric heat by 1967. Between 1959 and

1961, the office was moved to the northwestern portion of the property. A one-story, wood-framed, stove-heated coffee shop was constructed on the northern portion of the property in 1953. The coffee shop operated on the property until at least 1980. A one-story, masonry-framed repair garage was constructed on the northeastern portion of the property in 1959. Heat was provided by a suspended electric heater. All three buildings were demolished in 1983.

The automotive dealership and service garage building were constructed on the southern half of the property in 1952. The dealership and service facility was occupied by Westside Ford from the early 1950s to the early 1970s, Jim Houston Ford in the late 1970s, Goodyear Tire and Hart Chevrolet in the 1980s, and Huling Chevrolet from 1989 to 2008. The facilities and associated buildings were demolished in November 2014 as part of the Whittaker Property redevelopment. An additional automotive repair building was constructed to the north of the dealership building in 1983. This building was demolished by 1990. The retail building on the northern portion of the property was constructed between 1990 and 1995 and used as a used car sales office, and later as a produce stand. This building was demolished in November 2014 as part of the redevelopment activities.

The service garage equipment included 14 underground hydraulic hoists (one was removed in the 1990s) and a trench drain outlet leading to an oil/water separator. During the demolition activities in November 2014, 19 hydraulic hoist components were removed from the Huling building. During the initial phase of excavation work in January 2015, two additional hoist components were discovered and removed. Three USTs were removed by Lee Morse Contractors in September 1989. The removed USTs included a 2,500-gallon gasoline UST, a 1,000-gallon heating oil UST, and a 500-gallon waste oil UST. Information regarding remedial activities performed on the Huling Chevrolet property is located in the CAR submitted under Voluntary Cleanup Program (VCP) Project No. NW2716, Facility/Site No. 26131615, in 2016.

Kennedy Funeral Home. A funeral home operated on the Kennedy property from 1941 to 2014. The building was initially heated by a stove and was later converted to an oil-burning furnace. The building was occupied by the Howden-Kennedy Funeral Home since at least 1966 to 2014. Embalming took place on the property until approximately January 2012. A 500-gallon heating oil UST was located on the southern portion of the property and was decommissioned in January 2015 prior to cleanup action activities. Information regarding remedial activities performed on the Kennedy funeral home property is located in the Cleanup Action Report submitted under VCP Project No. NW2716, Facility/Site No. 26131615, in 2016.

2.3 SUMMARY OF PREVIOUS INVESTIGATIONS

The locations of soil borings, groundwater monitoring wells, and other SKS Shell Property features are shown on Figure 4. The soil and groundwater analytical results are shown on Figures 5 through 8 and in Tables 1 and 2. Additional details regarding previous subsurface investigations are present in the Remedial Investigation and Feasibility Study Report, dated June 24, 2014 (SoundEarth 2014c).

Previous subsurface investigations indicated that soil beneath the SKS Shell Property was contaminated with GRPH, DRPH, and BTEX exceeding the applicable soil CULs at depths generally ranging between 12 and 25 feet below ground surface (bgs). PCS was located beneath the northern and eastern two-thirds of the SKS Shell Property. However, the lateral (to the north and northeast) and vertical extents of contaminated soil were not fully characterized during these investigations.

Figure 4 shows the investigation borings used to plan the remedial excavation. The lateral extent of contaminated soil was bounded by soil boring SB202 to the north and monitoring well MW105 to the northeast, located in the Southwest Alaska Street and Fauntleroy Way Southwest ROWs, respectively. The southern extent of contamination extended beneath the historic SKS Shell building. The soil samples collected from monitoring well SMW04 indicate that the soil plume extended to the west beneath a portion of the Kennedy property. Soil boring SB401 bounded contaminated soil to the west. Soil borings conducted further south on the Huling and alley properties (including SMW03 and MW106) did not encounter PCS. Figure 7 shows the interpreted lateral extent of the identified PCS area before the remedial excavation.

Groundwater samples collected from monitoring wells located around the perimeter of the USTs and pump islands (wells MW-1 through MW-3 and GLMW-1 through GLMW-3) contain concentrations of GRPH, DRPH, and BTEX that exceeded the applicable groundwater CULs (Figure 8). Groundwater samples from monitoring well SMW04 indicated that the groundwater plume extended to the west beneath a portion of the Kennedy property. Groundwater elevations in these wells have historically ranged from approximately 23 to 26 feet bgs (243 to 247 feet North American Vertical Datum 1988 [NAVD88]). Based on depth to water measurements, groundwater at the Site generally flows to the northeast. Separate-phase hydrocarbons were intermittently observed in wells MW-1, MW-3, GLMW-2, and DW-2. Based on these historical groundwater results and the consistent groundwater flow direction to the northeast for the SKS Shell Property, the contaminant plume likely extends at depth beneath the sidewalks, but not across the Fauntleroy Way Southwest and Southwest Alaska Street ROWs. Based on previous testing of monitoring wells in the ROW, the lateral extent of groundwater contamination has been bounded.

Laboratory analytical results for groundwater samples collected from downgradient monitoring wells MW101 through MW103 and MW105 indicated that the plume extends less than 25 feet northeast of the SKS Shell Property boundary beneath the Fauntleroy Way Southwest ROW, and the plume does not extend beyond the Southwest Alaska Street ROW (Figure 8).

3.0 SELECTED CLEANUP ACTION AND STANDARDS

The selected cleanup action for the Site was a lot-line to lot-line excavation with ROW dewatering, water and vapor barrier installation, and chemical oxidation injections in the ROW. The selected remedy was determined to be the most permanent and effective alternative available for the Site. The excavation was compatible with the Site redevelopment plan. The redevelopment plans for the Whittaker Property included an overall excavation of the property to a subgrade elevation of approximately 248 feet NAVD88, with perimeter footings extending to elevation 247 feet NAVD88. The total excavation depth at the SKS Shell Property was extended in limited areas to approximately 30 feet bgs, or an elevation of 240 feet NAVD88. Excavation of the entire SKS Shell Property to this depth removed all soil exhibiting COCs above the respective cleanup levels, thereby eliminating the principal source of groundwater contamination.

The excavation and ROW dewatering activities were completed in June 2015. The groundwater beneath the SKS Shell Property and adjacent ROWs is currently being evaluated to determine if COCs in groundwater exceed the MTCA Method A cleanup levels. Due to construction activities, several wells along Southwest Alaska Street, RW06 through RW09 and MW107, are inaccessible and access to these wells is anticipated in fourth quarter 2016. If the COCs in groundwater are above the MTCA Method A

cleanup levels then a chemical oxidation injection event will be implemented, followed by additional groundwater monitoring. A solution of sodium persulfate activated by a 10 percent solution of hydrogen peroxide will be injected into the groundwater to chemically oxidize the COCs and provide an oxygen source to stimulate aerobic biodegradation of COCs. Additional details regarding the contingency injection plan are presented in Section 6.1.

3.1 **CHEMICALS AND MEDIA OF CONCERN**

The COCs for the Site are those compounds that were detected at concentrations exceeding their respective CULs. The depth of the planned excavation for the SKS Shell Property removed all soil that exhibited COC concentrations exceeding applicable cleanup levels. The soil was transported off the Site for disposal at an authorized disposal facility. The media and associated COCs are shown in the table below.

Media and Chemicals of Concern

Media of Concern	Chemicals of Concern
Soil	GRPH, DRPH, BTEX
Groundwater	GRPH, DRPH, BTEX

NOTES:

BTEX = benzene, toluene, ethylbenzene, and total xylenes

DRPH = diesel-range petroleum hydrocarbons

GRPH = gasoline-range petroleum hydrocarbons

3.2 **CLEANUP LEVELS**

The CULs for the media and COCs were included in the approved CAP and are tabulated below, including the source of the cleanup standard. The CULs for contaminated soil and groundwater at the Site are the MTCA Method A CULs for Unrestricted Land Use.

Cleanup Levels for Soil

	Cleanup Level	
COC	(mg/kg)	Source
GRPH	30	
DRPH	2,000	
Benzene	0.03	
Toluene	7	MTCA Method A, Unrestricted; WAC 173-340-740(2)(b)(i)
Ethylbenzene	6	
Total xylenes	9	

NOTES:

COC = chemical of concern

mg/kg = milligrams per kilogram DRPH = diesel-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

GRPH = gasoline-range petroleum hydrocarbons WAC = Washington Administrative Code

Cleanup Levels for Groundwater

сос	Cleanup Level (µg/L)	Source
GRPH	800	
DRPH	500	
Benzene	5	
Toluene	1,000	MTCA Method A, Table Value; WAC 173-340-720(3)(b)(i)
Ethylbenzene	700	
Total Xylenes	1,000	

NOTES:

μg/L = micrograms per liter

COC = chemical of concern

DRPH = diesel-range petroleum hydrocarbons GRPH = gasoline-range petroleum hydrocarbons MTCA = Washington State Model Toxics Control Act WAC = Washington Administrative Code

3.3 EXPOSURE PATHWAYS

For soil, the potential for exposure includes volatilization into soil vapor and subsequent exposure through the vapor pathway, and via direct contact which comprises dermal contact and/or ingestion of soil. The direct contact pathway is not completed due to the excavation and removal of soil on-Property containing concentrations of COCs in excess of their respective cleanup levels. Any remaining contaminated soil in the Fauntleroy Way Southwest ROW is below the direct contact point of compliance of 15 feet bgs and this area is capped by concrete and asphalt. Therefore, the soil direct contact pathway is considered incomplete.

A vapor barrier was installed after excavation work was completed on-Property. The vapor barrier covers the entire horizontal and vertical extent (north and east shoring walls) of the SKS Shell Property, and extends a minimum of 20 feet beyond any residual soil contamination or contaminated groundwater. Due to the source removal and installation of engineering controls the vapor inhalation pathway on the SKS Shell Property is considered incomplete.

Impacted groundwater is present beneath the Fauntleroy Way Southwest ROW. The exposure pathways for groundwater include direct contact or inhalation of vapors. Engineering controls prevent direct contact with residually contaminated groundwater beneath the ROWs by commercial workers and future residents. Therefore, the direct contact pathway will be incomplete for residents and commercial workers at the completion of the development. A contaminant resistant water and vapor barrier was installed along the north and east shoring walls to prevent recontamination of soil or groundwater on the Property. This barrier also acts as an engineering control to eliminate the exposure pathway for contaminants volatilizing from groundwater to indoor air.

4.0 CLEANUP ACTION IMPLEMENTATION

This section provides a description of the components of the cleanup activities completed at the Site to date. The cleanup activities were designed to coincide with redevelopment activities at the SKS Shell Property. Construction activities were coordinated with Chinn Construction, LLC (Chinn), the general contractor for the construction project, with SoundEarth providing supervision and guidance for all remedial activities. Photographs of the cleanup activities implementation process are included as an attachment and annotated for the field activity being performed. Chinn and its subcontractors were provided and required

to perform the construction activities in accordance with the procedures detailed in the CMP, dated January 2, 2015, that was also provided to Ecology in advance of the cleanup activities.

4.1 SITE SPECIFIC HEALTH AND SAFETY

Before the commencement of construction activities, SoundEarth prepared a Site-Specific Health and Safety Plan (HASP) in accordance with Part 1910.120 of Title 29 of the Code of Federal Regulations. Chinn was responsible for the health and safety of its workers while on the SKS Shell Property.

SoundEarth field-screened ambient air during the excavation and shoring activities to monitor petroleum hydrocarbon levels in the breathing zone of personnel and equipment operators, and at the SKS Shell Property boundaries. Ambient air field screening was conducted using a photoionization detector (PID) and colorimetric gas detector tubes. Results of ambient air monitoring are discussed in Section 5.1.

An exclusion zone was set up around the SKS Shell Property to ensure only HAZWOPER (Hazardous Waste Operations and Emergency Response)-certified workers entered the contaminated area.

4.2 UST DECOMMISSIONING

SoundEarth Strategies Construction LLC conducted the UST removal activities between December 2 and 5, 2013. The following tanks were removed, with locations shown on Figure 7:

- Tank #1—a 12,000-gallon, single-walled, epoxy-coated, steel, gasoline UST installed in 1984
- Tank #2—a 12,000-gallon, single-walled, epoxy-coated, steel, gasoline UST installed in 1984
- Tank #3—a 10,000-gallon, single-walled, epoxy-coated, steel, gasoline UST installed in 1984
- Tank #4—an 8,000-gallon, single-walled, epoxy-coated, steel, gasoline UST installed in 1974

The single-walled steel tanks appeared to be in good condition with no evidence of holes or significant corrosion. Other than low to moderate petroleum odors noted during clearing of the pump island areas, no significant odors or sheens were noted in soil immediately below or surrounding the tanks. All fuel piping and dispenser systems associated with the USTs were also removed.

All USTs were decommissioned in compliance with applicable regulations for USTs.

Additional details and paperwork for the UST decommissioning are presented in the Underground Storage Tank Removal and Assessment Report (SoundEarth 2014a).

Additional USTs, UST05, UST06, and UST07, were discovered during excavation activities on the northwest corner of the SKS Shell Property. Details of the discovered tanks and the UST decommissioning are outlined below in Sections 4.10.1 and 4.10.2.

4.3 ASBESTOS ABATEMENT

In August and September 2013, SoundEarth performed a pre-demolition hazardous materials survey on the property buildings. Asbestos-containing materials (ACMs) were identified within the former building on the SKS Shell Property. Affordable Environmental, Inc. (AEI), a Washington State licensed asbestos abatement contractor, was contracted by SoundEarth Strategies Construction, LLC to abate the ACMs. In

September 2014, AEI provided written notification to the Washington State Department of Labor and Industries and the Puget Sound Clean Air Agency and, in October 2014, AEI removed the ACMs identified in the SoundEarth survey. Copies of the notifications and certification of completion are provided in Appendix A.

4.4 BUILDING DEMOLITION

Demolition of the 1934-vintage building on the SKS Shell Property was completed prior to the Site excavation. The demolition included the decommissioning and removal of three hydraulic hoists beneath the building. Demolition activities were conducted by SoundEarth Strategies Construction LLC in November 2014.

4.5 DEWATERING SYSTEM INSTALLATION AND OPERATION

Remediation well RW01 was installed on February 20, 2013, and remediation wells RW02 through RW09 were installed June 9 through 16, 2014, within the sidewalk along Fauntleroy Way Southwest and Southwest Alaska Street. The remediation wells were installed by Holt Services, Inc., of Puyallup, Washington, under the supervision of a SoundEarth hydrogeologist. Borings were advanced using a hollow-stem auger drill rig to a maximum depth of approximately 40 to 41 feet bgs. Remediation wells were constructed using 4-inch-diameter PVC piping, with 0.010-inch slot screen from 25 to 40 feet bgs, and blank casing from ground surface to 25 feet bgs (Appendix B). After well completion, the remediation wells were developed using a whale pump to purge between 45 to 120 gallons of water from each well.

In accordance with the CAP (SoundEarth 2014b), groundwater was pumped from the SKS Shell Property excavation dewatering trench and remediation wells, RW01 through RW09, located in the adjacent ROWs during excavation of PCS at the SKS Shell Property. Each remediation well was equipped with an electric submersible pump capable of the design flow rate of 0.5- to 1-gallon per minute. The average pumping rate for the 9-well system was approximately 4 to 5 gallons per minute during system operation. Pumps were plumbed into 1-inch-diameter PVC piping that ran to a 6,900-gallon poly tank for temporary storage of the contaminated groundwater. The groundwater was pumped into the temporary water storage tank, and the collected water was removed daily (or as necessary) and transported to a permitted off-property facility, Marine Vacuum Service, for treatment and disposal. The additional groundwater encountered during the overexcavation of soil beneath the SKS Shell Property to an approximate elevation of 242 feet NAVD88 (28 feet bgs) was gathered in the dewatering trench and pumped from the excavation and stored in the water storage tank for off-property treatment and disposal. Marine Vacuum Service provided a receipt with approximate gallons removed with each load of water that is transport off property. SoundEarth personnel observed the removal of all water by Marine Vacuum Service and reviewed the water removal receipt prior to signing.

The goal of the cleanup activities was to remove three pore volumes or approximately 75,000 gallons from beneath the SKS Shell Property and adjacent ROWs. Additional pore volumes were removed to aid the general contractor's need for a lower water table during construction and for the vertical over-excavation of contaminated soil. The dewatering system was started on March 23, 2015. Initial dewatering was conducted until April 15, 2015, when 50,000 gallons, the equivalent of 2 pore volumes, were removed from the Site. The system was restarted on May 21, 2015, to draw down groundwater levels during the deeper excavation on the Site. The dewatering system operated through June 26, 2015.

SoundEarth metered the total gallons of water removed; a total of 135,780 gallons of groundwater, approximately 5 pore volumes, were pumped and removed from the Site during 4 months of operation.

The treatment and disposal facility, Marine Vacuum Service, handles approximately 6 million gallons of nonhazardous, unregulated waste streams per year. Waste petroleum received at their facility is processed and recycled under the alternate fuels program. Waste water is treated in accordance with a Centralized Waste Treatment Permit issued by King County METRO, and solids are solidified and disposed of at permitted landfills.

Preliminary mass estimates were prepared for Ecology discussions in May 2013 and are provided for reference in Appendix C (Tables C-1 and C-2). It was estimated that approximately 6 pounds of gasoline-range petroleum hydrocarbons were originally present in groundwater beneath the Site. Performance groundwater samples were collected during each pore volume removed in order to estimate the actual mass recovered during system operations (Appendix C, Tables C-3 and C-4). Based on performance sampling data, approximately 4 pounds of GRPH and 0.18 pounds of benzene were removed with the dewatering system.

4.6 MONITORING WELL DECOMMISSIONING

Ten monitoring wells (MW-1, MW-2, MW-3, DW-1, DW-2, DW-3, DW-4, GLMW-1, GLMW-2, and GLMW-3) that were located within the excavation area were decommissioned (Figure 4). Monitoring wells were decommissioned by a SoundEarth licensed Engineer in accordance with Chapter 173-160-460 of the Washington Administrative Code (WAC 173-160-460). Monitoring wells casings were filled with bentonite chips to grade and hydrated. Monitoring wells DW-2 and MW-1 were decommissioned prior to excavation activities. Monitoring wells MW-2, MW-3, GLMW-1 through GLMW-3, and DW-1 were decommissioned as they were uncovered during excavation activities. Monitoring wells DW-3 and DW-4 were unable to be located prior to or during the excavation. Based on the location of the wells along the property line, it is assumed that they were destroyed during the soldier pile installation.

4.7 SOIL CLASSIFICATION

SoundEarth, Lennar Multifamily Communities, LLC, Chinn, and the earthwork contractor discussed the recommended soil disposal facilities prior to the excavation and ensured all parties were in agreement for the preferred disposal facilities for the soil classification system detailed in the CMP. The CMP identified the following soil classifications to efficiently direct the real-time segregation of excavated soil and loading of haul trucks:

- Class 1—Non-Impacted fill or native soil (without debris)
- Class 2—Impacted fill or native soil (below MTCA cleanup levels)
- Class 3—Contaminated fill or native soil (above MTCA cleanup levels)
- Class 4—Debris soil (greater than 20 percent debris)

For more detailed information on soil classification designations and disposal acceptance criteria for permitted landfill facilities, refer to the CMP (SoundEarth 2015).

4.8 SHORING INSTALLATION

Shoring was required to protect the structural integrity of the planned excavation, the surrounding properties, and the adjoining ROWs. The shoring consisted of a soldier pile and wood lagging system with up to two sets of tie backs. The soldier piles were installed by a solid, double-flight auger drilling rig in 24-inch to 30-inch boreholes filled with controlled density fill (CDF). Following pile installation and CDF curing, the property perimeter was excavated vertically in 4- to 5-foot lifts. After each lift, timber lagging boards were installed. In addition, at prescribed depths tieback anchors were drilled and installed.

Piles E3 through E11 were installed during UST removal in December 2013. PCS was encountered in Piles E3 through E8 during augering. Soil with hydrocarbon odors were encountered during shoring installation between piles N27 through N33; and E1, E2, and E9 through E12, as well as during tieback installation in this area. The contaminated soils encountered were stockpiled on the SKS Shell Property and managed as Class 3 contaminated soil.

4.9 EXCAVATION

Remedial excavation for the SKS Shell Property was conducted between April and June 2015 in compliance with the procedures set forth in the CMP. Chinn was the general contractor for the duration of the project, and Elk Heights Excavation LLC (Elk Heights) of Maple Valley, Washington, was the earthworks contractor responsible for excavation and transportation of soils. A SoundEarth geologist observed excavation activities of all contaminated soils. Performance and confirmation soil sample locations are shown on Figures 9 through 12 and presented in Table 3.

The SKS Shell Property was excavated from approximately lot-line to lot-line as part of the redevelopment project. Elk Heights used excavators to excavate and load soil into haul trucks staged on the Site. The existing alleyway was used as a haul road through the Site until soil was excavated to approximately 12 feet bgs, or native soil was reached. Contaminated soils from below 12 feet bgs were excavated and transferred to the east side of the Site and loaded onto haul trucks on Fauntleroy Way Southwest. Soil was transferred along a flat surface, lined with plastic sheeting overlain by steel plates, to ensure no cross contamination during transport of contaminated soil.

SoundEarth used a soil management grid system that divided the Site into 24-foot by 24-foot grids. A handheld Trimble global positioning system (GPS) was used to store sample location points. If the GPS was not able to be used, sample locations were measured with a tape measure off the nearest shoring wall. Soil samples were labeled according to the specific property, bottom or sidewall, grid location, and depth in elevation, in accordance with the Site CMP. All sample depths were sampled based on NAVD88 elevation, with the top of the northeast soldier pile as a benchmark at approximately 270 feet NAVD88.

Excavation activities on the SKS Shell Property occurred in 5-foot lifts concurrent with shoring installation. Soil was field screened for indications of petroleum contamination, including staining, petroleum hydrocarbons odors, and elevated PID readings. PID screening was performed vertically and horizontally within each grid to confirm the presence of petroleum contamination. Performance samples were collected within each grid every 5 vertical feet, starting at approximately 261 feet NAVD88, or approximately 9 to 10 feet bgs. Additional performance samples were collected to assess contaminated soils encountered during excavation. Discovery areas are outlined below. Sidewall samples were collected on 5-foot vertical grids along Southwest Alaska Street and Fauntleroy Way

Southwest at 255, 250, and 245 feet NAVD88. South and west sidewall samples were collected every 5 vertical feet after all soils with indications of petroleum contamination were removed. Soil was screened at the final extent of the excavation floor prior to collecting confirmation samples. Floor samples were collected from each soil management grid. The final excavation depth ranged from 243 feet NAVD88 (27 feet bgs) in grid B3 to 240.5 feet NAVD88 (29.5 feet bgs) in grid A3. Soil samples for each elevation are depicted in Figure 9 through 12.

Excavated soil generally consisted of brown, sandy fill material to approximately 10 to 15 feet bgs, including fine to medium sand used to backfill the former UST tank beds. From 15 feet to 30 feet bgs, soil consisted of blue-gray sandy silt to silty sand with very strong hydrocarbon odors. Soils with strong hydrocarbon odors were typically stained blue-gray.

A total of 93 soil samples were collected during the SKS Shell Property excavation. Of those samples, 14 were collected from the floor of the excavation area (Figure 12). Soil samples were collected by a SoundEarth geologist and transferred directly to laboratory-prepared sample containers labeled with unique laboratory identification numbers. The containers were placed in an iced cooler and transported for laboratory analysis to Friedman & Bruya, Inc. (F&BI) under standard chain-of-custody protocols. Samples were analyzed for one or more of the following: DRPH and oil-range petroleum hydrocarbons (ORPH) by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Dx, GRPH by Method NWTPH-Gx, and BTEX by U.S. Environmental Protection Agency (EPA) Method 8021B or 8260C. Select samples were analyzed for forensic fingerprints. See Sections 5.2.1 and 5.3.1 for the chemical analytical results of the samples described in this paragraph.

Excavated soil on the Property was exported to one of the following disposal facilities: AAA Monroe Rock, in Snohomish, Washington; Erickson Logging (Erickson), in Ravensdale, Washington; or CEMEX in Everett, Washington, depending on the facilities' respective soil acceptance criteria.

4.9.1 Kennedy Excavation

Previous investigations indicated GRPH and benzene contamination from the SKS Shell Property had migrated onto the northeastern portion of the Kennedy property. The northern and western extents of the GRPH contamination from the SKS Shell Property were bounded by borings SB401 and MW107.

Excavation activities along the Kennedy-SKS Shell Property boundary occurred in 5-foot lifts corresponding with shoring installation activities. Soil was excavated between April 2 and May 27, 2015. The initial 15 feet of excavation (to approximately 255 feet NAVD88) on the northeast portion of the Kennedy property was clean soil hauled to Erickson for disposal. Soil below 255 feet NAVD88 (15 feet bgs) exhibited strong hydrocarbon odors in grids C1 and D1 on the Kennedy property. Soil was field screened for odors and sheen as excavation activities continued to the west and to final depth.

The western extent of petroleum contamination from the SKS Shell Property extended approximately 28 feet west of the property line into grids D1 through D3. The bottom of the excavation extended to 242 to 243 feet NAVD88 (27 to 28 feet bgs).

A remedial excavation of heating oil contaminated soil occurred on the Kennedy Property immediately west of the SKS Shell Property. The contaminated soil associated with the Kennedy Property heating oil UST was excavated and disposed of separately from the SKS plume. The

eastern extent of the Kennedy heating oil plume appeared to comingle with the western extent of the SKS contamination on the Kennedy property. Sidewall samples collected at the boundary of the SKS Shell Property and the heating oil plume were used to confirm compliance with applicable cleanup levels for both the SKS Shell and Kennedy Properties. Additional discussion on the comingled plumes is included below in Section 4.10.3.

4.10 FIELD DISCOVERIES

Unexpected contaminated areas were encountered during the remedial excavation. Additional details for each discovery are provided below, and the discovery areas are shown on Figure 13.

4.10.1 UST05 and UST06

On April 2, 2015, an excavator operator encountered two USTs on the northwest portion of the SKS Shell Property (Figure 13). Measurements of UST05 and UST06 exteriors indicated that the USTs were approximately 500- and 1,000-gallon capacity, respectively. During initial observations, no hydrocarbon odors or soil staining were observed in the vicinity of the UST. UST05 was approximately half full of oily water. UST06 contained approximately 6 inches of sludge at the bottom of the tank. Product samples were collected from both USTs for forensic analysis (Table 4).

UST05 and UST06 were decommissioned and removed on April 8, 2015. SoundEarth provided an International Code Council (ICC)-certified UST Site Assessor and conducted a site assessment in general accordance with Ecology's *Guidance for Site Checks and Site Assessments for Underground Storage Tanks* (Ecology 2003). SoundEarth contracted River's Edge to provide an ICC-certified UST Decommissioner and a National Fire Protection-certified Marine Chemist.

Prior to removal, the USTs were inerted with carbon dioxide by a certified Marine Chemist, and the lower explosive limit (LEL) and percent oxygen readings were measured to confirm that conditions were safe to proceed with UST excavation. Marine Vacuum Services, Inc. pumped the residual liquid out of UST05 and UST06 prior to tank removal. Elk Heights, the earthworks contractor, assisted with the removal of the USTs. Both USTs appeared in good condition upon removal, with no visible holes or damage.

Six discrete soil samples were collected from the sidewalls of the UST excavation area and a discrete bottom sample was collected below the bottom of each UST. Sample locations are depicted on Figure 14 and presented in Table 5. No indications of PCS were observed in the soil below or surrounding the USTs. Analytical results for the UST soil samples were below the laboratory reporting limit and/or MTCA Method A cleanup levels for all analyzed COCs. Documentation for the UST removal is included in Appendix D.

4.10.2 UST07

On April 13, 2015, an excavator operator encountered one UST on the northwest portion of the SKS Shell Property, south of previously located UST05 and UST06 (Figure 13). Measurements of UST07 indicated the tank was approximately 1,000 gallon capacity.

UST07 was decommissioned and removed on April 16, 2015. SoundEarth provided an ICC-certified UST Site Assessor and conducted a site assessment in general accordance with Ecology's 2003 guidance. SoundEarth contracted Filco Environmental Tank Services (Filco) to provide for an ICC-certified UST Decommissioner and a National Fire Protection-certified Marine Chemist. Prior to removing the tank, Filco pumped the residual liquid out of the UST. The LEL

and percent oxygen were measured by a certified Marine Chemist, to verify that the UST was inert. Elk Heights removed UST07 from the ground and loaded it up for disposal. The UST appeared in good condition, with no visible holes or damage.

Soil samples were collected from each sidewall and from below the bottom of the UST (Figure 14). The samples were analyzed for DRPH, ORPH, GRPH, and BTEX. Concentrations of DRPH, ORPH, GRPH, and BTEX were below remediation levels and/or MTCA Method A cleanup levels in all of the soil samples (Table 5). Documentation for the UST removal is included in Appendix D.

4.10.3 SKS Garage Plume Areas

Indications of petroleum contamination were encountered in grid C4 at approximately 1 foot bgs (270 feet NAVD88) in the vicinity of the former SKS garage (Figure 10). A performance sample was collected from grid C4 for profiling. Analytical result indicated concentrations of GRPH above the MTCA Method A cleanup level. The B4/C4 shallow petroleum impacted area was excavated on April 24, 2015, and stockpiled for disposal. The excavation area was approximately 28 feet by 28 feet, and extended approximately 8 feet west onto the Kennedy parcel. Final depth was approximately 263 feet NAVD88. Sidewall and bottom samples were collected from the final extents of the B4/C4 shallow petroleum impacted area. Analytical results indicated the east sidewall sample contained concentrations of GRPH, DRPH, and ORPH above the applicable MTCA Method A CULs. The area was excavated on April 30, 2015, until an east sidewall sample was collected to confirm all soil exceeding MTCA Method A CULs had been excavated.

On May 1, 2015, additional indications of petroleum contamination were encountered within grids B4/B5 at approximately 261 feet NAVD88. Soil encountered was black silty sand, with strong hydrocarbon odor, and was located 2 to 3 feet deeper than previously encountered contamination in the vicinity. Analytical results indicated concentrations of GRPH and DRPH above the MTCA Method A CUL. The deeper impacted area, B4/B5/C5 deep petroleum impacted area, was excavated on May 4, 2015. SoundEarth screened soils as the excavation continued north and west, removing all soil with strong hydrocarbon odors. The excavation area continued west into the Kennedy property, and south into the Huling alleyway. Strong odors were still present at the bottom of the excavation at 252 feet NAVD88, and within the north and west sidewalls. Excavation activities were halted to collect sidewall and bottom samples for profiling and forensic samples. One sample from the SKS Shell Property and one sample from the Kennedy property were collected from both the north and west sidewalls, and the bottom of the excavation. A performance sample was also collected from the south sidewall.

Analytical results from the B4/B5/C5 deep petroleum impacted area contained concentrations of GRPH and DRPH above the MTCA Method A CUL. The composition of GRPH and DRPH in soil samples collected from both the SKS Shell Property and the Kennedy property sides of the excavation indicated a similar source of contamination at comparable magnitudes. The forensic analysis indicated soil samples resembled a degraded middle distillate such as kerosene.

The C5/B5 excavation area overlapped with the main SKS gasoline plume to the north and into the Kennedy heating oil excavation to the west of the SKS property line. The excavation was terminated when final sidewall samples collected from the C5/B5 area showed that MTCA Method A CULs had been met. The final extent of the SKS plume discovery area is depicted on Figure 13.

4.11 SOIL TRACKING

SoundEarth tracked all Class 2 and Class 3 soil exported from the Site. SoundEarth prepared a soil ticket for each individual load of soil that left the Site. Soil tickets identified the property name, grid reference, ticket number, date of export, soil references, disposal facility, truck number, and data references. Truck drivers filled in the scale weight for each truck load and provided SoundEarth with a disposal facility scale ticket, when applicable. SoundEarth maintained a log of all trucks departing the Site with soil for disposal as Class 2 or Class 3.

In addition to the soil tickets, a soil manifest was provided for every individual load of soil. SoundEarth obtained soil disposal profiles on behalf of LMI West Seattle Holdings, LLC, the current owner of the SKS Shell Property, based on the analytical data gathered during the environmental investigations. Soil manifests were provided for each disposal facility for specific classifications of soil.

In total, 192 tons of Class 2 soil was hauled to AAA Monroe, and 9,563 tons of Class 3 soil was hauled to CEMEX from the SKS Shell Property. The clean overburden and surrounding Class 1 soils were hauled to Erickson for disposal. The summary of soil removal is included in Appendix E.

4.12 VAPOR BARRIER INSTALLATION

As part of the cleanup action plan, a tiered vapor intrusion evaluation was conducted in accordance with Ecology's 2009 *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action (revised February 2016).* On June 12, 2014, groundwater samples were collected from monitoring wells, MW104, GLMW-1, and MW-3, prior to the excavation (Table 2). Concentrations of GRPH and benzene in groundwater in all three monitoring wells exceeded the MTCA Method B groundwater screening levels protective of indoor air, which ranges from 2.9 to 1,300 μ g/L for GRPH and 2.4 μ g/L for benzene.

The cleanup activities removed all impacted soil within the limits of the SKS Shell Property boundary and removed approximately 5 pore volumes of groundwater over the course of the excavation activities, which will greatly contribute to restoring groundwater quality beneath the SKS Shell Property and the adjacent Fauntleroy Way Southwest and Southwest Alaska Way ROWs. Due to residual soil and groundwater contamination that remains beneath the adjacent Fauntleroy Way Southwest and Southwest Alaska Way ROWs, a vapor barrier was specified to mitigate the potential vapor intrusion pathway.

After the completion of soil excavation activities on the SKS Shell Property, Chinn began construction of a 2-story sub-grade parking garage and building structure. Prior to pouring concrete foundation and vertical walls, a vapor barrier was installed on the sidewalls and floor of the excavation to mitigate the potential vapor intrusion pathway. The vapor barrier was installed by Division Seven Waterproofing (Division Seven), of Shoreline, Washington. Division Seven applied all components of the vapor barrier according to the manufacturers' specifications (Appendix F).

The vertical components of the vapor barrier include a waterproof Voltex DS contaminant resistant material, overlain by a VI-20 detailing fabric, and Liquid Boot. The Liquid Boot is a spray-applied water-based membrane that seals all vapor intrusion pathways. The vapor barrier components extend from the bottom of the building grade at 23 feet bgs (approximately 247 feet NAVD88) to approximately 4 to 5 feet bgs. The horizontal component of the vapor barrier consists of the Liquid Boot vapor barrier over

the VI-20 detailing fabric. Both the vertical and horizontal components of the vapor barrier extend off the SKS Shell Property to the south and west, as shown in Figure 15.

The technical components of the vapor barrier are included in Appendix F. Photographs of the installation process are included as an attachment.

4.13 MONITORING WELL INSTALLATION

On September 1, 2015, monitoring wells MW108 through MW110 were installed on the SKS Shell Property to complete compliance groundwater monitoring. The wells were installed by ESN Northwest, of Olympia, Washington, using a push-probe limited-access drill rig. Wells were installed under the supervision of a SoundEarth geologist. Monitoring well locations are shown on Figure 15.

Monitoring wells MW108 through MW110 were installed to an approximate elevation of 234 to 235 feet NAVD88 (35 to 36 feet bgs), with 10 feet of screen. Monitoring wells MW108 and MW109 were constructed with 3/4-inch-diameter blank PVC casing, and MW110 was constructed with 1-inch-diameter casing. All wells were flush-threaded to 0.010-inch slotted well screen. The bottom of each of the wells was fitted with a threaded PVC bottom cap, and the top of each well was fitted with a slip cap. The annulus of the monitoring wells was filled with 2/12 sand from the bottom of the well to approximately 6 inches above the well screen, and sealed with approximately 2 feet of bentonite and a concrete cap. The wells were completed at the surface with a flush-mounted, traffic-rated well box set in concrete. Boring logs of the monitoring wells are included in Appendix B.

Monitoring wells were developed by SoundEarth using a peristaltic pump to surge and purge the wells. Monitoring wells were purged until approximately five casing volumes were removed and the purge water no longer appeared turbid.

5.0 COMPLIANCE MONITORING

There are three types of compliance monitoring identified for the cleanup action (WAC 173-340-410): protection, performance, and confirmational monitoring. A paraphrased definition for each is presented below (WAC 173-340-410[1]):

- Protection Monitoring. To evaluate whether human health and the environment are adequately protected during the cleanup activities.
- Performance Monitoring. To document that the cleanup activities have attained cleanup standards.
- Confirmational Monitoring. To evaluate the long-term effectiveness of the cleanup activities, or once cleanup standards or other performance standards have been attained.

5.1 PROTECTION MONITORING

In accordance with the Site-specific HASP, SoundEarth monitored ambient air during excavation, shoring, and drilling activities for petroleum hydrocarbons in the breathing zone of personnel and equipment operators, and at the boundaries of the Property. Air monitoring was conducted using a PID and benzene colorimetric gas detection tubes. Air monitoring logs during the excavation activities are included in Appendix G.

Results of air monitoring indicated elevated PID readings that exceeded the limits set in the Site-Specific HASP. Due to the strong odors and elevated PID readings, workers were required to don respirators while working within the exclusion zone.

Although high PID readings were observed, the Occupational Safety and Health Administration (OSHA) the National Institute for Occupational Safety and Health (NIOSH) do not have exposure limits for gasoline. No benzene was detected with the gas detection tubes during the duration of the excavation; therefore, the ambient air on the Site did not exceed the applicable OSHA permissible exposure limits or the NIOSH recommended exposure limits during active excavation of PCS on the Site.

5.2 PERFORMANCE MONITORING

Performance monitoring included the collection of soil samples from the sidewalls and floor of the redevelopment excavation area, soil samples collected during excavation and removal of any previously unidentified contamination, and groundwater samples collected from the dewatering system. A quarterly groundwater monitoring program will be implemented to evaluate the effectiveness of the cleanup activities.

5.2.1 Soil

Performance monitoring and field screening of soil was conducted during the remedial excavation activities to direct advancement of the excavation and demonstrate that MTCA Method A CULs had been met. A SoundEarth geologist observed the excavation of identified impacted and contaminated soil during the excavation activities and performed field screening of the non-impacted soil areas to confirm the lack of notable impacts. Field screening included observation of the soil for discoloration, sheen, and odors. In addition to physical observations, a PID was used to qualitatively measure volatile organic vapors in the soil.

Performance soil samples were collected to validate that the performance criteria have been met at the designated points of compliance. Samples were collected at designated 5-foot vertical horizons within each 24-foot by 24-foot soil management grid. Performance sample locations are depicted on Figures 9 through 12.

Soil samples were collected by a SoundEarth geologist and transferred directly to laboratory prepared sample containers labeled with unique laboratory identification numbers. The containers were placed in an iced cooler and transported for laboratory analysis to F&BI, under standard chain-of-custody protocols. Samples were analyzed for one or more of the following: DRPH and ORPH by Method NWTPH-Dx, GRPH by Method NWTPH-Gx, and BTEX by EPA Method 8021B. Select samples were analyzed for forensic fuel fingerprints.

5.2.2 **Groundwater**

Performance groundwater samples were collected during the dewatering system operation to determine whether MTCA Method A CULs have been met. Samples were collected from each pore volume removed in order to estimate the mass recovered during system operations. Performance samples are presented in Appendix C, Table C-4.

Performance groundwater monitoring includes quarterly or semi-annual groundwater monitoring of monitoring wells, MW104, and MW107 through MW110, with periodic monitoring of off-Property wells MW103 and MW105 for up to 5 years to evaluate the reduction of dissolved-phase petroleum hydrocarbons in groundwater across the Site.

Performance monitoring is required until groundwater concentrations meet the MTCA Method A cleanup level for COCs.

5.3 CONFIRMATIONAL MONITORING

Confirmation sampling included the collection of soil samples from the final extent of the redevelopment excavation area and groundwater sampling after the completion of the cleanup activities.

5.3.1 Soil Confirmation Sampling

Confirmation samples were collected from the sidewalls and excavation floor of each 24-foot by 24-foot grid in 5-foot vertical increments. Analytical results for the soil samples collected from the final limits of the remedial excavation areas are presented in Tables 3 through 5 and depicted in Figures 9 through 12. Laboratory analytical results are included in Appendix H.

- Concentrations of COCs in all the soil samples collected from the floor of the remedial excavation area were below the laboratory reporting limits and/or the applicable MTCA Method A cleanup levels. Final bottom confirmation samples are highlighted in yellow in Table 3 and shown on Figure 12.
- Concentrations of COCs in all the soil samples collected from the south and western
 extents of the SKS Shell excavation were below the laboratory reporting limits
 and/or the applicable MTCA Method A cleanup levels.
- Three samples collected from the north sidewall (Southwest Alaska Street) contained concentrations of GRPH and/or benzene that exceeded the applicable MTCA Method A cleanup levels. Two samples were located at 245 feet NAVD88 within grids A1 and B1, and one sample was located in at 250 feet NAVD88 in grid C1. Sidewall samples collected along the northern sidewall were collected behind the shoring wall, in soil located outside the Property boundary.
- Four samples collected from the east sidewall (Fauntleroy Way Southwest) contained concentrations of GRPH and/or DRPH that exceeded the applicable MTCA Method A cleanup levels. Samples in grid A2 at 245 and 250 feet NAVD88 contained concentrations of GRPH. A sample in grid A1 at 250 feet NAVD88 contained concentrations of GRPH, and a sample in grid A3 at 245 feet NAVD88 contained concentrations of GRPH and DRPH. Sidewall samples collected along the eastern sidewall were collected behind the shoring wall, in soil located outside the Property boundary.
- Confirmation soil samples collected from the sidewalls and immediately below UST05, UST06, and UST07 indicated concentrations of COCs below the applicable cleanup levels.
- Confirmation soil sampling conducted during excavation and removal of any previously unidentified contamination indicated that all soil with concentrations of COCs above applicable remediation levels was removed from the SKS Shell Property.

5.3.2 Groundwater Confirmation Sampling

Confirmational groundwater sampling will commence once performance monitoring indicates that concentrations of COCs in groundwater are below the applicable MTCA Method A cleanup levels beneath the SKS Shell Property and the adjoining ROWs. Once the results from four sequential quarters of groundwater monitoring indicate that concentrations of COCs are less than the MTCA Method A cleanup levels, the groundwater will be considered to meet the remedial action objective in the CAP.

6.0 PLANNED ACTIONS

Post excavation groundwater monitoring events are being completed quarterly to evaluate current groundwater concentrations and trends. The remaining monitoring well network on the SKS Shell Property is depicted on Figure 15. Quarterly groundwater monitoring will be conducted to monitor the effectiveness of the cleanup activities completed to date and the effectiveness of the chemical oxidation injections, if necessary. The existing network of groundwater monitoring wells around the perimeter of the SKS Shell Property, MW104, MW105, MW108, MW109, and MW110, will be sampled quarterly or semi-annually for up to 5 years to evaluate the reduction of dissolved-phase petroleum hydrocarbons in groundwater across the Site. If a chemical oxidation injection event is required, the groundwater conditions will be evaluated for 2 years, or 8 quarters, after the injection to determine whether a second chemical oxidation injection is required to address residual soil and groundwater contamination beneath the ROWs. Groundwater sampling will be considered complete once concentrations of COCs are below the applicable MTCA Method A cleanup levels for four sequential quarters. Following completion of the final groundwater monitoring event, a Closure Report will be prepared.

6.1 CONTINGENCY CHEMICAL OXIDATION INJECTION PLAN

SoundEarth will consider a chemical oxidation injection if concentrations of COCs persist at levels indicating that attenuation will not occur within two years, as set forth in the CAP. The determination of the necessity for the chemical oxidation injection will be evaluated with Ecology. If necessary, the chemical oxidation injections will treat the remaining contaminated soil and groundwater underneath the Fauntleroy Way Southwest and Southwest Alaska Street ROWs.

Sodium persulfate activated by a 10 percent solution of hydrogen peroxide will be injected into each of the eight remediation wells and MW104. Approximately 300 gallons or two batches will be injected into each well. A second contingency injection is proposed if COCs in compliance monitoring wells remain above the MTCA Method A cleanup levels.

7.0 CONCLUSIONS

Cleanup was activities were performed under the PPCD in accordance with the Ecology-approved CAP. All cleanup activities have been performed in compliance with MTCA under the direct supervision of Ecology. The following remedial action objectives have been accomplished:

All soil on the SKS Shell Property containing concentrations of COCs above the MTCA Method A cleanup level was excavated and removed. Residual GRPH and BTEX contamination detected along the sidewalls is located outside the SKS Shell Property boundary to the east and north. All cleanup activities regarding soil contamination on and beneath the SKS Shell Property have been

performed in full compliance with the CAP and PPCD. No further cleanup activities associated with soil contamination on or beneath the SKS Shell Property are necessary or required.

- Approximately 5 groundwater pore volumes in the treatment area, approximately of 135,780 gallons of groundwater, were pumped from the dewatering system during the excavation activities. Based on performance sampling data, approximately 4 pounds of GRPH and 0.18 pounds of benzene were removed with the dewatering system.
- A chemical vapor and water barrier was installed along the Fauntleroy Way Southwest and Southwest Alaska Street ROWs to prevent vapor intrusion on the Property and recontamination of on-Property soil and groundwater from the impacts that remain beneath the ROWs beyond the Property boundary.

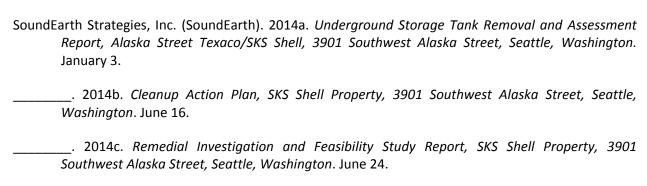
Based on data generated during previous investigations and prior to the source removal and dewatering activities at the Property, impacts to soil and groundwater remain beneath the Fauntleroy Way Southwest and Southwest Alaska Street ROWs, beyond the SKS Shell Property boundary. As set forth in the CAP (SoundEarth 2014b), if post excavation groundwater concentrations exceed the MTCA Method A cleanup levels), a chemical oxidation injection will be conducted to address the residual soil and groundwater contamination beneath the adjacent ROWs. Performance groundwater monitoring will be conducted after the injection event.

8.0 LIMITATIONS

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

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

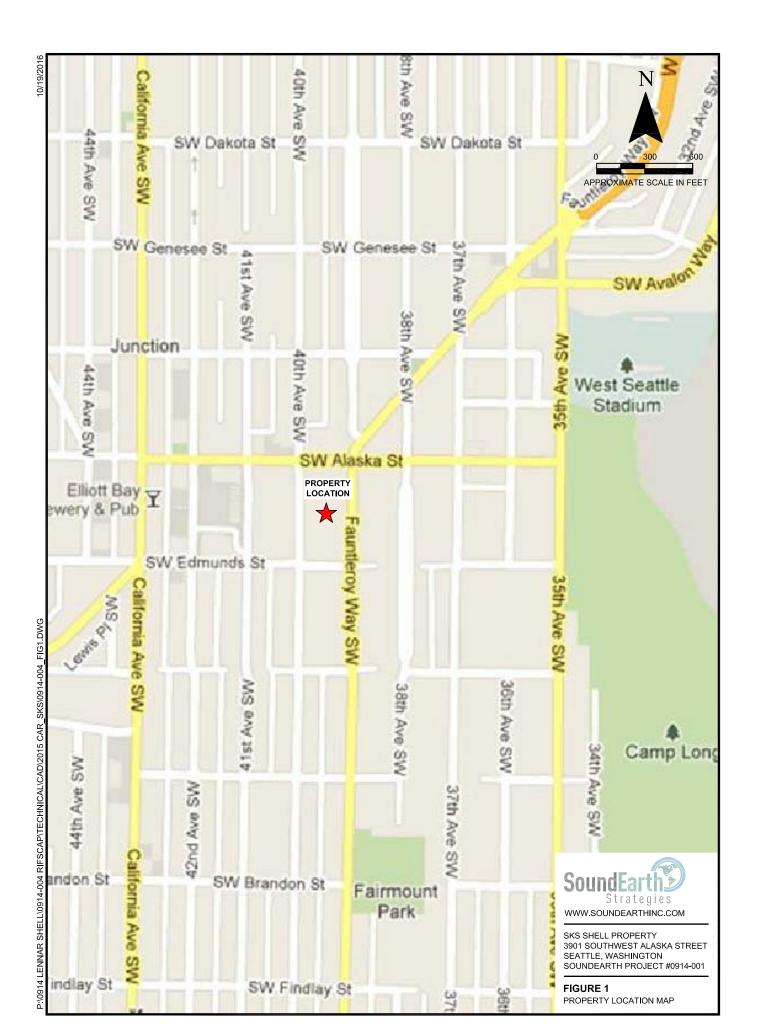
9.0 REFERENCES

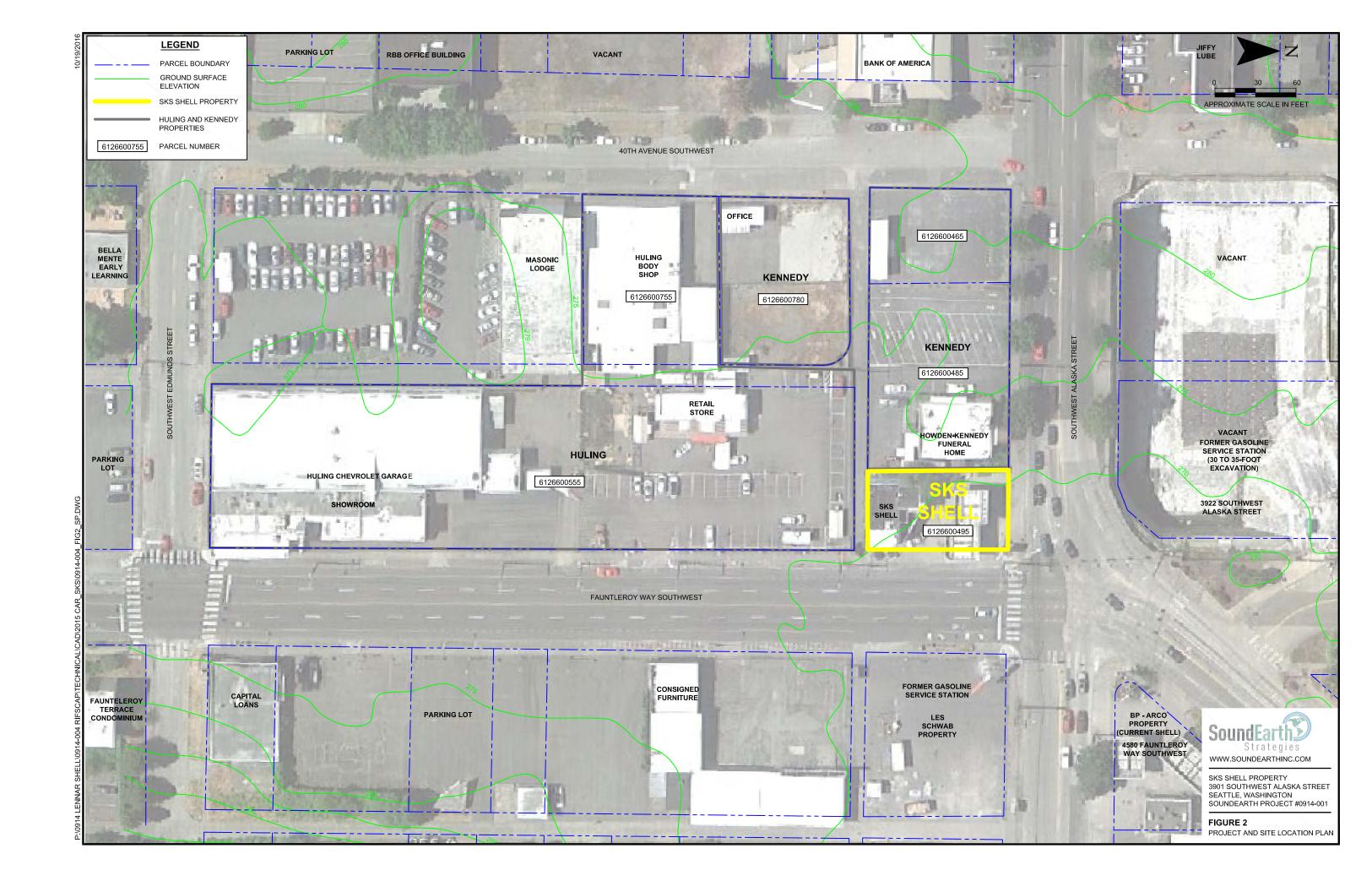


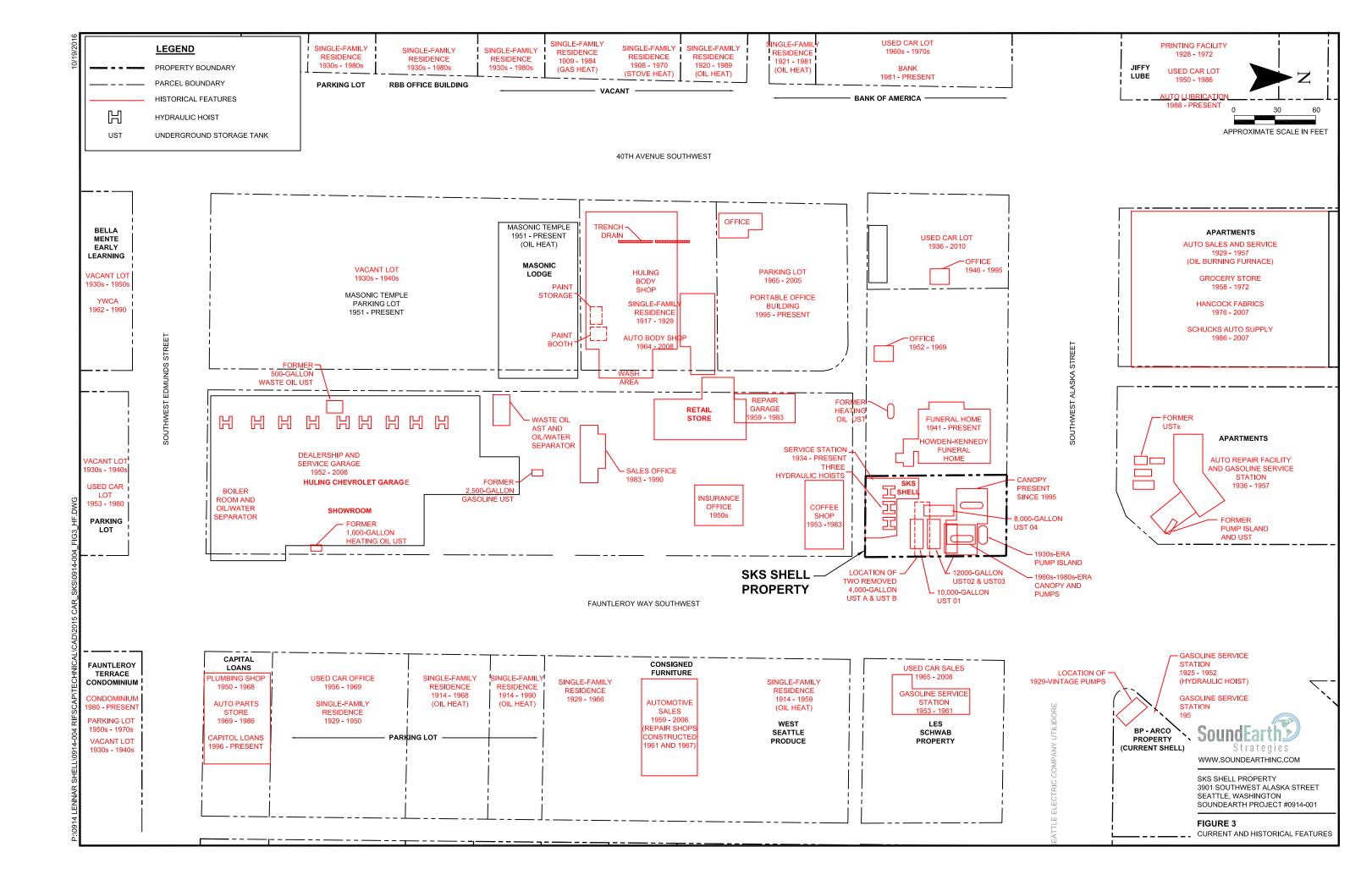
2014d. Phase I Environmental Site Assessment, The Whittaker Property, 4755 Fauntleroy Way Southwest, Seattle, Washington. August 28.
2015. Construction Management Plan, The Whittaker Property, Fauntleroy Way SW and SW Alaska Street, Seattle, Washington. January 2.

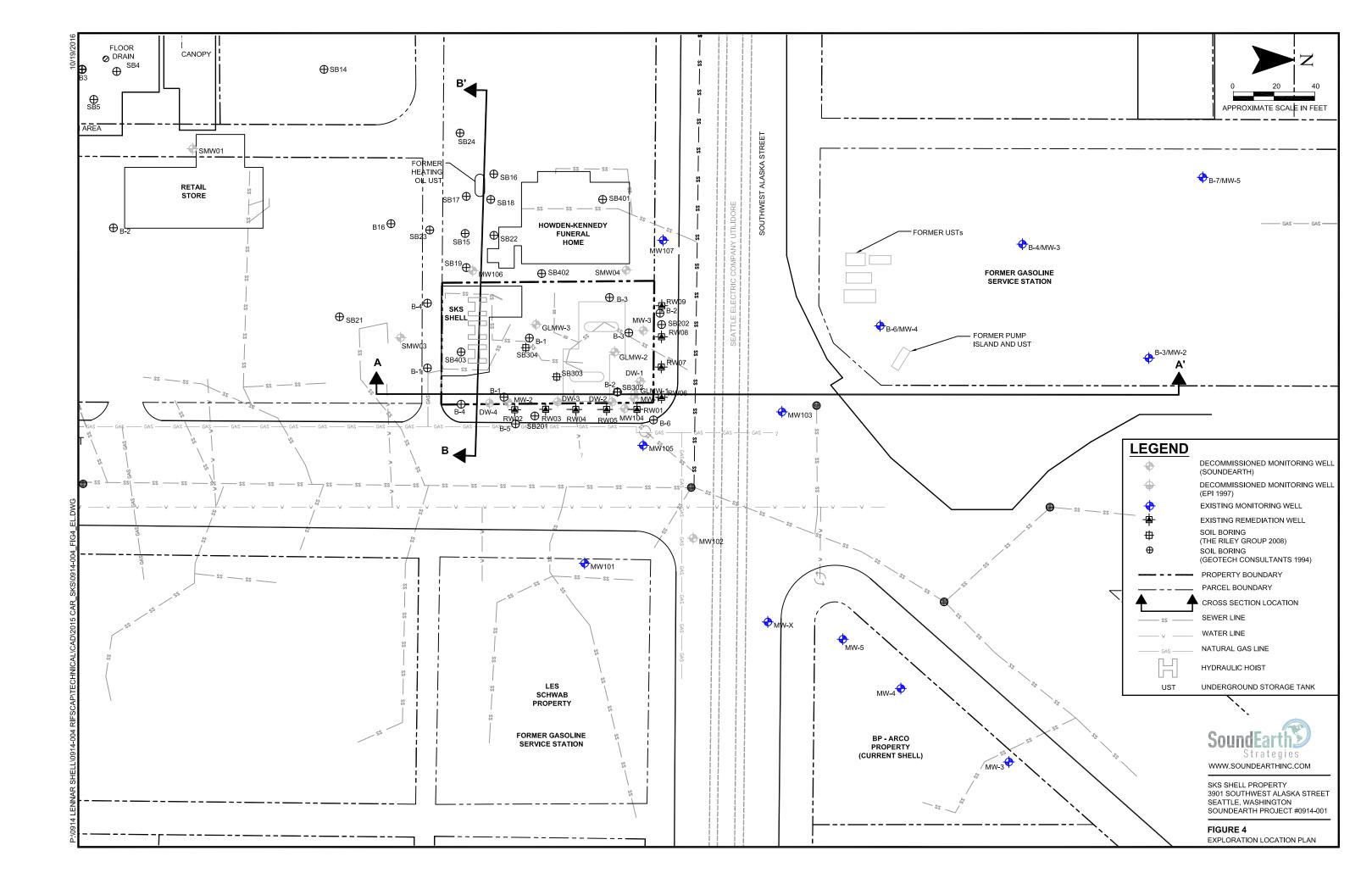
Washington State Department of Ecology (Ecology). 2003. *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*. Publication No. 90-52. Revised May.

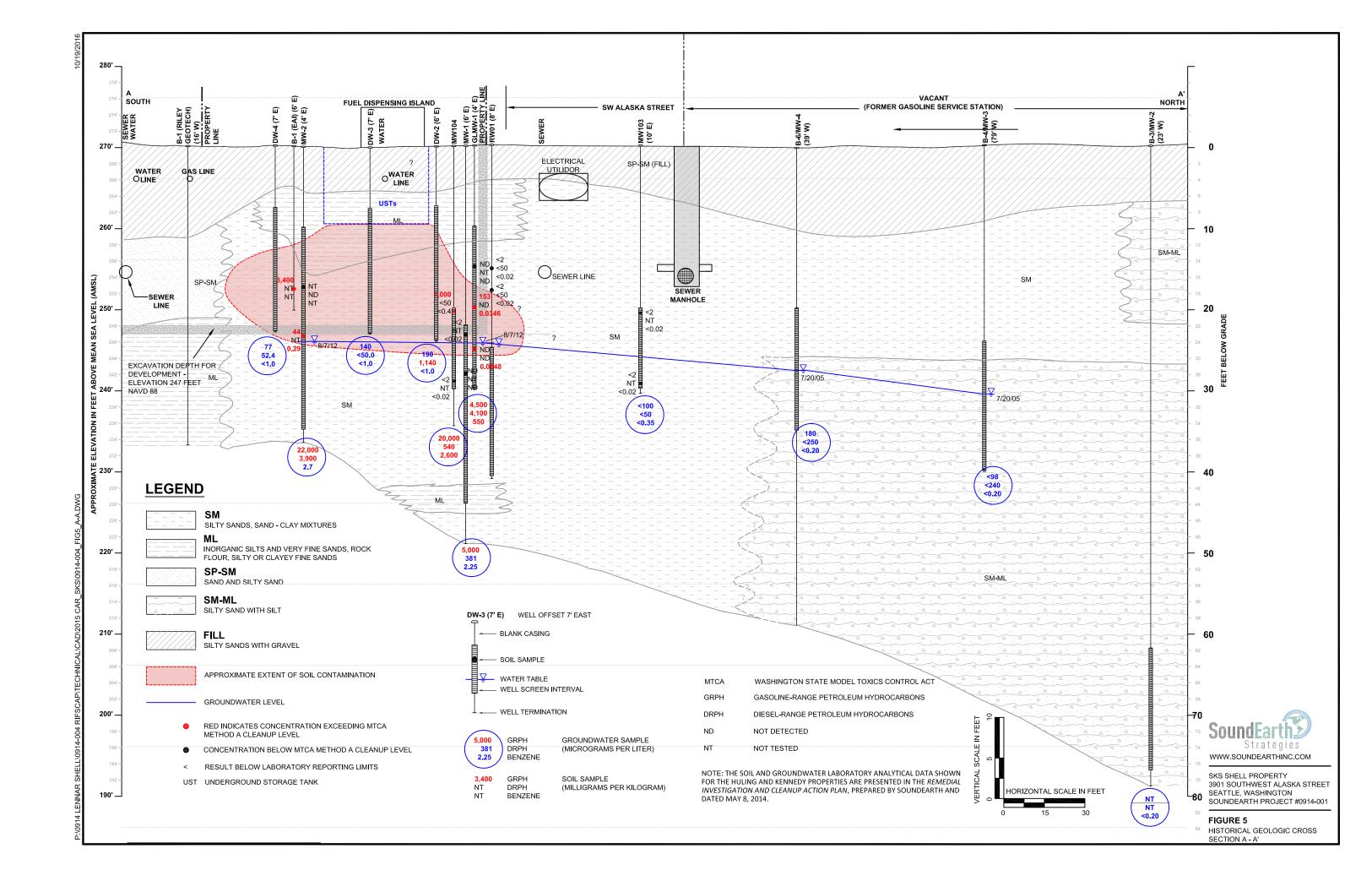
FIGURES SoundEarth Strategies, Inc.



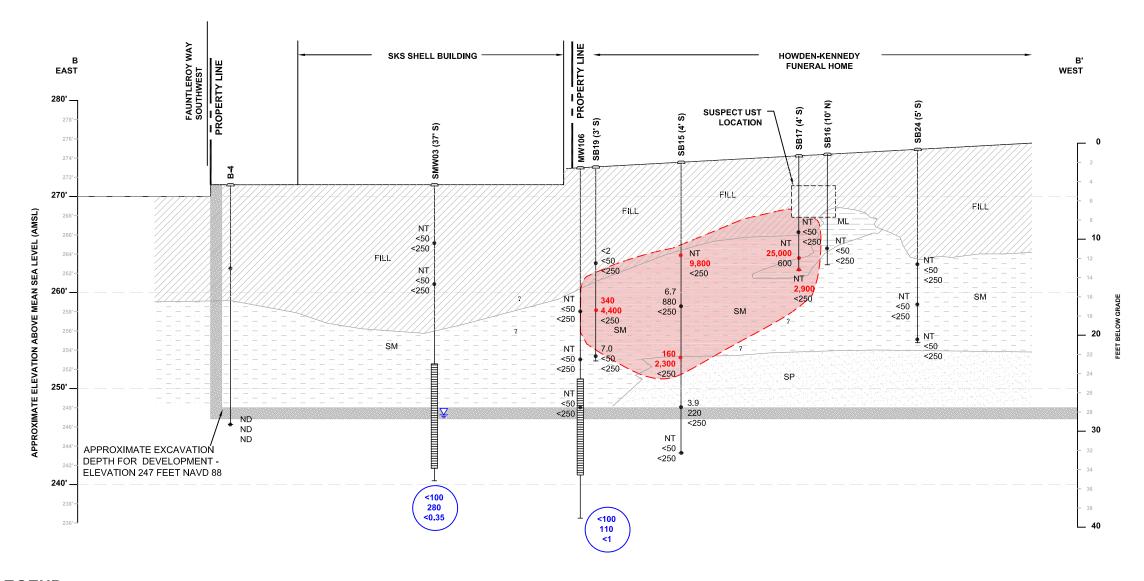




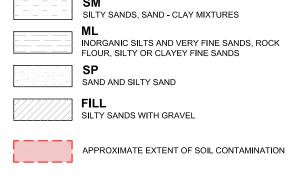


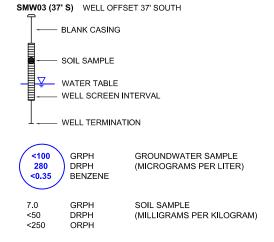


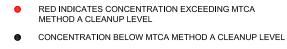


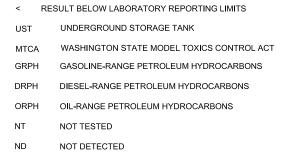


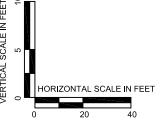
LEGEND









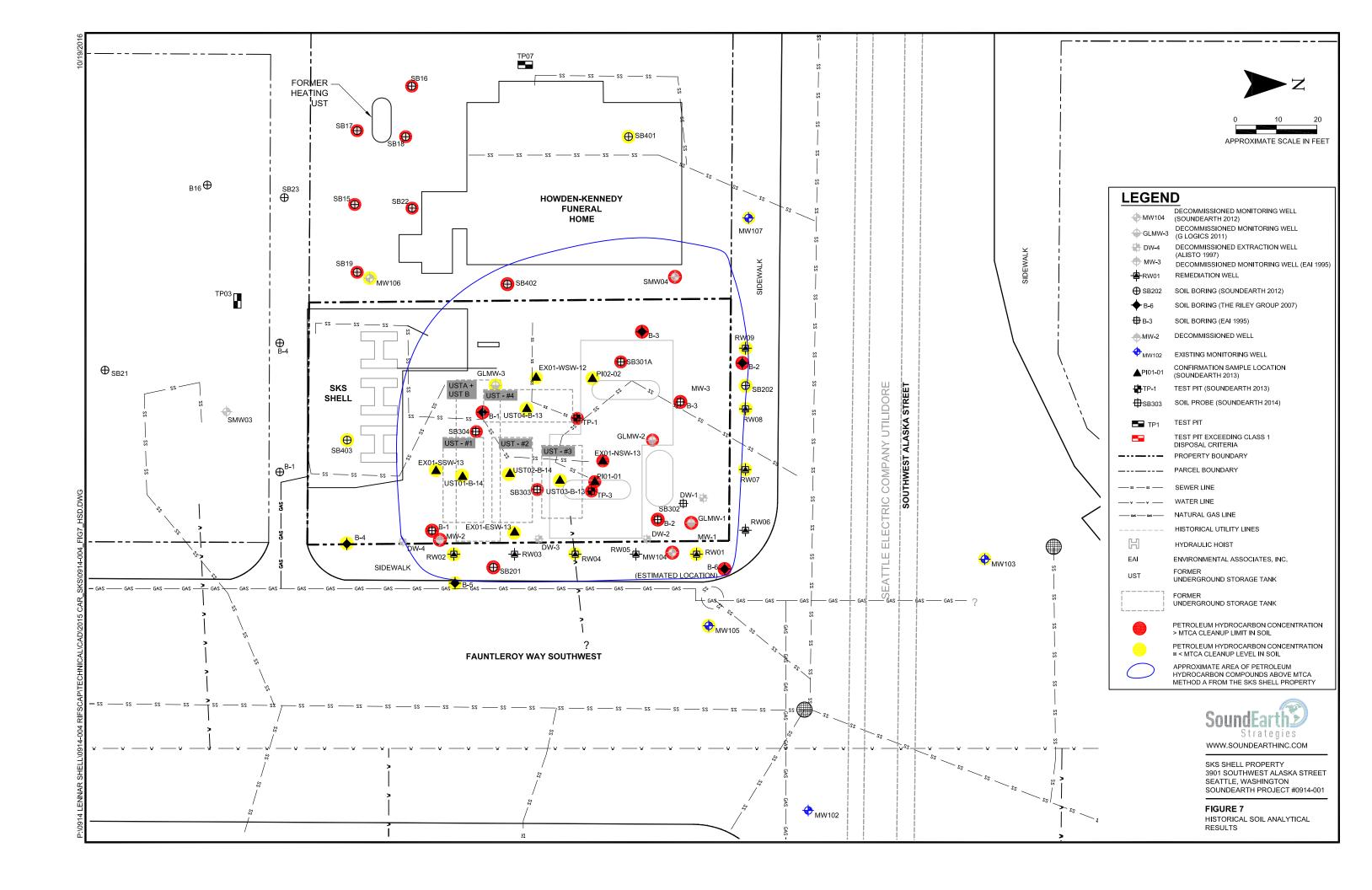


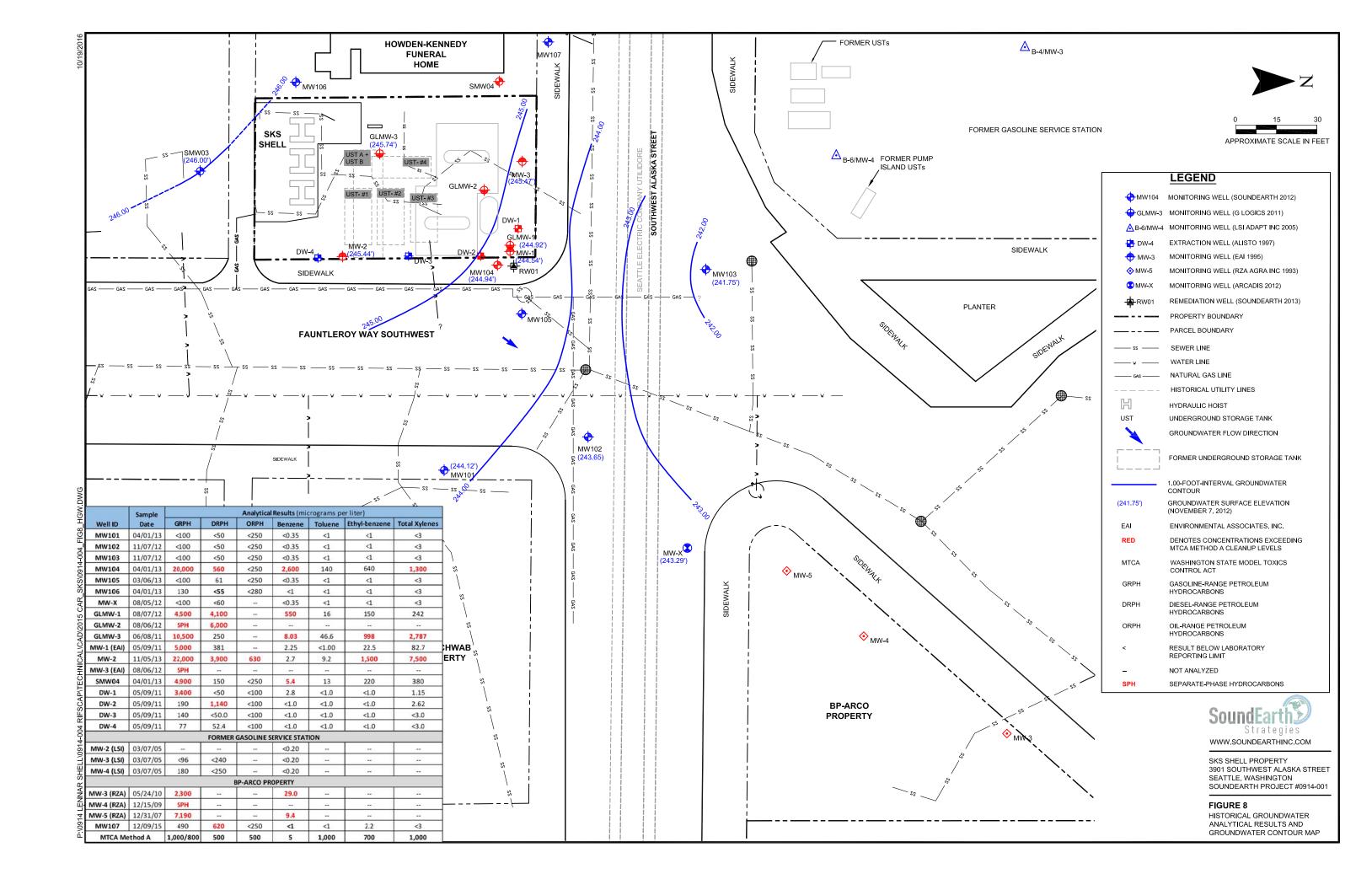


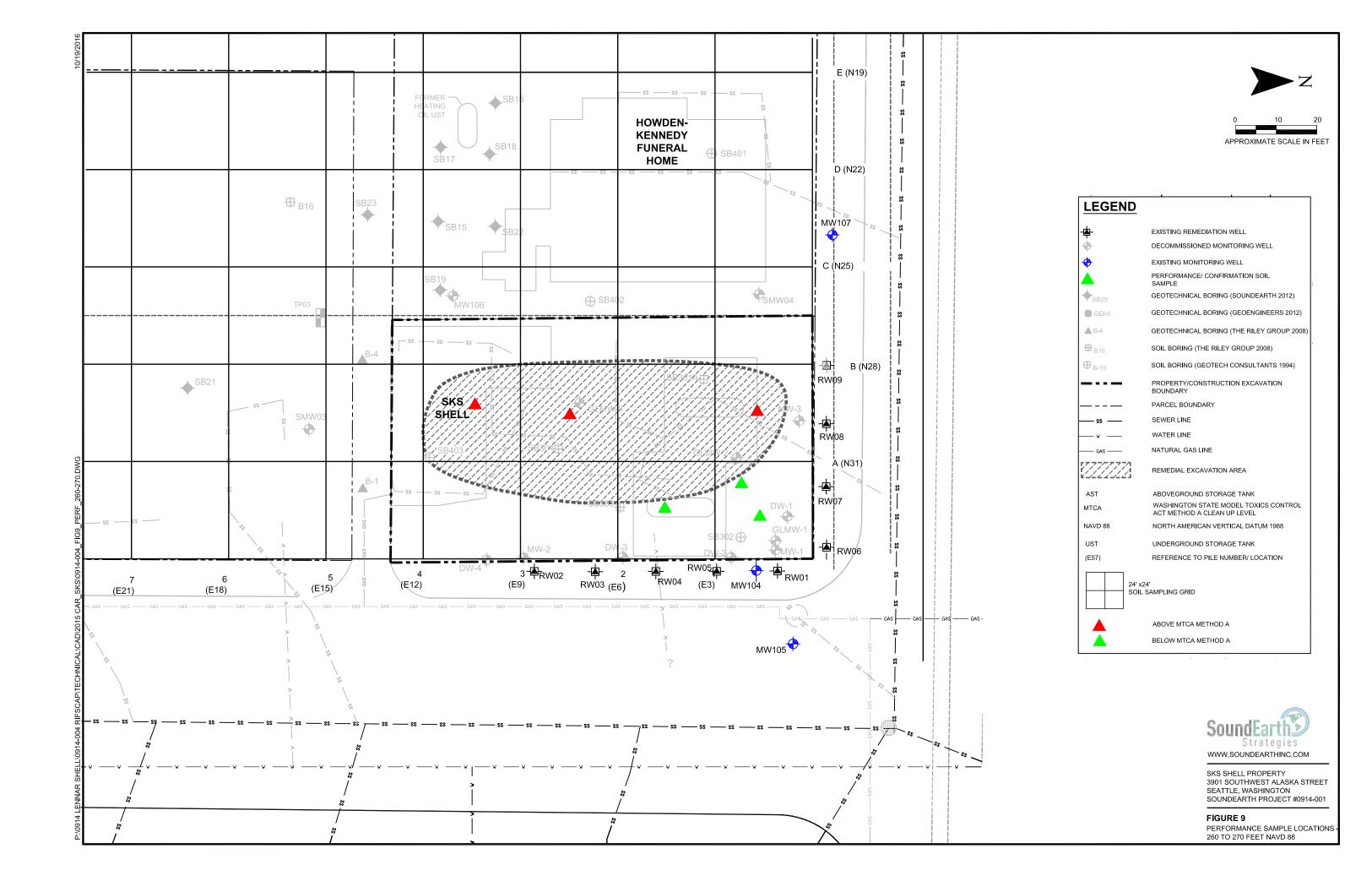
SKS SHELL PROPERTY 3901 SOUTHWEST ALASKA STREET SEATTLE, WASHINGTON SOUNDEARTH PROJECT #0914-001

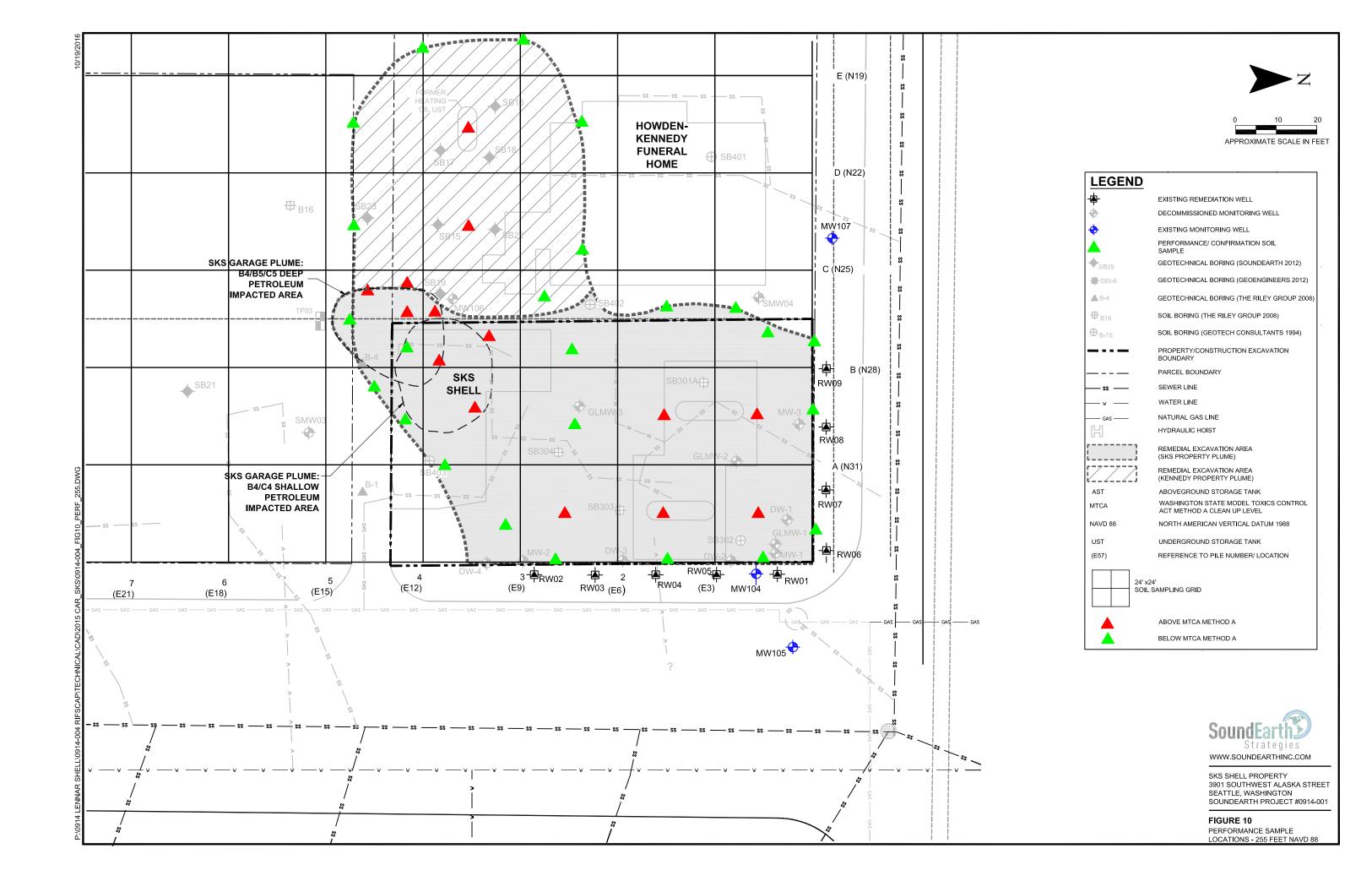
FIGURE 6

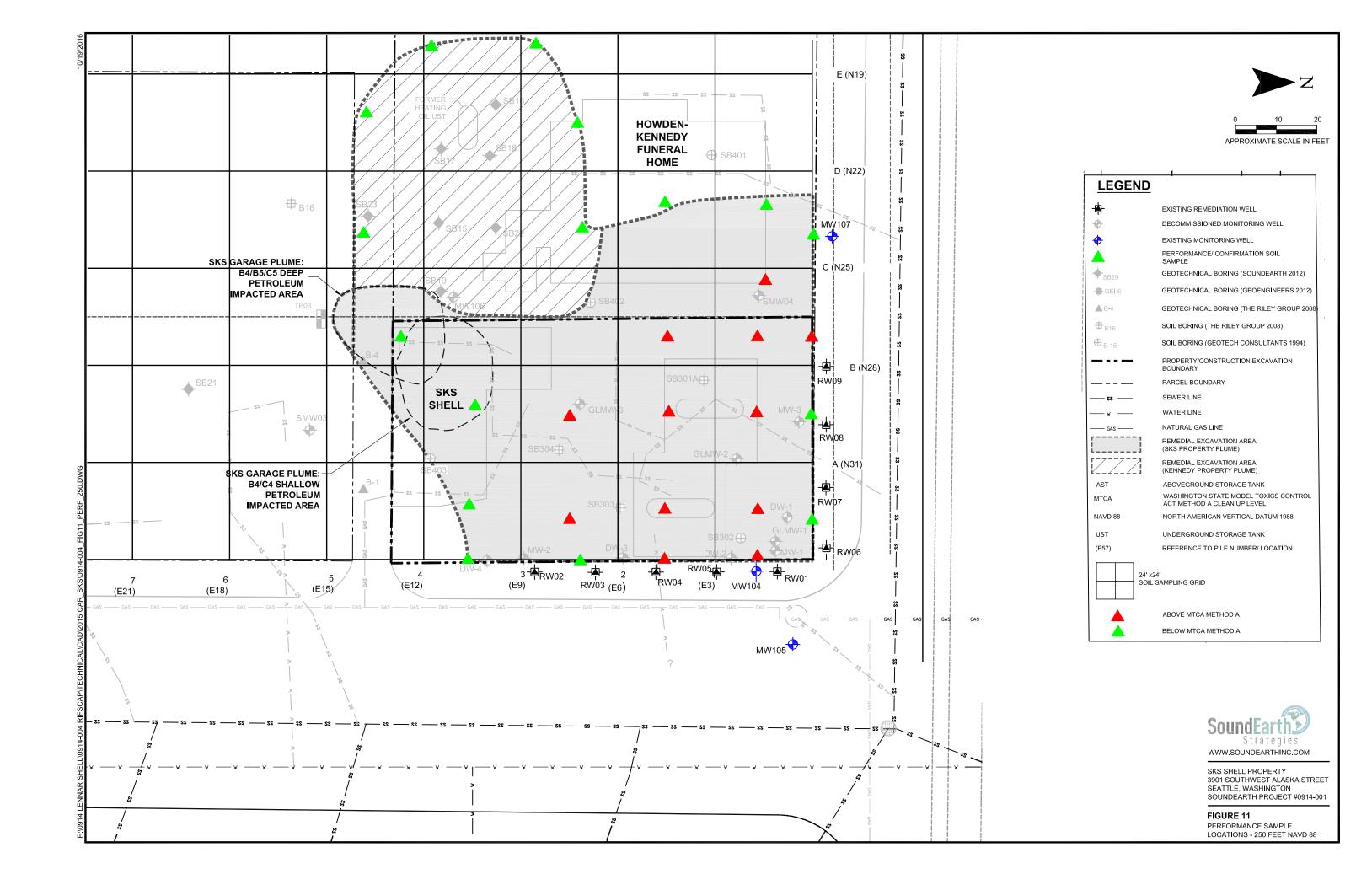
HISTORICAL GEOLOGIC CROSS SECTION B-B'

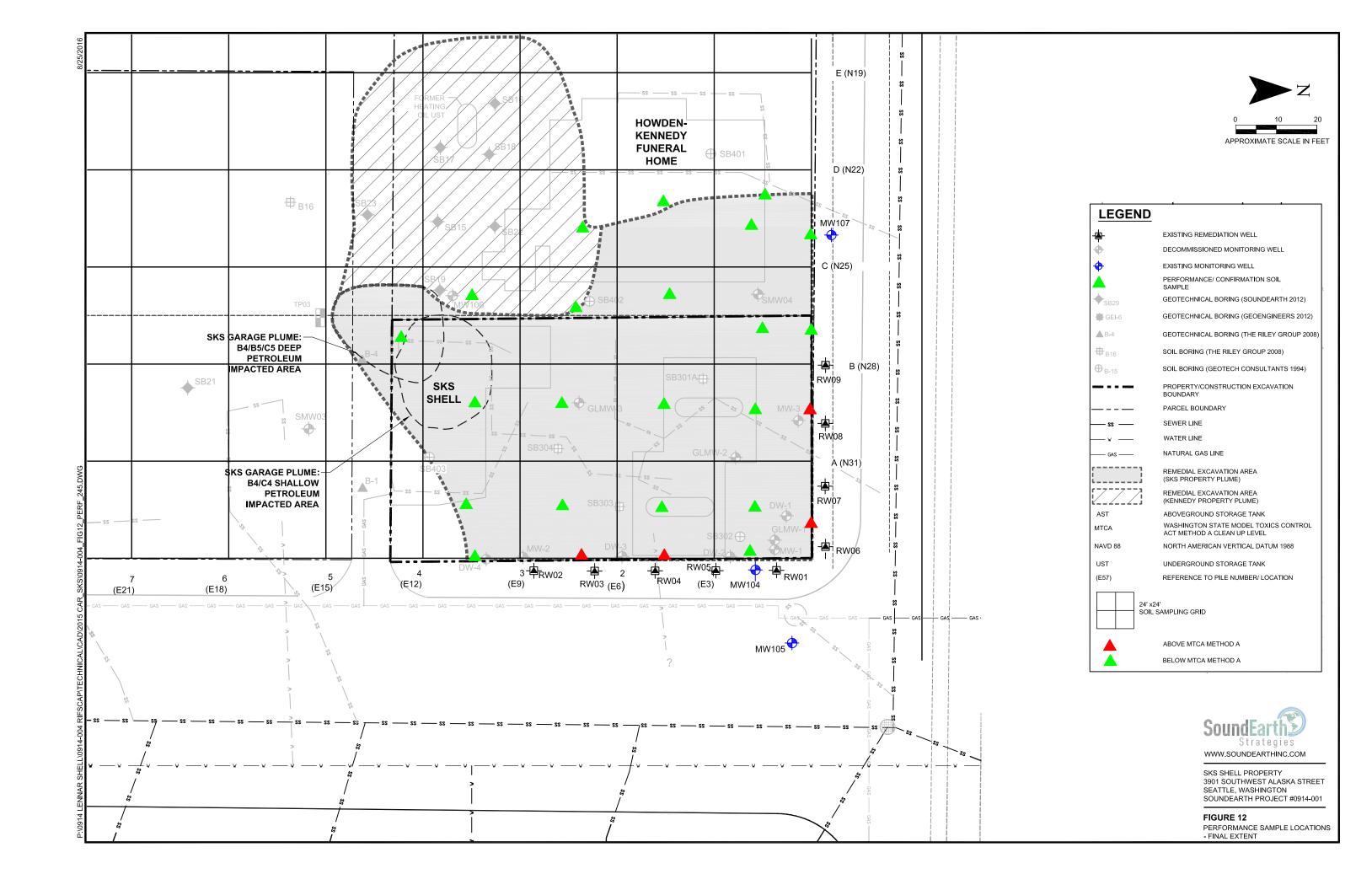


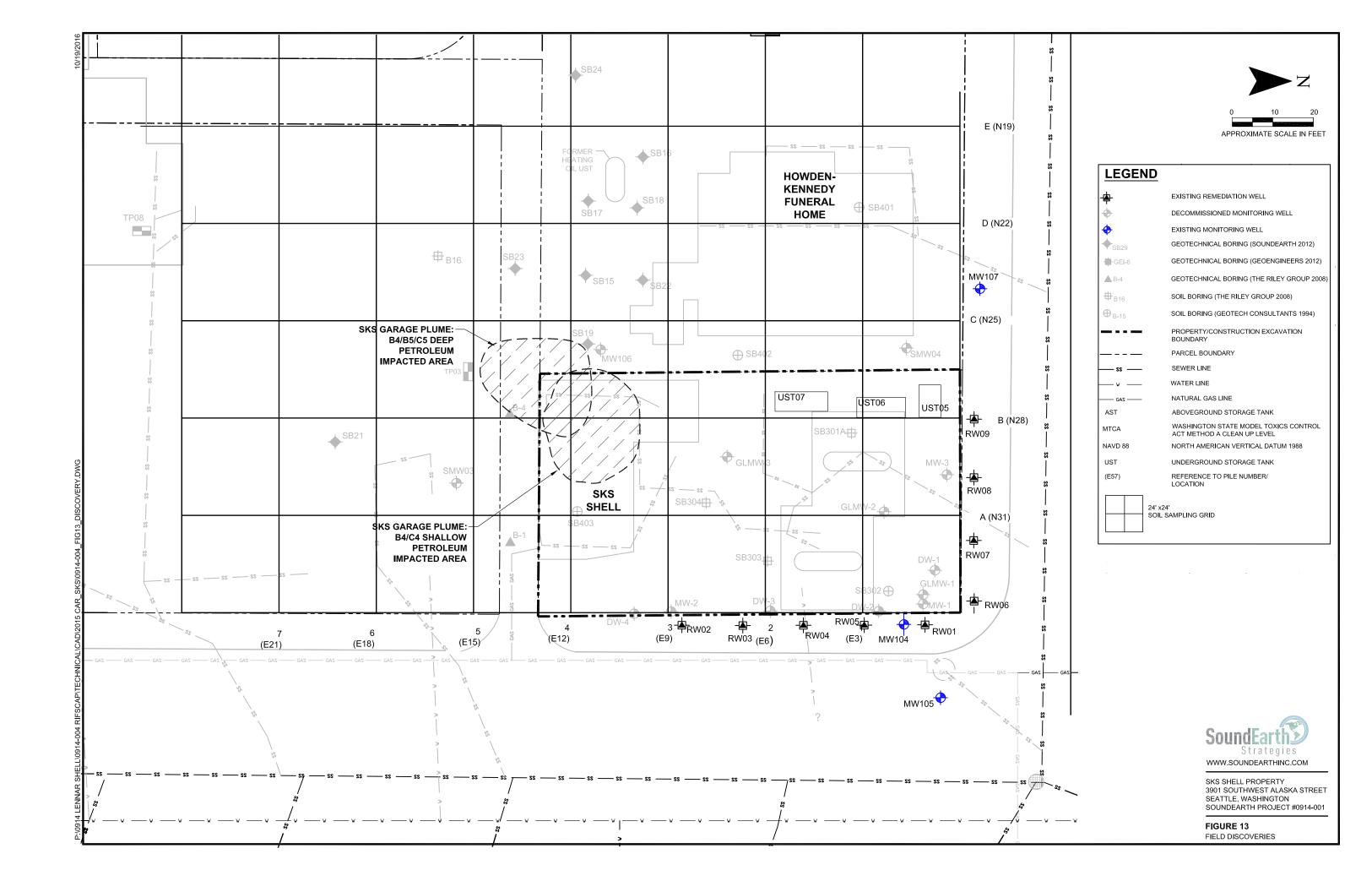


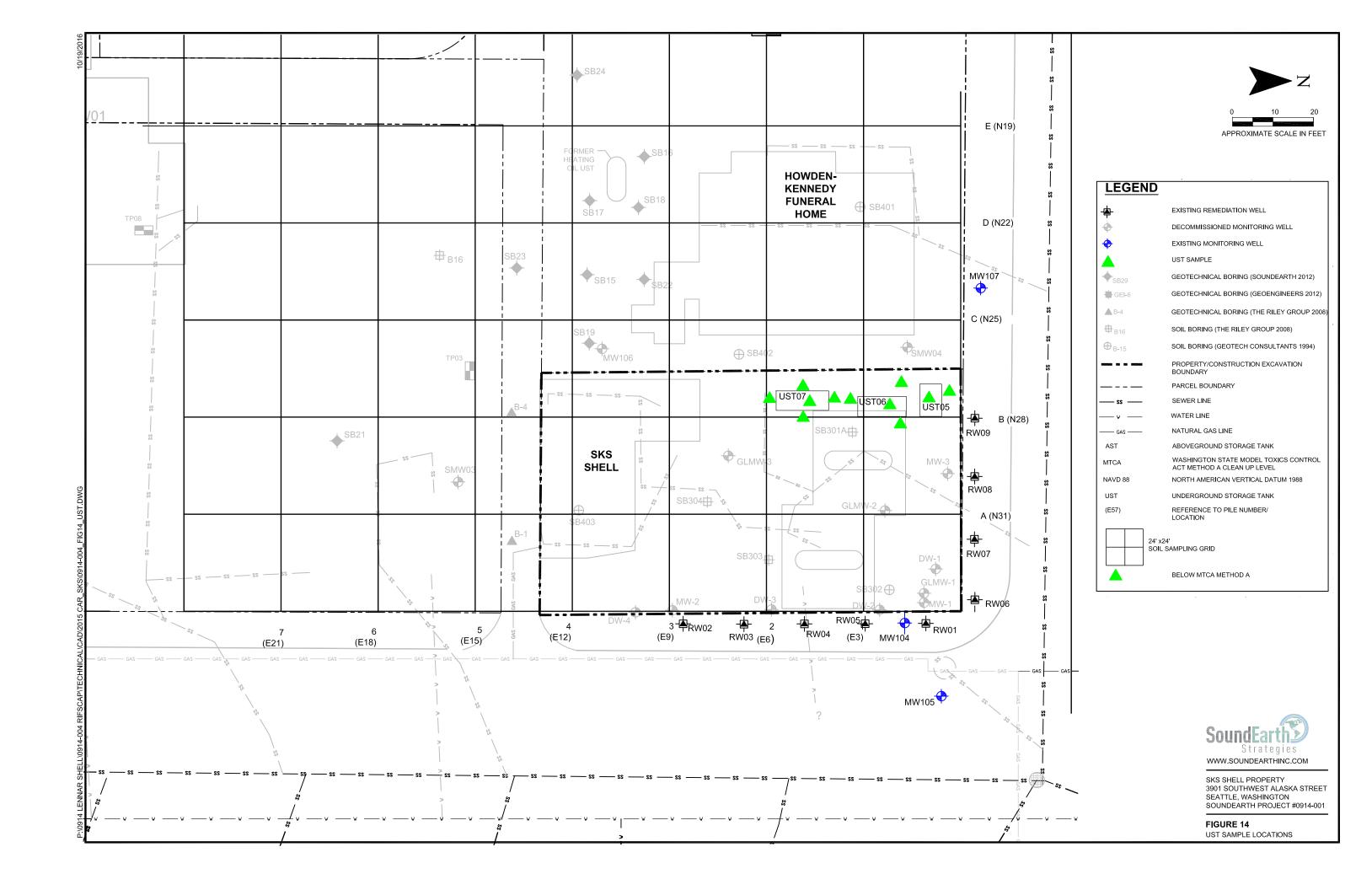


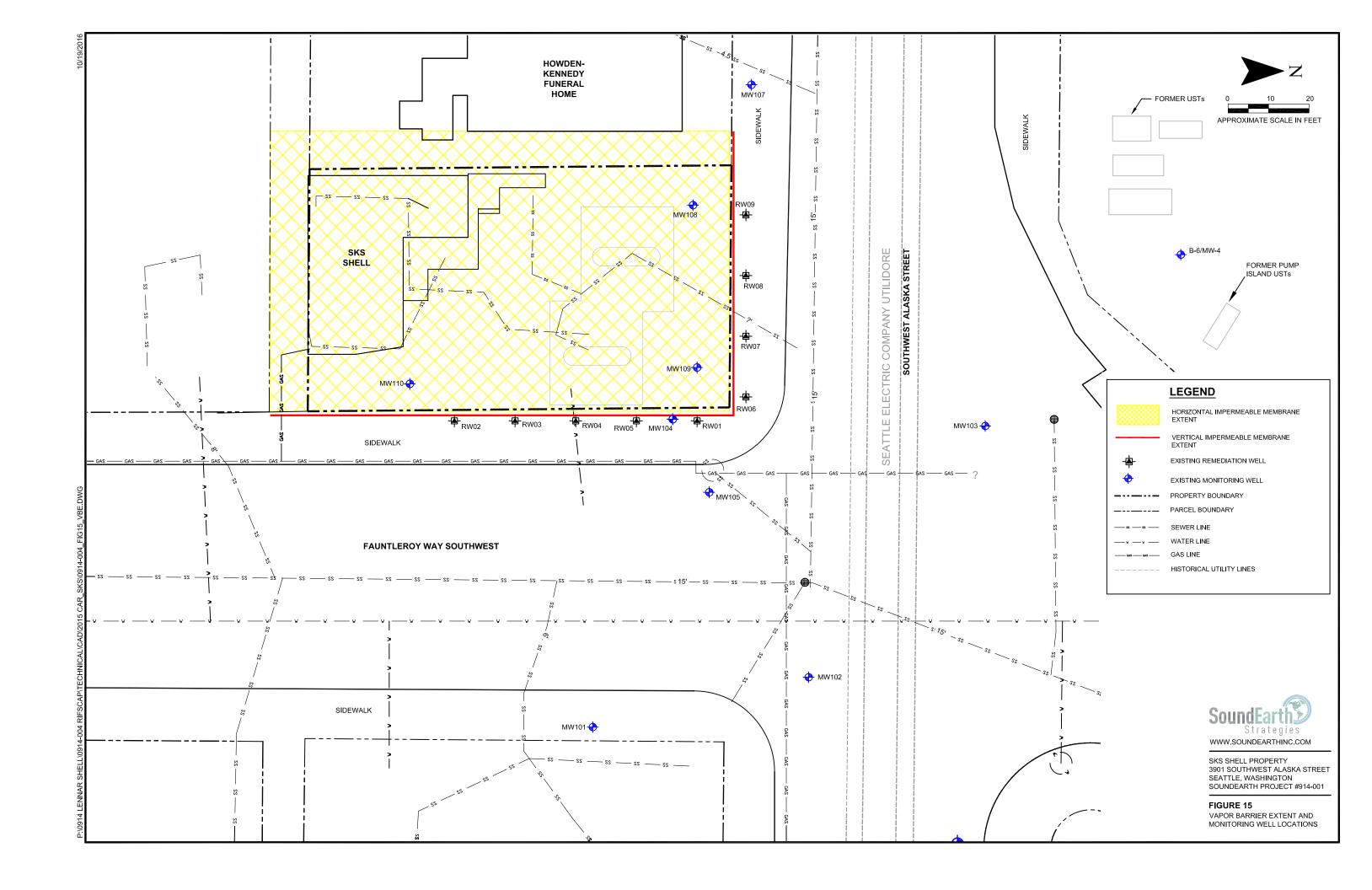












TABLES SoundEarth Strategies, Inc.



								Analytical	Results (mg/l	kg)			
		Date		Sample					Total				
Sample Location	Sample Identification	Sampled	Sampled By	Depth	GRPH ⁽¹⁾	Benzene ⁽²⁾	Toluene ⁽²⁾	Ethylbenzene ⁽²⁾	Xylenes ⁽²⁾	DRPH ⁽³⁾	ORPH ⁽³⁾	MTBE ⁽²⁾	Lead ⁽⁴⁾
B-1	B-1 @ 17.5	05/25/95	EAI	17.5	3,400								
B-2	B-2 @ 22.5	05/25/95	EAI	22.5	5,600								
B-3	B-3 @ 17.5	05/26/95	EAI	17.5	9,000								
MW-1	MW-1 @ 22.5-24.0	07/06/95	EAI	22.5-24.0						ND			
IVIVV-I	MW-1 @ 27.5-29.0	07/06/95	EAI	27.5-29.0	ND	ND	ND	ND	ND				
MW-2	MW-2 @ 17.5-19.0	07/07/95	EAI	17.5-19.0						ND			
IVIVV-Z	MW-2 @ 22.5-24.0	07/07/95	EAI	22.5-24.0	44	0.29	2.9	0.46	2.64				
MW-3	MW-3 @12.5-14.0	07/07/95	EAI	12.5-14.0						ND			
IVIVV-3	MW-3 @ 22.5-24.0	07/07/95	EAI	22.5-24.0	ND	ND	ND	ND	ND				
	B-1-12	02/05/07	RGI	12	790 ^d	ND	1.1 ^d	2.7 ^d	8.3 ^d	220 ^x	ND		
	B-1-19	02/05/07	RGI	19	1,200 ^d	0.47 ^d	2.9 ^d	5.2 ^d	18 ^d	1,900 ^x	ND		
B-1	B-1-26	02/05/07	RGI	26	ND	ND	ND	ND	ND	ND	ND		
	B-1-30	02/05/07	RGI	30	ND	ND	ND	ND	ND	ND	ND		
B-2	B-2-16	02/05/07	RGI	16	77	ND	0.03	0.14	0.67	ND	ND		
	B-3-18	02/05/07	RGI	18	130	ND	0.07	0.18	0.83	ND	ND		
B-3	B-3-25	02/05/07	RGI	25	ND	ND	0.04	0.17	0.80	ND	ND		
B-4	B-4-24	02/05/07	RGI	24	ND	ND	ND	ND	ND	ND	ND		
D.F.	B-5-20	02/05/07	RGI	20	27	ND	ND	ND	ND	ND	ND		
B-5	B-5-23	02/05/07	RGI	23	25	ND	ND	ND	0.08	ND	ND		
2.5	B-6-21	02/05/07	RGI	21	ND	ND	ND	ND	ND	ND	ND		
B-6	B-6-24	02/05/07	RGI	24	350 ^d	0.49 ^d	1.7 ^d	5.8 ^d	ND	2,600 ^x	ND		
	GLMW-1-15	06/07/11	G-Logics	15	ND	ND	ND	ND	ND				
GLMW-1	GLMW-1-20	06/07/11	G-Logics	20	153	0.0346	ND	0.116	0.375	ND	ND	ND	2.10
	GLMW-1-25	06/07/11	G-Logics	25	ND	0.0648	ND	0.0715	0.122	ND	ND		
	GLMW-2-15	06/07/11	G-Logics	15	>3,200 ^d	3.42	0.409	6.50 ^d	18.39 ^d	ND	ND	ND	2.90
GLMW-2	GLMW-2-20	06/07/11	G-Logics	20	>4,400 ^d	6.73 ^d	7.88 ^d	14.5 ^d	85.2 ^d				
	GLMW-2-25	06/07/11	G-Logics	25	ND	0.677	0.121	0.274	0.515				
G13.014.2	GLMW-3-20	06/07/11	G-Logics	20	ND	ND	ND	ND	ND				
GLMW-3	GLMW-3-25	06/07/11	G-Logics	25	15	ND	ND	0.537	1.856	ND	ND		
	MW101-22.5	08/05/12	SoundEarth	22.5	<2	<0.02	<0.02	<0.02	<0.06				
	MW101-25	08/05/12	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06				
	MW101-27.5	08/05/12	SoundEarth	27.5	<2	<0.02	<0.02	<0.02	<0.06				
	MW101-30	08/05/12	SoundEarth	30	<2	<0.02	<0.02	<0.02	<0.06				
MW101	MW101-35	08/05/12	SoundEarth	35			<0.02	<0.02					
	MW101-40	08/05/12	SoundEarth	40	<2	<0.02	<0.02	<0.02	<0.06				
	MW101-45	08/05/12	SoundEarth	45			<0.02	<0.02					
	MW101-50	08/05/12	SoundEarth	50			<0.02	<0.02					
	MW101-55	08/05/12	SoundEarth	55	<2	<0.02	<0.02	<0.02	<0.06				
ATCA Method A Clear	nup Level for Soil ⁽⁵⁾				100/30 ⁽⁶⁾	0.03	7	6	9	2,000	2,000	0.1	250

1 of 4 1 1 of 4 RIPSCAP\Technical\Table\10014 004 RIPSCAP\Technical\Table\12015 CAR\SKS\00016\00010 SKS Tables 1-5_F



								Analytical	Results (mg/l	kg)			
Sample Location	Sample Identification	Date Sampled	Sampled By	Sample Depth	GRPH ⁽¹⁾	Benzene ⁽²⁾	Toluene ⁽²⁾	Ethylbenzene ⁽²⁾	Total Xylenes ⁽²⁾	DRPH ⁽³⁾	ORPH ⁽³⁾	MTBE ⁽²⁾	Lead ⁽⁴
	MW102-20	11/02/12	SoundEarth	20	<2	<0.02	<0.02	<0.02	<0.06				
MW102	MW102-25	11/02/12	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06				
	MW102-31	11/02/12	SoundEarth	31	<2	<0.02	<0.02	<0.02	<0.06				
	MW103-20	11/02/12	SoundEarth	20	<2	<0.02	<0.02	<0.02	<0.06				1
MW103	MW103-25	11/02/12	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06				
	MW103-31	11/02/12	SoundEarth	31	<2	<0.02	<0.02	<0.02	<0.06				
	MW104-20	11/05/12	SoundEarth	20	1,000	<0.4	<0.4	13	12	<50	<250		1
	MW104-23	11/05/12	SoundEarth	23	440	0.47	0.69	4.5	7.7				1
MW104	MW104-25	11/05/12	SoundEarth	25	<2	0.067	<0.02	0.027	<0.06	<50	<250		
10100104	MW104-28	11/05/12	SoundEarth	28	<2	<0.02	<0.02	<0.02	<0.06				
	MW104-30	11/05/12	SoundEarth	30	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	MW104-33	11/05/12	SoundEarth	33	<2	<0.02	<0.02	<0.02	<0.06				
	MW105-20	12/12/12	SoundEarth	20	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
MW105	MW105-25	12/12/12	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	MW105-30	12/12/12	SoundEarth	30	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	SB201-20	11/05/12	SoundEarth	20	<2	<0.02	<0.02	0.027	0.20				
	SB201-23	11/05/12	SoundEarth	23	710	0.63	0.88	8.8	63				
SB201	SB201-25	11/05/12	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06				-
	SB201-30	11/05/12	SoundEarth	30	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	SB201-33	11/05/12	SoundEarth	33	<2	<0.02	<0.02	<0.02	<0.06			-	-
	SB202-20	11/05/12	SoundEarth	20	<2	<0.02	<0.02	<0.02	<0.06				-
	SB202-25	11/05/12	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06				
SB202	SB202-28	11/05/12	SoundEarth	28	<2	<0.02	<0.02	<0.02	<0.06			-	-
	SB202-30	11/05/12	SoundEarth	30	<2	<0.02	<0.02	<0.02	<0.06	<50	<250	-	-
	SB202-35	11/05/12	SoundEarth	35	<2	<0.02	<0.02	<0.02	<0.06				
	SMW04-15	08/29/12	SoundEarth	15	<2	<0.02	<0.02	<0.02	<0.06				
	SMW04-20	08/29/12	SoundEarth	20	7.3	<0.02	<0.02	<0.02	<0.06	<50	<250		
SMW04	SMW04-25	08/29/12	SoundEarth	25	1,500	<2	4.9	23	62	2,900 ^x	<250		
	SMW04-30	08/29/12	SoundEarth	30	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	SMW04-35	08/29/12	SoundEarth	35	<2	<0.02	<0.02	<0.02	<0.06				
	MW106-15	12/12/12	SoundEarth	15						<50	<250		
MW106	MW106-20	12/12/12	SoundEarth	20					-	<50	<250		
	MW106-25	12/12/12	SoundEarth	25					-	<50	<250		
	PW01-15	02/20/13	SoundEarth	15	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
RW01	PW01-17.5	02/20/13	SoundEarth	17.5	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	RW02-25	07/09/14	SoundEarth	25	7.3	<0.02	<0.02	0.19	1.4	<50	<250		
RW02	RW02-35	07/09/14	SoundEarth	35	<2	<0.02	<0.02	0.038	0.23	<50	<250		
	RW04-25	07/10/14	SoundEarth	25	16	0.069	<0.02	0.16	0.44	<50	<250		
RW04	RW04-35	07/11/14	SoundEarth	35	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	RW07-25	07/15/14	SoundEarth	25	<2	0.037	<0.02	<0.02	<0.06	<50	<250		
RW07	RW07-35	07/15/14	SoundEarth	35	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	RW09-25	07/11/14	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
RW09	RW09-35	07/11/14	SoundEarth	35	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	nup Level for Soil ⁽⁵⁾	,,	3044241111	55	100/30 ⁽⁶⁾	0.03	7	6	9	2,000	2,000	0.1	250

P\0914 Lennar Shell\0914-004 RIFSCAP\Technical\Tables\2015 CAR\SKS\0914_001_SKS Tables 1-5_F



								Analytical	Results (mg/l	kg)			
		Date		Sample					Total				
Sample Location	Sample Identification	Sampled	Sampled By	Depth	GRPH ⁽¹⁾	Benzene ⁽²⁾	Toluene ⁽²⁾	Ethylbenzene ⁽²⁾	Xylenes ⁽²⁾	DRPH ⁽³⁾	ORPH ⁽³⁾	MTBE ⁽²⁾	Lead ⁽⁴⁾
		•			•	onfirmation Sa	mples			ı	1		
Pump Island 1	PI01-01	12/04/13	SoundEarth	1	35	<0.02	0.37	0.17	2.2	480	<250		
UST 3	UST03-B-13	12/04/13	SoundEarth	13	<2	<0.02	0.025	<0.02	0.095	<50	<250		
Excavation Sidewall													
(North)	EX01-NSW-13	12/04/13	SoundEarth	13	42	0.024	0.12	<0.02	0.15	<50	<250		
UST 2	UST02-B-14	12/04/13	SoundEarth	14	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
Excavation Sidewall													
(East)	EX01-ESW-13	12/04/13	SoundEarth	13	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
UST 1	UST01-B-14	12/04/13	SoundEarth	14	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
Excavation Sidewall	EX01-SSW-13	12/04/12	SoundEarth	42	-2	<0.02	<0.02	<0.02	<0.06	.50	-250		1
(South)		12/04/13		13	<2					<50	<250		
Pump Island 2 Excavation Sidewall	PI02-02	12/05/13	SoundEarth	2	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
(West)	EX01-WSW-12	12/05/13	SoundEarth	12	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
UST 4	UST04-B-13	12/05/13	SoundEarth	13	4.0	<0.02	<0.02	<0.02	<0.06	<50	<250		
Stockpile 01	SP01-01	12/05/13	SoundEarth		83	0.048	1.3	0.67	4.4	<50	<250		
Stockpile 01	SP01-02	12/05/13	SoundEarth		92	0.099	2.5	1.1	6.4	<50	<250		
Stockpile 01	SP01-02 SP01-03 ^{pc}	12/05/13			20	<0.02	0.14	0.10	1.0				
Stockpile 01	SP01-03 ⁻	12/05/13	SoundEarth				0.14	0.10	1.0	<50	<250		
				ī		sics Samples				ı	ı	1	
PI01-01	PI01-01	12/06/13	SoundEarth	1	35	<0.02	0.37	0.17	2.2	480	<250		
UST03-B-13	UST03-B-13	12/06/13	SoundEarth	13	<2	<0.02	0.025	<0.02	0.095	<50	<250		
EX01-NSW-13	EX01-NSW-13	12/06/13	SoundEarth	13	42	0.024	0.12	<0.02	0.15	<50	<250		
UST02-B-14	UST02-B-14	12/06/13	SoundEarth	14	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
EX01-ESW-13	EX01-ESW-13	12/06/13	SoundEarth	13	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
UST01-B-14	UST01-B-14	12/06/13	SoundEarth	14	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
EX01-SSW-13	EX01-SSW-13	12/06/13	SoundEarth	13	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
PI01-02	PI01-02	12/06/13	SoundEarth	2	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
EX01-WSW-12	EX01-WSW-12	12/06/13	SoundEarth	12	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
UST04-B-13	UST04-B-13	12/06/13	SoundEarth	13	4.0	<0.02	<0.02	<0.02	<0.06	<50	<250		
SB301A	SB301A-20	09/04/14	SoundEarth	20	3,000	<2	<2	32	45				2.10
cnana	SB302-20	09/04/14	SoundEarth	20	3,100	<2	<2	12	20				
SB302	SB302-23	09/04/14	SoundEarth	23	3,300	<2	<2	21	64				2.73
SB303	SB303-24	09/04/14	SoundEarth	20	3600	<2	6.7	<2	170				
SB304	SB304-24	09/04/14	SoundEarth	24	1,100	<2	<2	<2	<6				
	<u> </u>				2014 Subsu	rface Investiga	tion						
	MW107-20	10/31/14	SoundEarth	20	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
MW107	MW107-25	10/31/14	SoundEarth	25	63	<0.02	0.24	0.57	0.41	<50	<250		
-	MW107-30	10/31/14	SoundEarth	30	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
	SB401-20	10/31/14	SoundEarth	20	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
SB401	SB401-25	10/31/14	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
MTCA Cleanup Level fo		10,01,17	JoudEditii	-3	100/30 ⁽⁶⁾	0.03	7	6	9	2.000	2.000	0.1	250
MTCA Cleanup Level fo	יווסכ ווי				100/30	0.03	/	1 6	9	2,000	2,000	0.1	250

3 of 4



								Analytical	Results (mg/k	(g)			
Sample Location	Sample Identification	Date Sampled	Sampled By	Sample Depth	GRPH ⁽¹⁾	Benzene ⁽²⁾	Toluene ⁽²⁾	Ethylbenzene ⁽²⁾	Total Xylenes ⁽²⁾	DRPH ⁽³⁾	ORPH ⁽³⁾	MTBE ⁽²⁾	Lead ⁽⁴⁾
•					2014 Subsu	rface Investiga	tion		<u> </u>				
SB402	SB402-20	10/31/14	SoundEarth	20	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
36402	SB402-25	10/31/14	SoundEarth	25	2,000	<0.4	9.6	18	12	850 ^x	<250		
SB403	SB403-25	10/31/14	SoundEarth	25	<2	<0.02	<0.02	<0.02	<0.06	<50	<250		
MTCA Cleanup Level for	or Soil ⁽⁵⁾				100/30 ⁽⁶⁾	0.03	7	6	9	2,000	2,000	0.1	250

NOTES:

Red denotes concentration exceeds MTCA Method A cleanup level.

Bold denotes concentration below laboratory detection limit, but exceeding the MTCA cleanup level for soil; the detection limit has been raised due to high concentrations of associated analytes requiring dilution and/or historical cleanup levels that historical detection limits were based upon.

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

Laboratory Notes:

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

-- = not analyzed

DRPH = diesel-range petroleum hydrocarbons

EAI = Environmental Associates, Inc.

EPA = Environmental Protection Agency

G-Logics = G-Logics Inc.

GRPH = gasoline-range petroleum hydrocarbons

mg/kg = milligrams per kilogram

MTBE = methyl tertiary-butyl ether

MTCA = Washington State Model Toxics Control Act

ND = not detected

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

 $\mathsf{RGI} = \mathsf{The}\;\mathsf{Riley}\;\mathsf{Group}, \mathsf{Inc}.$

 $SoundEarth = SoundEarth \ Strategies, \ Inc.$

UST = underground storage tank

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⁽¹⁾Analyzed by Method NWTPH-Gx.

⁽²⁾Analyzed by EPA Method 8021B or 8260B.

⁽³⁾Analyzed by Method NWTPH-Dx.

⁽⁴⁾ Analyzed by EPA Method 6010B or 200.8.

⁽⁵⁾ MTCA Method A Soil Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

 $^{^{\}rm (6)}\rm 100~mg/kg$ when benzene is not present and 30 mg/kg when benzene is present.

^{pc}The sample was received in a container not approved by the method. The value reported should be considered an estimate.

^dDenotes the sample was diluted. Detection limits are raised due to dilution.

^xThe sample chromatographic pattern does not resemble the fuel standard used for quantitation.



			Depth to									Д	Analytical Resu	ilts (μg/L)							
			Groundwater	Relative																	
	Sample		(feet below	Groundwater				Ethyl-	Total	Other 8260						Tetraethyl	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
Well ID	Date	Sampled By	TOC)	Elevation ⁽¹⁾	GRPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	benzene ⁽³⁾	Xylenes ⁽³⁾	VOCs ⁽³⁾	MTBE ⁽³⁾	EDC ⁽³⁾	EDB ⁽³⁾	DRPH ⁽²⁾	ORPH ⁽²⁾	Lead ⁽⁴⁾	Chromium ⁽⁵⁾	Arsenic ⁽⁵⁾	Cadmium ⁽⁵⁾	Lead ⁽⁵⁾	Mercury ⁽⁵⁾
MW101	08/06/12	SoundEarth	24.39	245.15	<100	<0.35	<1	<1	<3		<1	<1	<1								
	04/01/13	SoundEarth	24.67	244.87	<100	<1	<1	<1	<3					<50	<250						
MW101-55 Temp	08/05/12	SoundEarth	Approx. 55'		<100	<0.35	<1	<1	<3		<1	<1	<1		(6)						
MW102	11/07/12	SoundEarth	25.41	243.65	<100	<0.35	<1	<1	<3		<1	<1	<1	<50 ⁽⁶⁾	<250 ⁽⁶⁾						
MW103	11/07/12	SoundEarth	27.80	241.75	<100	<0.35	<1	<1	<3		<1	<1	<1	<50 ⁽⁶⁾	<250 ⁽⁶⁾						
	11/07/12	SoundEarth	24.41	244.94	6,100	2,100	10	120	418		<1	<1	<1	4,000	<250						
MW104	03/06/13	SoundEarth	23.24	246.11	9,900	2,300	110	470	870					1,900 ^x 540 ^{(6) x}	<250 <250 ⁽⁶⁾						
	04/01/13	SoundEarth	23.37	245.98	20,000	2,600	140	640	1,300					3.600 ^{(6)x}	<250 ⁽⁶⁾						
	06/12/14	SoundEarth	22.54	246.81	15,000	1,800	120	480	1,330				<0.01	<50 ⁽⁶⁾	<250 ⁽⁶⁾					<1	
MW105	12/13/12	SoundEarth	24.25	245.05	140	<1	<1	<1	<3					61 ^x							
MW-X	03/06/13 08/05/12	SoundEarth SoundEarth	23.33	245.97 244.19	<100 <100	<0.35 <0.35	<1 <1	<1 <1	<3 <3		<1		<1	<60 ^b	<250						
IVIVV-X	06/03/12	G-Logics	22.76	244.19	11,600	1,510	41.8	349	884			<1		4,590							
	08/06/12	SoundEarth		240.06	6,000	640	15	190	233		<10	<10	<10	4,590							
GLMW-1	08/00/12	SoundEarth	23.52	245.92	4,500	550 ^{ve}	16	150 ^{ve}	242		<1	<1	<1	4,100 ^x							
	06/12/14	SoundEarth	22.65	246.79	13,000	1,500	23	180	312				<0.01	3.300 ^{(6)x}	<250 ⁽⁶⁾					<1	
	06/08/11	G-Logics	22.72	246.80	22,500	2,410	467	825	3,340					961							
GLMW-2	08/06/12	SoundEarth	23.34	246.18	0.05' SPH									6.000 ^x		480000 mg/kg					
	06/08/11	G-Logics	23.32	247.05	10,500	8.03	46.6	998	2,787					250							
GLMW-3	08/06/12	SoundEarth	23.42	246.95																	
	07/14/95	EAI ⁽⁷⁾			7,500	78	30	130	410					ND							
	06/18/97	Alisto ⁽⁷⁾			1,800 ^b	3.5	ND	ND	ND												
	11/10/98	Alisto ⁽⁷⁾			2,140	ND ^c	ND	ND	18.5												
	12/17/99	Alisto ⁽⁷⁾			2,120	ND ^c	ND ^c	ND ^c	ND ^c												
	07/11/00	Alisto ⁽⁷⁾			1,310	7.26	ND ^c	ND ^c	ND ^c		6										
	03/26/01	Alisto ⁽⁷⁾			851	3.7	ND	ND	ND		4.05										
	12/17/01	Alisto ⁽⁷⁾			540	6.2	2	1	4.7		ND										
MW-1	06/28/02	Alisto ⁽⁷⁾			1,300	16	4.8	2.4	10		ND										
	03/01/03	Alisto ⁽⁷⁾			1,800	2.7	4.1	7	3		ND										
	08/08/03	Alisto ⁽⁷⁾			1,100	9.2	3.6	4.7	5							-					
	03/21/04	AEG ⁽⁷⁾			190	ND	4.5	ND	4		ND										
	10/23/08	RGI ⁽⁷⁾			>3' SPH																
	11/21/08	RGI ⁽⁷⁾			0.01' SPH																
	05/09/11	G-Logics	23.26	246.19	5,000	2.25	<1.00	22.5	82.7		ND	<1.00	<0.0100	381							
	08/06/12	SoundEarth	23.95	245.50																	
	07/14/95	EAI ⁽⁷⁾			25,000	2,500	48	100	240					9,500							
	06/18/97	Alisto ⁽⁷⁾	-		280,000	4,000	44,000	5,500	28,000												
	11/10/98	Alisto ⁽⁷⁾			161,000	4,000	42,100	5,710	29,400												
	12/17/99	Alisto ⁽⁷⁾																			
	07/11/00	Alisto ⁽⁷⁾			ND	ND	ND	ND	ND		ND										
	03/26/01	(7)			ND	ND	ND	ND	ND		ND										
	12/17/01				390 ^d	85	10	2.7	13		ND										
84141 2	06/28/02	(7)			3,500	58	6.5	160	300		ND										
MW-2	03/01/03				140	1	ND	3.50	3		ND			ND							
	08/08/03	Alisto ⁽⁷⁾			7,500	100	490	1,400	350												
	03/21/04				25,200	403	1,100	1,540	4,040		ND			80,000							
	10/23/08	RGI ⁽⁷⁾			20,000	62	ND F6.4	530	1,640				 -0.0100	ND 1.050	ND						
	05/09/11		22.25	247.44	67,000	64.3	56.4	3,670	21,890		<1.00	<1.00	<0.0100	1,950							
	06/08/11		22.35	247.44	33,200 32,000	29.9	27.7	2,720	9,970		<10	<10	<10	411							
		SoundEarth		+	· ·	11	23	1,900 400 ^{ve}	10,100		<1	<1	<1								
		SoundEarth SoundEarth	23.24	246.55 244.99	5,300 22,000	2.2	4.0 9.2	1,500	1,710 7,500		<1	<1	<1 	2,800 3,900 ^x	630 ^x						
		roundwater ⁽⁸⁾	24.8	244.99	1,000/800 ⁽⁹⁾	5	1,000	700	1,000	varies	20	5	0.01	500	500	NA	50	5	5	15	2

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			Depth to									A	Inalytical Resu	lts (ug/L)							
Well ID	Sample Date	Sampled By	Groundwater (feet below TOC)	Relative Groundwater Elevation ⁽¹⁾	GRPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethyl- benzene ⁽³⁾	Total Xylenes ⁽³⁾	Other 8260 VOCs ⁽³⁾	MTBE ⁽³⁾	EDC ⁽³⁾	EDB ⁽³⁾	DRPH ⁽²⁾	ORPH ⁽²⁾	Tetraethyl Lead ⁽⁴⁾	Dissolved Chromium ⁽⁵⁾	Dissolved Arsenic ⁽⁵⁾	Dissolved Cadmium ⁽⁵⁾	Dissolved Lead ⁽⁵⁾	Dissolved Mercury ⁽⁵⁾
	07/14/95	EAI ⁽⁷⁾			2,400	140	7.4	13	14					ND							
	06/18/97	Alisto ⁽⁷⁾			3,000	48	10	18	19												
	11/10/98	Alisto ⁽⁷⁾			2,270	30.1	3.93	5.62	ND ^c												-
	12/17/99	Alisto ⁽⁷⁾			1,850	ND ^c	ND ^c	ND ^c	13.6°												
	07/11/00	Alisto ⁽⁷⁾			1,700	54.8	10	9.61	16.8		ND										-
	03/26/01	Alisto ⁽⁷⁾			1,030	8.02	3.15	ND	ND		2.50										
	12/17/01	Alisto ⁽⁷⁾			1,200	11	3.5	1.7	1.4		ND										-
MW-3	06/28/02	Alisto ⁽⁷⁾			3,000	33	11	2.7	5		ND							-		-	-
10100-3	03/01/03	Alisto ⁽⁷⁾			3,900	28	7.5	4.6	4		ND							ł			
	08/08/03	Alisto ⁽⁷⁾			3,200	20	8.4	2.2	0.9												
	03/21/04	Alisto ⁽⁷⁾			780	43	15	9.2	57		ND			ND				-		-	-
	10/23/08	RGI ⁽⁷⁾			1,300	6.5	2.5	3.6	8.4					ND	ND						
	05/09/11	G-Logics			160,000	<1.00	11	690	2,886		<1.00	<1.00	<0.0100	13,300				-			
	06/08/11	G-Logics	23.25	247.00	13,500	8.46	12.5	362	1,501					910				ł			
	08/06/12	SoundEarth	24.11	246.14	trace SPH													-			
	06/12/14	SoundEarth	23.64	246.61	SPH/7,500	68	9.4	180	420				<0.01	3,700 ^{(6)x}	<250 ⁽⁶⁾					3.62	
SMW04	08/31/12	SoundEarth	26.03	246.27	1,000	<0.35	3	43	63	ND		<1		320 ^x	<250		<1	8.42	1.62	<1	<0.1
31414404	04/01/13	SoundEarth	25.57	246.73	4,900	5.4	13	220	380					150 ^{(6) x}	<250 ⁽⁶⁾						
MW106	12/13/12	SoundEarth	26.97	246.36	<100	<1	<1	<1	<3					110 ^x	<250						
14144 100	04/01/13	SoundEarth	25.92	247.41	130	<1	<1	<1	<3					<55 ⁽⁶⁾	<280 ⁽⁶⁾			-			
MW107	12/09/15	SoundEarth			490	<1	<1	2	<3					620	<250			-			
DW-1	05/09/11	G-Logics			3,400	2.8	<1.0	<1.0	1.15		<1.0	<1.0	<0.01	<50	<100			1			
	10/23/08	RGI ⁽⁷⁾			>0.5' SPH													-		-	
DW-2	11/21/08	RGI ⁽⁷⁾			0.6' SPH													-			
	05/09/11	G-Logics			190	<1.0	<1.0	<1.0	2.62		<1.0	<1.0	<1.0	1,140	<100			-			
DW-3	05/09/11	G-Logics			140	<1.0	<1.0	<1.0	<3.0		<1.0	<1.0	<1.0	<50.0	<100			-			
DW-4	12/17/99	Alisto ⁽⁷⁾			857	4.04	5.92	8.47	152									-			
D11-4	05/09/11	G-Logics			77	<1.0	<1.0	<1.0	<3.0		<1.0	<1.0	<1.0	52.4	<100			-			
MTCA Method A Cleanu	p Levels for G	roundwater ⁽⁸⁾			1,000/800 ⁽⁹⁾	5	1,000	700	1,000	varies	20	5	0.01	500	500	NA	50	5	5	15	2

NOTES:

Red indicates concentrations exceeding MTCA Method A cleanup levels for groundwater.

Bold denotes concentration below laboratory detection limit, but exceeding the MTCA cleanup level for groundwater; the detection limit has been raised due to high concentrations of associated analytes requiring dilution and/or historical cleanup levels that historical detection limits were based upon.

2012 Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

2011 Samples analyzed for G-Logics by Fremont Analytical of Seattle, Washington.

(1) Elevation reference datum North American Vertical Datum 1988 (Dowl HKM November 2012).

(2) Analyzed by Method NWTPH-Gx (gasoline) and NWTPH-Dx (diesel and oil).

⁽³⁾Analyzed by EPA Method 8260B or 8260C.

⁽⁴⁾Analyzed by EPA Method 8082 (result is for product sample).

(5) Analyzed by EPA Method 200.8

(6)Sample extracts passed through a silica gel column prior to analysis.

⁽⁷⁾Data obtained from G-Logics 2011 Remedial Investigation and Feasibility Study Report Table 2: Groundwater Sample Analyses.

(8) MTCA Cleanup Regulation, Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the

Washington Administrative Code, revised November 2007.

 $^{(9)}$ 1,000 $\mu g/L$ when benzene is not present and 800 $\mu g/L$ when benzene is present.

August 7, 2012 results for wells MW-2 and GLMW-1 reflect 10x casing volume redevelopment conducted August 6.

Laboratory Notes:

^bThis sample did not have a typical gasoline pattern.

^cThe reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

^dThe sample was diluted. Detection limits may be raised due to dilution.

we 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.

 $^{\mathsf{x}}$ The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

-- = not analyzed, not measured

< = not detected above the laboratory reporting limit

μg/L = micrograms per liter
AEG = Associated Environmental Group LLC

Alisto = Alisto Engineering Group Inc.

DRPH = diesel-range petroleum hydrocarbons EAI = Environmental Associates, Inc.

EAI = Environmental Associates, Inc. EDB = 1,2 dibromoethane

EDC = 1,2 dichloroethane

EPA = U.S. Environmental Protection Agency

G-Logics = G-Logics Inc.

GRPH = gasoline-range petroleum hydrocarbons

mg/kg = milligrams per kilogram

MTBE = methyl tertiary-butyl ether

MTCA = Washington State Model Toxics Control Act

ND = not detected

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

RGI = The Riley Group, Inc.

SoundEarth = SoundEarth Strategies, Inc. SPH = separate-phase hydrocarbon

TOC = top of casing elevation

VOC = volatile organic compound

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Table 3 Summary of Soil Analytical Results - TPH and BTEX SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

									Analytica	l Results (millign	ams per kilograi	m)	
Remediation Area	Grid Location	Sample ID	Sample Date	Elevation (amsl)	Sample Depth (feet bgs)	Performance or Confirmation Sample Kennedy Pro	GRPH ⁽¹⁾	DRPH ⁽²⁾	ORPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Total Xylenes ⁽³⁾
	C1	K-B01-C1-250	05/15/15	250	20	Performance	3,200	860 [×]	<250	<0.4	<0.4	18	31
		K-WSW01-C2-250	05/26/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	C2	K-B01-C2-242	05/27/15	242	28	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		K-B01-C3-250	05/26/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	C3	K-B01-C3-243	05/27/15	243	27	Confirmation	19	<50	<250	<0.02	<0.02	0.060	<0.06
A18 - SKS		K-NSW01-D1-250	05/22/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
Petroleum Area		K-NSW01-D1-245	05/26/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	D1	K-WSW01-D1-250	05/15/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		K-WSW01-D1-245	05/27/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		K-B01-D1-242	05/27/15	242	28	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	D2	K-WSW01-D2-245	05/27/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	D3	K-WSW01-D3-250	05/27/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		K-NSW01-C4-255	05/04/15	255	15	Performance	1,000	3,500	<250				
Discovery	C4	K-B01-C4-248	05/27/15	248	22	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
(C4,C5)		K-WSW01-C5-255	05/04/15	255	15	Performance	340	2,100	<250				
(0.,00)	C5			252	18	Performance	230						
		K-B01-C5-252	05/04/15	252	18	SKS Shell Pro		1,700	<250				
		S-B01-A1-03	04/02/15	267	3	Performance	28	<50	<250	<0.02	<0.02	0.11	0.071
		S-NSW01-A1-245	05/26/15	245	25	Confirmation	<2	<50	<250	0.045	<0.02	<0.02	<0.06
		S-ESW01-A1-245	03/26/15	265	5	Confirmation	3.6	<50	<250	<0.02	0.031	<0.02	<0.06
		S-ESW01-A1-265	04/13/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-NSW01-A1-255	04/29/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-NSW01-A1-250		250	20	Confirmation	4.6	<50	<250	<0.02	<0.02	<0.02	<0.06
	A1	S-ESW01-A1-250	05/22/15 05/22/15	250	20	Confirmation	560	180 ^x	<250	<0.02	<0.02	2.0	5.3
		S-ESW01-A1-245	05/29/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-A1-261	03/29/13	261	9	Performance	27	<50	<250	<0.02	0.064	<0.02	0.073
		S-B01-A1-255	04/17/13	255	15	Performance	2.7	<50	<250	0.036	0.030	<0.02	<0.06
A18		S-B01-A1-250	05/12/15	250	20	Performance	3,300	1,100 ^x	<250	<0.2	<0.2	25	58
		S-B01-A1-242	05/29/15	242	28	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-ESW01-A2-255	04/29/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-ESW01-A2-250	05/26/15	250	20	Confirmation	700	160 ^x	<250	<0.02 ^j	1.6	1.6	5.8
		S-ESW01-A2-245	05/29/15	245	25	Confirmation	1.300	610 ^x	300	<0.02 ^j	4.8	8.9	39
		S-B01-A2-243	04/13/15	267	3	Performance	1,600	430 ^x	<250	<0.02	<0.1	7.6	6.0
	A2	S-B01-A2-261	04/13/15	267	9	Performance	1,600	<50	<250	<0.02	<0.1	<0.02	<0.06
		S-B01-A2-261 S-B01-A2-255	04/17/15	255	15	Performance	1.400	390 ^X	<250	<0.02	7.0	4.9	60
		S-B01-A2-250	05/12/15	250	20	Performance	7,200	1,800 ^x	<250	<0.02	65	53	460
		S-B01-A2-242	05/29/15	242	28	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
MTCA Cleanup Le	wal for Sail ⁽⁴⁾	3 BUT-NZ-Z-+Z	03/23/13	Z+Z	20	Commination	100/30 ⁽⁵⁾	2.000	2.000	0.03	7	6	9

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Table 3 Summary of Soil Analytical Results - TPH and BTEX SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

									Analytica	Results (milligr	ams per kilograi	n)	
Remediation				Elevation	Sample Depth	Performance or Confirmation	(1)	(2)	(2)	_ (3)	(3)	(3)	(3)
Area	Grid Location	Sample ID	Sample Date	(amsl)	(feet bgs)	Sample	GRPH ⁽¹⁾	DRPH ⁽²⁾	ORPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Total Xylenes ⁽³⁾
		S-ESW01-A3-255	04/29/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-ESW01-A3-250	05/26/15	250	20	Confirmation	14	<50	<250	<0.02	<0.02	<0.02	0.12
		S-ESW01-A3-245	05/29/15	245	25	Confirmation	3.7	3,200 ^x	<250	<0.02	<0.02	0.023	0.24
	A3	S-B01-A3-265	04/17/15	265	5	Performance	83	<50	<250	<0.02	0.37	0.44	1.1
		S-B01-A3-255	04/29/15	255	15	Performance	230	<50	<250	<0.02	0.40	0.29	2.7
		S-B01-A3-250	05/12/15	250	20	Performance	8,000	1,200 ^x	<250	<0.2	24	91	860
		S-B01-A3-240.5	06/01/15	240.5	30.5	Confirmation	14	<50	<250	<0.02	<0.02	0.42	2.5
		S-ESW01-A4-250	06/01/16	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-ESW01-A4-245	05/29/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-SSW01-A4-265	04/15/15	265	5	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	A4	S-SSW01-A4-255	04/29/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-SSW01-A4-245	06/01/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	0.14	<0.06
		S-SSW02-A4-255	05/12/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-A4-250	05/12/15	250	20	Performance	4.0	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-NSW01-B1-255	04/29/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-NSW01-B1-250	05/22/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-NSW01-B1-245	05/26/15	245	25	Confirmation	800	<50	<250	0.30	<0.2	4.0	20
	B1	S-B01-B1-261	04/17/15	261	9	Performance	1,700	85 ^x	<250	<0.02 ^j	<0.1	14	15
A18		S-B01-B1-255	04/28/15	255	15	Performance	470	72 ^X	<250	<0.02 ^j	<0.1	3.2	3.5
(continued)		S-B01-B1-250	05/12/15	250	20	Performance	4,000	1,500 ^x	<250	<0.4	<0.2	29	74
		S-B01-B1-242	05/28/15	242	28	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-B2-255	04/28/15	255	15	Performance	840	170 ^X	<250	<0.02 ^j	6.8	3.4	7.6
	B2	S-B01-B2-250	05/12/15	250	20	Performance	4,900	1,500 ^x	<250	<0.4	26	48	250
		S-B01-B2-242	05/29/15	242	28	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-B3-260	05/11/15	260	10	Performance	40	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-B3-255	05/11/15	255	15	Performance	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	B3	S-B01-B3-250	05/12/15	250	20	Performance	400	130 ^x	<250	<0.02	<0.02	0.57	4.2
		S-B01-B3-243	05/28/15	243	27	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-NSW01-C1-255	05/13/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-NSW01-C1-250	05/22/15	250	20	Confirmation	790	130 ^x	<250	<0.02 ^j	<0.1	3.1	9.5
		S-NSW01-C1-245	05/26/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	0.027	<0.06
	C1	S-WSW01-C1-255	04/28/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-C1-255	04/28/15	255	15	Performance	3.3	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-C1-250	05/12/15	250	20	Performance	2,000	680 ^x	<250	<0.02 ^j	<0.1	14	15
		S-B01-C1-242	05/28/15	242	28	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-WSW01-C2-255	04/28/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	C2	S-B01-C2-250	05/12/15	250	20	Performance	1,500	370 ^x	<250	<0.02 ^j	<0.1	11	11
	C3	S-B01-C3-255	05/11/15	255	15	Performance	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	CS	S-ESW01-B4-265	04/24/15	265	5	Performance	410	5,200 ^x	21,000	<0.02	<0.02	2.1	1.7
Discovery -	B4	S-ESW01-B4-263 S-ESW02-B4-264	04/30/15	264	6	Performance	<2	130 ^x	600	<0.02	<0.02	<0.02	<0.06
Shallow		S-B01-C4-270	04/30/15	270	2	Performance	36	200 ^x	320	<0.02	0.12	0.12	0.74
(B4,C4,C5)	C4				7								
(2.,01,00)	C5	S-B01-C4-263	04/24/15	263	5	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	evel for Soil ⁽⁴⁾	S-SSW01-C5-265	04/24/15	265] 5	Confirmation	22 100/30 ⁽⁵⁾	<50 2,000	310 2,000	<0.02 0.03	0.066 7	0.052 6	0.35 9

P:\0914 Lennar Shell\0914-004 RIFSCAP\Technica\\Tables\2015 CAR\SKS\0914_001_SKS Tables 1-5_F



Table 3 Summary of Soil Analytical Results - TPH and BTEX SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

									A 1 1* 1	I Baran III a / a cilii a a		\	
								ı	Analytica	Results (milligr	ams per kilograi	m)	
					Sample	Performance or							
Remediation				Elevation	Depth	Confirmation							
Area	Grid Location	Sample ID	Sample Date	(amsl)	(feet bgs)	Sample	GRPH ⁽¹⁾	DRPH ⁽²⁾	ORPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Total Xylenes ⁽³⁾
		S-SSW01-B4-245	06/01/15	245	25	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	B4	S-B01-B4-260	05/11/15	260	10	Performance	75	<50	<250	<0.02	<0.02	<0.02	<0.06
	D 4	S-B01-B4-255	05/12/15	255	15	Performance	1,500	3,000	1,400	<0.02 ^j	<0.1	1.3	3.6
		S-B01-B4-250	05/12/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-ESW01-B5-255	05/12/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
	B5	S-SSW01-B5-255	05/12/15	255	15	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
Discovery - Deep		S-B01-B5-261	05/01/15	261	9	Performance	1,100	3,600	<250	<0.02	<0.02	1.0	1.7
(B4, B5, C4, C5)		S-NSW01-C4-255	05/04/15	255	15	Performance	1,000	3,400	780	<0.02 ^j	<0.1	0.75	0.50
	C4	S-B01-C4-259	05/11/15	259	11	Performance	240	740	<250	<0.02	<0.02	0.047	0.099
		S-B01-C4-255	05/12/15	255	15	Performance	660	2,800	<250	<0.02	<0.02	0.90	1.7
		S-WSW01-C5-254	05/04/15	254	16	Performance	220	700	<250	<0.02	<0.02	0.13	0.12
	C5	S-SSW01-C5-255	05/04/15	255	15	Confirmation	3.6	<50	<250	<0.02	<0.02	<0.02	<0.06
	CS	S-B01-C5-252	05/04/15	252	18	Performance	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
		S-B01-C5-250	06/02/15	250	20	Confirmation	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
MTCA Cleanup Le	evel for Soil (4)	·	·		<u> </u>		100/30 ⁽⁵⁾	2,000	2,000	0.03	7	6	9

NOTES:

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

RED denotes concentration exceeds MTCA cleanup level.

Bold denotes concentration below laboratory detection limit, but exceeding the MTCA cleanup level for soil; the detection limit has been raised due to high concentrations of associated analytes requiring dilution and/or historical cleanup levels that historical detection limits were based upon.

 $\ensuremath{^{\text{(1)}}}\textsc{Samples}$ analyzed by Method NWTPH-Gx.

(2) Samples analyzed by Method NWTPH-Dx.

⁽³⁾Analyzed by EPA Method 8021B or 8260C.

(4) MTCA Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 Washington Administrative Code, revised November 2007.

⁽⁵⁾100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.

Indicates final bottom confirmation sample.

Laboratory Notes:

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

 $^{\rm x}\! \text{The sample chromatographic pattern does not resemble the fuel standard used for quantitation.}$

-- = not analyzed

 $\,$ < = not detected at a concentration exceeding the laboratory reporting limit.

amsl - above mean sea level

bgs = below ground surface

BTEX = benzene, toluene, ethylbenzene, and total xylenes

DRPH = diesel-range petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

mg/kg = milligrams per kilogram

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

TPH = total petroleum hydrocarbons

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Table 4 Summary of UST Product Samples SKS Shell Property

3901 Southwest Alaska Street Seattle, Washington

				Sample						Analytical	Results (milligr	ams per kilograi	m)					
				Depth					Total		Total	Total		Total	Total	Total		Flashpoint ⁽⁵⁾
Property	Grid Location	Sample ID	Sample Date	(feet bgs)	GRPH ⁽¹⁾	GRPH ⁽¹⁾ DRPH ⁽¹⁾ ORPH ⁽¹⁾ VOCs ⁽²⁾ Arsenic ⁽³⁾ Total Barium ⁽³⁾ Cadmium ⁽³⁾ Chromium ⁽³⁾ Total Lead ⁽³⁾ Mercury ⁽³⁾ Selenium ⁽³⁾ Silver ⁽³⁾ PCBs ⁽⁴⁾									(°F)			
						SKS Shell Property												
SKS	C1	UST05	04/02/15		<4,000	D	D	ND	<1	20.3	<1	<1	328	<1	<1	<1	<2	201
SKS	C1	UST06	04/02/13		<4,000	D	D	ND	<1	1.04	<1	<1	252	<1	<1	<1	<2	91.4
SKS	C2	UST07	04/14/15		D	<5,000	D	ND	<1	4.89	<1	1.82	1,230	<1	<1	<1	<2	>200

NOTES:

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

⁽¹⁾Analyzed by Method NWTPH-HCID. Result of ND indicates material not detected at or above 4,000 mg/kg GRPH; 5,000 mg/kg DRPH; and 25,000 mg/kg ORPH.

(2) Analyzed by EPA Method 8260C. VOCs analyzed included PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; vinyl chloride; 1,1-DCE; EDC; 1,1-DCA; 1,1,1-trichloroethene; chloroethane; and methylene chloride. Results listed as ND indicate none of the analytes were detected above laboratory reporting limits.

⁽³⁾Analyzed by EPA Method 200.8.

⁽⁴⁾Analyzed by EPA Method 8082A.

⁽⁵⁾Analyzed by EPA Method 1010/ASTM D93.

-- = not applicable

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

ASTM = American Society for Testing and Materials

bgs = below ground surface

D = detected

DCA - dichloroethane

DCE = dichloroethene

DRPH = diesel-range petroleum hydrocarbons

EDC = 1,2-dichloroethane

EPA = U.S. Environmental Protection Agency

°F = degrees Fahrenheit

GRPH = gasoline-range petroleum hydrocarbons

HCID = hydrocarbon identification

ND = not detected

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

PCB = polychlorinated biphenyl

PCE = tetrachloroethene

TCE = trichloroethene

VOC = volatile organic compound

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Table 5 Summary of UST Soil Samples - TPH, BTEX, and Lead SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

					Sample				Analytical Resul	ts (milligrams p	er kilogram)		
			Sample	Elevation	Depth							Total	
Property	Grid Location	Sample ID	Date	(amsl)	(feet bgs)	GRPH ⁽¹⁾	DRPH ⁽²⁾	ORPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Xylenes ⁽³⁾	Total Lead ⁽⁴⁾
SKS	C1	UST05-NSW01-262	04/08/15	262	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	
SKS	C1	UST05-BTM01-261	04/08/15	261	9	<2	87 ^x	580	<0.02	<0.02	<0.02	<0.06	
SKS	B2	UST06-ESW01-262	04/08/15	262	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	
SKS	C2	UST06-SSW01-263	04/08/15	263	7	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	
SKS	C1	UST06-WSW01-262	04/08/15	262	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	
SKS	C1	UST06-BTM01-261	04/08/15	261	9	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	
SKS	C2	UST07-NSW01-262	04/16/15	262	8	<2	72 ^x	420	<0.02	<0.02	<0.02	<0.06	29.9
SKS	C2	UST07-ESW01-262	04/16/15	262	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	3.24
SKS	C2	UST07-SSW01-262	04/16/15	262	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	2.68
SKS	C2	UST07-WSW01-262	04/16/15	262	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	4.14
SKS	C2	UST07-BTM01-262	04/16/15	262	8	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	3.91
MTCA Cleanup L	evel for Soil ⁽⁵⁾	·				100/30 ⁽⁶⁾	2,000	2,000	0.03	7	6	9	250

NOTES:

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

BOLD denoted concentration exceeds soil disposal acceptable criteria.

Laboratory Note:

-- = not analyzed

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

amsl - above mean sea level

bgs = below ground surface

BTEX = benzene, toluene, ethylbenzene, and total xylenes

DRPH = diesel-range petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

mg/kg = milligrams per kilogram

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

TPH = total petroleum hydrocarbons

UST = underground storage tank

WAC = Washington Administrative Code

⁽¹⁾Samples analyzed by Method NWTPH-Gx.

⁽²⁾Samples analyzed by Method NWTPH-Dx.

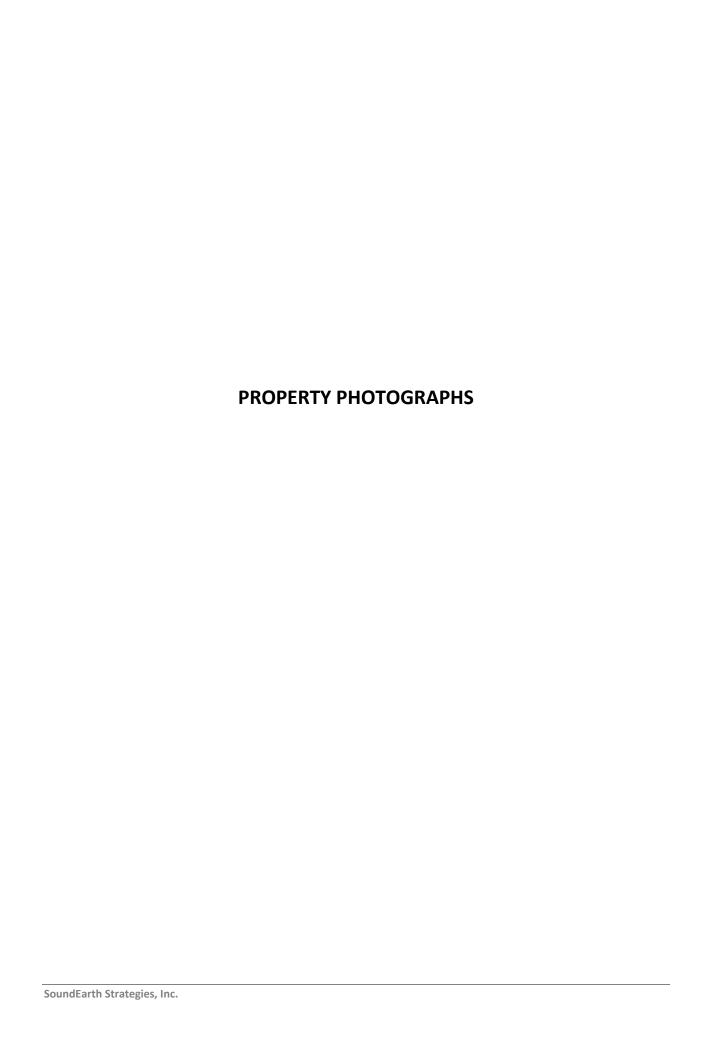
⁽³⁾Analyzed by EPA Method 8021B.

⁽⁴⁾Analyzed by EPA Method 200.8.

⁽⁵⁾MTCA Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 WAC, revised November 2007.

 $^{^{(6)}}$ 100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.

 $^{{}^{\}mathrm{x}}$ The sample chromatographic pattern does not resemble the fuel standard used for quantitation.





SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington Project No.: 0914-001

Date: August 3, 2015

Drawn By: EBF Chk By: CER



Photograph 1. Marine Vacuum Services emptying UST05 and UST06.



Photograph 2. Removing UST06.



Photograph 3. UST07.



Photograph 4. Marine Chemist inerting UST07.



Photograph 5. Excavating east wall of the Property to approximately 10 feet bgs.



Photograph 6. The Property excavated to 10 feet bgs.



SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington Project No.: 0914-001

Date: August 3, 2015

Drawn By: EBF Chk By: CER



Photograph 7. Plastic and metal plates placed south of the Property for a loading dock for contaminated soil.



Photograph 9. Excavating to approximately 15 feet below ground surface. Respirators required by all personnel working within the contaminated area.



Photograph 11. Bottom extent of the excavation area, between 27 and 30 feet below ground surface.



Photograph 8. Excavating down to approximately 15 feet below ground surface, view looking north.



Photograph 10. Excavating down to approximately 20 feet below ground surface.



Photograph 12. Final extent of the petroleum contamination excavation at the Property.



Vapor Barrier Install SKS Shell Property 3901 Southwest Alaska Street

Seattle, Washington

Project No.: 0914-001 Date: September 17, 2015

Drawn By: EBF Chk By: SES



Photograph 13. Application of Liquid Boot vapor barrier on the eastern sidewall along the basement level. Not visible beneath the Liquid Boot is waterproofing Voltex DSCR and green detailing fabric (VI-20).



Photograph 14. Completed application of Liquid Boot on basement level.



Photograph 15. Close up of detailing around intrusions through the vapor barrier on the northern sidewall, with blue protective fabric applied over the Liquid Boot to protect the Liquid Boot during concrete application.



Photograph 16. Detail of piping through the vapor barrier, with Liquid Boot surrounding the piping.



Photograph 17. Completed Liquid Boot on the upper level of the sidewall with blue protective fabric applied.



Photograph 18. Application of the protective fabric over the Liquid Boot.



Vapor Barrier Install
SKS Shell Property
3901 Southwest Alaska Street
Seattle, Washington

Project No.: 0914-001

Date: September 17, 2015

Drawn By: EBF Chk By: SES



Photograph 19. Cross-sectional cut of sidewall vapor barrier. From bottom: black waterproofing, Voltex DSCR (gray-white layer), green VI-20 detailing fabric, and black Liquid Boot.



Photograph 20. Application of horizontal Liquid Boot layer over the detailing VI-20 fabric. Liquid Boot was sprayed between overlapping layers of fabric.



Photograph 21. Application of Liquid Boot layer up against the sidewall.



Photograph 22. Continuing to install the detailing VI-20 fabric and Liquid Boot horizontal component.



Photograph 23. Completed Liquid Boot installation on the floor of the Property.



Photograph 24. Vapor barrier installation complete, with blue protective fabric installed to protect the barrier.

APPENDIX A ABATEMENT DOCUMENTATION

Dept. of Labor & Industries, Division of Occupational Safety & Health

Asbestos Project Notification Form

Form ID: 91526##1427Affor813151

Notice Date: 9/15/2014

Start Date: 10/1/2014

Completion Date: 10/19/2014

Status: Amended

Site Work Hours: 8:00 am - 2:30 pm

Site Work Days:

Monday

Tuesday

Wednesday

Thursday Friday

1.000

Contractor: Affordable Environmental, Inc

Job Site C.A.S.: Anthony Chase

Your email address: ci@affenv.net

Contractor Phone Number: 4255128750

Property Owner

Name:

Owner's Agent: Paul kemp

Company: Sound Earth Strategies

Address: 2811 Fairview Ave E, Suite 200

City: Seattle

State: WA

Zip+4: 98102

Phone: 2063061900

Job Site

Address: 4755 Fauntleroy Way SW

Building Name: Huling Brothers

Room:

City: Seattle

Zip + 4: 98115

County: King

Facility

Type: Commercial

Age: 1970's

Size: 3200

Type of activity: Demolition

Quantity of Asbestos to Be Removed Outdoors Indoors

Quantity: 170 square feet

Popcom ceiling Other:Window Putty

Quantity: 3200 linear feet

Control Measures

Neg. pres. enclosure Wet methods HEPA vacuum Critical barriers Manual methods

Respiratory Protection

Type C continuous flow Other:PPE Pursuant to task

Comments:

Date/Time Submitted

10/8/2014 1:46:50 PM



View Account History

Create Amendment 201403638-2

Notification Details for Case #: 201403638-1

Transaction Date 09/15/14

Owner's Name Sound Earth Strategies

Project Street Address 4755 Fauntieroy Way
Oty Seattle

Contact Person Paul Kemp

Mailing Address 2811 Fairview Ave E, Suite 200

Seattle, WA 98102

Phone (206) 306-1900

Zip 98116

Phone (206) 306-1900

This project includes asbestos removal.

Project Size 3200 linear feet / 170 square feet.

Project Start Date 09/25/14 Completion Date 10/19/14

Aspestos will be removed by a licensed aspestos abatement contractor

Contractor Affordable Environmental Inc.

Contact Anthony Chase

Mailing Address PO Box 40

Mountlake Terrace, WA 98043

Contractor Job # 1189 D

Phone (425) 512-8750

Note: Notifications cannot be amended after the completion date.



AFFORDABLE ENVIRONMENTAL, INC.

P.O. BOX 40 MOUNTLAKE TERRACE, WA 98043 FAX (425) 212-9805 (425) 512-8750

CERTIFICATE OF COMPLETION

Affordable Environmental, Inc. performed asbestos removal and disposal services at the following address per asbestos survey:

Whittaker Project West Seattle 98116

Be assured that all activities performed were conducted in accordance with all current and applicable environmental regulations and contract specifications.

Any air monitoring required by statutes was performed. Clearance air sampling verified air was clean by current state and national standards.

Regulated waste was deposited in accordance with EPA guidelines. An approved landfill facility is required to forward documentation of this within 45 days of disposal.

Asbestos liability **insurance** and a contractor's surety bond were in effect during these operations.

Note: Affordable Environmental, Inc. summitted notification to Puget Sound Clean Air Agency (PSCAA) and the Department of Labor & Industries, Division of Occupational Safety & Health prior to starting this project.

Please contact our customer service representative at (425) 512-8750 between 7:00 AM and 3:30 PM Monday through Friday if you have any questions or need additional documentation.

Sincerely,

Anthony M Chase President AEI

m Oher

APPENDIX B BORING LOGS



Project: SKS Shell Property

Project Number: 0914-001 Logged by: EBF Date Started: 9/1/15 Surface Conditions: Gravel

9 ft south of NE property corner Well Location N/S: Well Location E/W: 50 ft west of NE property corner

Reviewed by: CER Date Completed: 9/1/15

BORING LOG

MW108

Site Address: 3901 SW Alaska Street

Seattle, Washington

Water Depth At - Time of Drilling

NA feet bgs

Water Depth After Completion 8.6

feet bgs

						0/1/1			
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic		Detail/ er Depth
-								Backfill.	
5								Drill straight to well depth. No soil samples.	
10 —									
-								Refusal at 12.5 feet bgs. Set monitoring well.	
Drillir Samp Hamr Total Total	ng Eq oler Ty ner T Borir Well	./Drille uipmer ype: ype/We ng Dept Depth: ID No.:	ight: L ight: - ih: 1	- 2.5	W Solbs Fi feet bgs Au	ell/Auger D ell Screene creen Slot S lter Pack Usurface Seals nullar Seals onument Ty	d Interval: Size: sed:	3/4" well inches 2.5 to 12.5 feet bgs 0.010 inches 2/12 Sand Concrete Bentonite Flush mount Page: 1 of 1	
							-	ı aye. I OI	·



Project: SKS Shell Property

Project Number: 0914-001 Logged by: EBF Date Started: 9/1/15 Surface Conditions: Gravel

Well Location N/S: 8 ft south of NE property corner
Well Location E/W: 10 ft west of NE property corner

Reviewed by: CER **Date Completed:** 9/1/15

BORING LOG

MW109

Site Address: 3901 SW Alaska Street

Seattle, Washington
Water Depth At

7 Water Depth At - Time of Drilling NA feet bgs

Water Depth

After Completion 6.6 feet bgs

Drilling Co/Driller: ESN/Richard Drilling Equipment: LAR Probe Holdscreen Inches Representation of the Probes Representation of th							0/1/1			·	
Drilling Co/Driller: ESN/Richard Well/Auger Diameter: 3/4" well inches Probes Well Screened Interval: 3 to 15 feet bgs. Notes/Comments: Well Screened Interval: 3 to 15 feet bgs.		Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	on	Well Detail/ Water Depth
Drilling Co./Driller: ESN/Richard Drilling Cqu/priller: LAR Probe Well/Auger Diameter: 3/4* well inches Drilling Equipment: LAR Probe Well/Screened Interval: 3 to 13 feet bgs. Notes/Comments: Screen Slot Size: 0.010 inches	-								Backfill.		
Drilling Co./Driller: ESN/Richard Well/Auger Diameter: 3/4" well inches Drilling Equipment: LAR Probe Well Screened Interval: 3 to 13 feet bgs Sampler Type: Screen Slot Size: 0.010 inches	-								Drill straight to well depth, no soil		
Drilling Co./Driller:ESN/RichardWell/Auger Diameter:3/4" wellinchesNotes/Comments:Drilling Equipment:LAR ProbeWell Screened Interval:3 to 13feet bgsSampler Type:Screen Slot Size:0.010inches	_								End of boring at 13 feet bgs. Set m	nonitoring well.	
Total Boring Depth: 13 feet bgs Total Well Depth: 13 feet bgs State Well ID No.: BJC 822 Surface Seal: Concrete Annular Seal: Bentonite Monument Type: Flush mount Page: 1 of 1	Drilling Co./Driller: ESN/Richard Drilling Equipment: LAR Probe Sampler Type: Hammer Type/Weight: lbs Total Boring Depth: 13 feet bg Total Well Depth: 13 feet bg				lbs Fifeet bgs A	/ell Screene creen Slot S ilter Pack Us urface Seal: nnular Seal:	d Interval: Size: sed: :	3 to 13 feet bgs 0.010 inches 2/12 Sand Concrete Bentonite		of 1	



Project: SKS Shell Property

Project Number: 0914-001 Logged by: EBF Date Started: 9/1/15 Surface Conditions: Gravel

Well Location N/S: 79 ft south of NE property corner
Well Location E/W: 7 ft west of NE property corner

Reviewed by: CER **Date Completed:** 9/1/15

BORING LOG

MW110

Site Address: 3901 SW Alaska Street

Seattle, Washington

Water Depth At Time of Drilling

l NA

feet bgs

Water Depth
After Completion 5.5

5.5 feet bgs

						0/1/1				
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologi	c Description	Well Detail/ Water Depth
0	0 -							Gravel. Backfill.		
5—					Drill straight to well depth. No soil samples.					
_								Refusal at 12 feet bgs.	Set monitoring well.	
Drilling Co./Driller: ESN/Richa Drilling Equipment: LAR Probe Sampler Type: Hammer Type/Weight: Total Boring Depth: 12 Total Well Depth: 12 State Well ID No.: BJC 821			- - 2 2	W Solbs Fi feet bgs Feet bgs Ar	ell/Auger Di ell Screene creen Slot S Iter Pack Us urface Seal: nnular Seal: onument Ty	d Interval: Size: sed: :	1" well inche 2 to 12 feet b 0.010 inche 2/12 Sand Concrete Bentonite Flush mount	ogs	1 of 1	



SKS Shell Project: **Project Number:** 0914-004 Logged by: DMM Date Started: 2/20/2013 Surface Conditions: Concrete

3' north of MW104 Well Location N/S: Well Location E/W: 4' east of MW-1

Reviewed by: CCC **Date Completed:** 2/20/2013 BORING | **RW01** LOG | RW01

Site Address: Fauntleroy Way SW and Alaska \$treet

Seattle, Washington

Water Depth At - Time of Drilling

25 feet bgs

Water Depth

After Completion 23.80 feet bgs

Date Completed: 2/20/2013									After Completion	23.80 166	l bgs
Depth (feet bgs)	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lith	nologic De	scription		Detail/ r Depth
0	Co./Drille	r: Ci	ascade/Jeremia	h We	Il/Auger Di	ameter:	6" of concrete c by vac-truck to	inches	Notes/Comments:		
Drilling E	Equipmer		SA LAR		I Screene		25-40	feet bgs	Boring advanced with 4.25" i.d. auger		
Sampler			plit-spoon	Scr	een Slot S	ize.	0.010	inches	sample collection: overdrilled for well ins		

Sampler Type:

Split-spoon Hammer Type/Weight: 140 lbs **Total Boring Depth:** 40.5 feet bgs **Total Well Depth:** 40 feet bgs BHS 937 State Well ID No.:

Screen Slot Size: Filter Pack Used:

Surface Seal:

Annular Seal:

Monument Type:

0.010 inches #2/12 Silica Sand Concrete Bentonite Chips

Flush Mount

sample collection; overdrilled for well install with larger auger.

1 of 3 Page:



SKS Shell Project: **Project Number:** 0914-004 DMM Logged by: Date Started: 2/20/2013 Surface Conditions: Concrete

3' north of MW104 Well Location N/S: Well Location E/W: 4' east of MW-1

Reviewed by: CCC **Date Completed:** 2/20/2013 BORING | **RW01** LOG RW01

Site Address: Fauntleroy Way SW and Alaska \$treet

Seattle, Washington

Water Depth At Time of Drilling

25 feet bgs

Water Depth

After Completion 23.80 feet bgs

1				Da	te Completea:	2/20/	2013	Alter Completion 20	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
15		50/6"	200	15.9	RW01-15	SM		Damp, very dense, silty fine SAND, brown, faint hydrocarbon odor (15, 85, 0).	
		50/6"	300	38.0	RW01-17.5	SM		Damp, very dense, silty fine SAND, brown, moderate hydrocarbon odor (15, 85, 0).	
20 -		50/4"	300	352	RW01-20	SM		Damp, very dense, silty fine SAND, brown, strong hydrocarbon odor (15, 85, 0).	
		50/6"	100	24.6	RW01-22.5	SM		Moist, very dense, silty fine SAND, gray, strong hydrocarbon odor (15, 85, 0).	_
25 -		50/6"	100	27.4	RW01-25	SM		Wet, very dense, silty fine SAND, brown with gray, moderate hydrocarbon odor (15, 85, 0).	
30									

Drilling Co./Driller: Drilling Equipment: Sampler Type:

Split-spoon Hammer Type/Weight: 140 lbs 40.5 **Total Boring Depth:** feet bgs 40 **Total Well Depth:** feet bgs BHS 937 State Well ID No.:

Cascade/Jeremiah

HSA LAR

Well/Auger Diameter: 2/4.25-10.25 Well Screened Interval: 25-40 Screen Slot Size: Filter Pack Used:

0.010 inches #2/12 Silica Sand Surface Seal: Concrete **Annular Seal:** Bentonite Chips Flush Mount Monument Type:

Notes/Comments:

inches

feet bgs

Boring advanced with 4.25" i.d. auger for sample collection; overdrilled for well install

with larger auger.

2 of 3 Page:



Project: SKS Shell Project Number: 0914-004 Logged by: DMM Date Started: 2/20/2013 Surface Conditions: Concrete

3' north of MW104 Well Location N/S: Well Location E/W: 4' east of MW-1

Reviewed by: CCC **Date Completed:** 2/20/2013 BORING **RW01** LOG | RW01

Site Address: Fauntleroy Way SW and Alaska \$treet

Seattle, Washington

Water Depth At Time of Drilling

25 feet bgs

Water Depth

After Completion 23.80 feet bgs

				Da	te Complete	5 u . 2/20/	2013			20.00 1001 bg0
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic De	scription	Well Detail/ Water Depth
30	X	50/6"	300	23.7	RW01-30	SM		Wet, very dense, silty fine S	AND, brown, fa	int
35 —	X	50/6"	100	38.2	RW01-35	SM		hydrocarbon odor (15, 85, 0) Wet, very dense, silty fine S moderate hydrocarbon odor	AND, brown,	
40 —	\vee	50/6"	100	27.4	RW01-40	SM		Wet, very dense, silty fine S moderate hydrocarbon odo		
- 45								Boring terminated at 40.5 fe surface (bgs). Two-inch dia to a depth of 40 feet bgs, so feet bgs, and finished with a monument and concrete ser RW01.	meter well insta reened from 25 a flush-mounted	alled i to 40 d
	ng Co	./Drille	r: C	ı ascade/Jeremia	ıh v	 Vell/Auger Di	iameter:	2/4.25-10.25 inches	Notes/Comme	ents:
Drillin	ıg Eq	uipmer	nt: H	SA LAR	v	Well Screene	d Interval:	•	Boring advanced	with 4.25" i.d. auger for
-	ler T ner T	ype: ype/We		plit-spoon 40		Screen Slot S Filter Pack Us		0.010 inches #2/12 Silica Sand	sample collection with larger auger.	; overdrilled for well install
		ng Dept	-			Surface Seal:		Concrete		
otal	Well	Depth:	40)	feet bgs A	Annular Seal:		Bentonite Chips		
State	Well	ID No.:	В	HS 937	1	Monument Ty	pe:	Flush Mount	Page:	3 of 3



CMP Logged by: Date Started: 7/9/14

Surface Conditions: Concrete Well Location N/S: 8.5 feet North of NE corner of Bldg Well Location E/W: 19.5 feet East of NE corner of Bldg

Reviewed by: JAC/CCC **Date Completed:** 7/10/14

BORING | RW02 LOG

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 22.24 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
0_									
-								Concrete (6 inches thick).	
5		0	0					No recovery.	
10 —		0 3 10	60	0.0	RW02-10	SM		Moist, medium dense, silty SAND, brown, no petroleum hydrocarbon odor (40-60-0).	
15 — - - -		8 12 12	100	0.2	RW02-15	SM		Moist, medium dense, silty SAND, gray, no petroleum hydrocarbon odor (30-70-0).	
20 —		6 11 16	100	0.9	RW02-20	SM		Moist, medium dense, silty SAND, grayish brown, no petroleum hydrocarbon odor (40-60-0). 4" ID/10" OD inches Notes/Comments:	<u></u>

Drilling Co./Driller: Holt/Derek **Drilling Equipment:** HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 lbs **Total Boring Depth:** 40 feet bgs 39.5 **Total Well Depth:** feet bgs State Well ID No.: **BIP 867**

Well Screened Interval: **Screen Slot Size:** Filter Pack Used: Surface Seal: **Annular Seal: Monument Type:**

4" ID/10" OD inches 24.4 to 39.4 feet bgs 0.10 inches #10/20 Concrete Bentonite

Flushmount

1 of 2 Page:



CMP Logged by: Date Started: 7/9/14 Surface Conditions: Concrete

8.5 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 19.5 feet East of NE corner of Bldg

Reviewed by: JAC/CCC Date Completed: 7/10/14

BORING | LOG

RW02

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 22.24 feet bgs

Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
	9 15 17	50	32.7	RW02-25	ML		Moist to wet, hard, sandy SILT, gray to brown, weak petroleum hydrocarbon odor (65-35-0).	
	10 12 15	100	28.2	RW02-30	SM ML		Moist, medium dense, silty SAND, gray, mild petroleum hydrocarbon odor (35-65-0). Moist, very stiff, sandy SILT, weak petroleum hydrocarbon odor (65-35-0).	
X	9 14 18	100	8.2	RW02-35	ML		Wet, hard, sandy SILT, brown, mild petroleum hydrocarbon odor (65-35-0).	
X	15 17 31	100		RW02-40	ML		Wet, hard, fine sandy SILT, brown, no petroleum hydrocarbon odor (80-20-0).	
							Boring was terminated at 40 feet below ground surface (bgs). Four-inch-diameter well RW02 was installed to a depth of 39.4 feet bgs, screened from 24.4 to 39.4 feet bgs, silica sand from 21 to 40 feet bgs, bentonite seal from 1.5 to 21 feet bgs, concrete from 0 to 1.5 feet bgs, and finished at surface grade with a flushmount monument.	
		9 15 17 10 12 15 15 17 15 17	9 50 15 17 100 15 100 15 17 100 17 17 100 100 100 100 100 100 10	9 15 100 32.7 10 100 28.2 9 14 18 100 8.2	9 15 17 100 28.2 RW02-35 10 100 28.2 RW02-30 15 100 8.2 RW02-35	9 15 17 100 28.2 RW02-25 ML 10 12 15 100 8.2 RW02-35 ML 15 17 31 100 ML	9 15 17 100 28.2 RW02-25 ML 10 12 15 15 100 8.2 RW02-35 ML 15 17 100 ML 15 17 100 ML	9 10 28.2 RW02-30 SM ML Wet, hard, sandy SILT, gray to brown, weak petroleum hydrocarbon odor (65-35-0). 10 100 28.2 RW02-30 SM ML Wet, hard, sandy SILT, gray to brown, weak petroleum hydrocarbon odor (35-65-0). Moist, very stiff, sandy SILT, weak petroleum hydrocarbon odor (65-35-0). 15 100 8.2 RW02-35 ML Wet, hard, sandy SILT, brown, mild petroleum hydrocarbon odor (65-35-0). Wet, hard, sandy SILT, brown, mild petroleum hydrocarbon odor (65-35-0). Wet, hard, fine sandy SILT, brown, no petroleum hydrocarbon odor (80-20-0). Boring was terminated at 40 feet below ground surface (bgs). Four-inch-diameter well RW02 was installed to a depth of 39.4 feet bgs, screened from 24.4 to 39.4 feet bgs, screened from 24.4 to 39.4 feet bgs, screened from 24.4 to 39.4 feet bgs, screened from 25.5 to 21 feet bgs, conforted from 26.1 foet bgs, solice sand from 21 to 40 feet bgs, bentonite seal from 15.5 to 21 feet bgs, corefer from 0 to 1.5 feet bgs, and finished

Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 lbs **Total Boring Depth:** 40 39.5 **Total Well Depth:**

Holt/Derek

BIP 867

Drilling Co./Driller:

State Well ID No.:

feet bgs feet bgs Well/Auger Diameter: Well Screened Interval: **Screen Slot Size:** Filter Pack Used:

4" ID/10" OD 24.4 to 39.4 0.10 #10/20

Notes/Comments: inches feet bgs inches

Surface Seal: Concrete **Annular Seal:** Bentonite **Monument Type:** Flushmount

2 of 2 Page:



Logged by: CMP
Date Started: 7/10/14
Surface Conditions: Concrete

Well Location N/S: 26 feet North of NE corner of Bldg
Well Location E/W: 19.5 feet East of NE corner of Bldg

Reviewed by: JAC/CCC
Date Completed: 7/10/14



RW03

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

30

feet bgs

Water Depth

After Completion 23.34 feet bgs

				Da	ite Completed	i: //10/	14	Alter Cor	inpiction 20.	54 leet bys
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description		Well Detail/ Water Depth
0								Concrete (6 inches thick).		
-								Drilled to 41 feet below ground surface no samples collected.	(bgs) with	
5— - -										
10 —										
15 —										
20 —										
Drillir Samp	ng Eq oler Ty		nt: F	Holt/Derek HSA Split-spoon	W Sc	ell/Auger D ell Screene creen Slot S	d Interval: Size:	4" ID/10" OD inches 24.6 to 39.6 feet bgs 0.10 inches	nments:	
Total Total	Borir Well	ype/We ng Dept Depth: ID No.:	h: 4	40 .1 9.6 BIP 868	feet bgs St feet bgs Ar	ter Pack Us irface Seal: inular Seal: onument Ty	: :	#10/20 Concrete Bentonite Flushmount Page:	1	of 2



Logged by: CMP Date Started: 7/10/14 Surface Conditions: Concrete

26 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 19.5 feet East of NE corner of Bldg

Reviewed by: JAC/CCC **Date Completed:** 7/10/14



RW03

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

Water Depth

After Completion 23.34 feet bgs

						7,10,				
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	e USCS Class	Graphic	Lithologic Description		Well Detail/ Water Depth
								Drilled to 41 feet bgs with no samples co	llected.	
25 — -								Strong petroleum hydrocarbon odor in s cuttings.	oil	
30 —								Wet at 30 feet bgs.		
35 — - - -										
40 —								Boring was terminated at 41 feet bgs. Fo diameter well RW03 was installed to a de 39.6 feet bgs, screened from 24.6 to 39.6 silica sand from 21 to 41 feet bgs, bentor	pth of feet bgs,	
- - 45 —								from 2 to 21 feet bgs, concrete from 0 to bgs, and finished at surface grade with a flushmount monument.	2 feet	
Drillir Drillir Samp Hamn	Drilling Co./Driller: Drilling Equipment: Sampler Type: Hammer Type/Weight: Total Boring Depth: Total Well Depth:		ight:	Holt/Derek HSA Split-spoon 140 41 39.6	lbs if feet bgs	Well/Auger Di Well Screene Screen Slot S Filter Pack Us Surface Seal: Annular Seal:	d Interval: Size: sed:	4" ID/10" OD inches 24.6 to 39.6 feet bgs 0.10 inches #10/20 Concrete Bentonite	ments:	
1		ID No.:	I	BIP 868	- 1	Monument Ty		Flushmount Page:	2	of 2



Logged by: CMP
Date Started: 7/10/14
Surface Conditions: Concrete

Well Location N/S: 42 feet North of NE corner of Bldg
Well Location E/W: 19.5 feet East of NE corner of Bldg

Reviewed by: JAC/CCC
Date Completed: 7/11/14



Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

24 feet bgs

Water Depth

After Completion 23.08 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	0		Well Detail/ Water Depth
0 -								Concrete (6 inches thick).	
5		0 0 2	25	0.0	RW04-05	SM		Moist, very loose, silty SAND, brown, no petroleum hydrocarbon odor (30-70-0).	
10		6 14 21	100	1.9	RW04-10	SM		Moist, medium dense, silty SAND, gray, no petroleum hydrocarbon odor (35-65-0).	
15 — - -		5 11 16	100	21.2	RW04-15	SM		Moist, medium dense, silty fine SAND, gray, weak petroleum hydrocarbon odor (30-70-0).	
20 —		7 12 17	75	534	RW04-20	SM		Same as above with strong petroleum hydrocarbon odor.	
Drillin Samp Hamn Total	g Eq ler Ty ner T Borir Well	./Driller uipmen ype: ype/We ng Dept Depth: ID No.:	nt: HS Sp ight: 14 h: 40	olit-spoon 10 .5	lbs Feet bgs Sefeet bgs A	Vell/Auger Di Vell Screene Screen Slot S Filter Pack Us Surface Seal: Annular Seal: Monument Ty	d Interval: size: sed:	0.10 inches #10/20 Concrete Bentonite	of 2



Logged by: CMP
Date Started: 7/10/14
Surface Conditions: Concrete

Well Location N/S: 42 feet North of NE corner of Bldg
Well Location E/W: 19.5 feet East of NE corner of Bldg
Povinged by:

Reviewed by: JAC/CCC
Date Completed: 7/11/14

BORING | RV

RW04

Site Address: 3901 SW Alaska Street

Seattle, WA

 $\bigvee_{\mathsf{T}} \bigvee_{\mathsf{T}}$

Water Depth AtTime of Drilling

feet bgs

Water Depth

After Completion 23.08 feet bgs

						77117			
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
25 — -		13 17 21	100	52.8	RW04-25	SM		Wet, dense, silty fine SAND, gray, strong petroleum hydrocarbon odor (35-65-0).	*
30		10 15 21	100	15.8	RW04-30	SM		Wet, dense, silty fine SAND, brown, moderate petroleum hydrocarbon odor (35-65-0).	
35 —		9 19 20	100	6.0	RW04-35	SM		Same as above, moderate petroleum hydrocarbon odor.	
40 —	X	13 18 21	100	3.8	RW04-40	ML		Wet, hard, fine sandy SILT with trace clay, gray, faint petroleum hydrocarbon odor (60-40-0).	
-								Boring was terminated at 40.5 feet below ground surface (bgs). Four-inch-diameter well RW04 was installed to a depth of 40 feet bgs, screened from 25 to 40 feet bgs, silica sand from 22 to 40.5 feet bgs, bentonite seal from 2 to 22 feet bgs, concrete from 0 to 2 feet bgs, and finished at surface grade with a flushmount monument.	
45 —									
Drillir Samp Hamr Total Total	ng Eq oler T ner T Borii Well	o./Drille puipmer ype: ype/We ng Dept Depth: ID No.:	nt: H: S _l eight: 14 th: 40).5	W Silbs Fifeet bgs A	/ell/Auger Di /ell Screene creen Slot S ilter Pack Us urface Seal: nnular Seal:	d Interval: size: sed:	0.10 inches #10/20 Concrete Bentonite	2 of 2



Logged by: CMP Date Started: 7/16/14 Surface Conditions: Concrete

56.5 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 19.5 feet East of NE corner of Bldg

Reviewed by: JAC/CCC Date Completed: 7/16/14



RW05

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 23.51 feet bgs

	Date Complet			ate Complete	d: 7/16/	/14		After Comple	etion 23.51 feet bgs	ŝ	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv	Sample ID	USCS Class	Graphic	Lithologic De	escription	Well Deta Water De	- 1
0 - -								Concrete (6 inches thick). S hydrocarbon odor in soil di concrete slab to approxima ground surface (bgs).	rectly beneath		
5								Drilled to 40.5 feet bgs with	no samples co	llected.	
10 —											
15 —											
20 —											
Drillin Samp Hamn	ig Eq ler Ty ner T	o./Drille uipmer ype: ype/We ng Dept	nt: ight:	Holt/Derek HSA Split-spoon 140 40.5	lbs F	/ell/Auger D /ell Screene creen Slot S ilter Pack Us urface Seal	d Interval: Size: sed:	4" ID/10" OD inches 25.5 to 40.5 feet bgs 0.10 inches #10/20 Concrete	Notes/Comme		
Total	Well	Depth: ID No.:		40.5 BIP 874	feet bgs A	nnular Seal	:	Bentonite Flushmount	Page:	1 of 2	_



Logged by: CMP
Date Started: 7/16/14
Surface Conditions: Concrete

Well Location N/S: 56.5 feet North of NE corner of Bldg
Well Location E/W: 19.5 feet East of NE corner of Bldg

Reviewed by: JAC/CCC
Date Completed: 7/16/14



RW05

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth AtTime of Drilling

feet bgs

Water Depth

After Completion 23.51 feet bgs

					· · · · · · · · · · · · · · · · · · ·	77107			
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
25 — 30 — 35 —								Drilled to 40.5 feet bgs with no samples collected. Wet at 30 feet bgs.	d
40 —								Boring was terminated at 40.5 feet bgs. Four-inch-diameter well RW05 was installed to a dep of 40.5 feet bgs, screened from 25.5 to 40.5 feet bgs, silica sand from 20.5 to 40.5 feet bgs, bentonite seal from 3 to 20.5 feet bgs, concrete from 0 to 3 feet bgs, and finished at surface grade with a flushmount monument.	h
Drillir Samp Hamn Total Total	ng Eq ler Ty ner T Borir Well	o./Drille uipmer ype: ype/We ng Dept Depth: ID No.:	nt: light: lh:	Holt/Derek HSA Split-spoon 140 40.5 40.5 BIP 874	lbs F feet bgs feet bgs A	/ell/Auger Di /ell Screene creen Slot S ilter Pack Us urface Seal: nnular Seal: lonument Ty	d Interval: Size: sed:	4" ID/10" OD inches feet bgs 0.10 inches #10/20 Concrete Bentonite Flushmount inches inches Page:	2 of 2



Logged by: CMP Date Started: 7/15/14 Surface Conditions: Concrete 85 feet North of NE corner of Bldg Well Location N/S:

Well Location E/W: 9 feet East of NE corner of Bldg Reviewed by: JAC/CCC **Date Completed:** 7/15/14

BORING | **RW06** LOG

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

Water Depth

After Completion 23.84 feet bgs

										1
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	scription	Well Detail/ Water Depth
0								Concrete (6 inches thick).		
_								Concrete (o mones tinck).		
								Drilled to 40.5 feet below gr	ound surface (b	ogs)
5								Drilled to 40.5 feet below gr with no samples collected.	ound surface (b	ogs)
10										
15 —										
-										
		./Drille		Holt/Derek		/ell/Auger D		4" ID/10" OD inches	Notes/Comme	ents:
		uipmer		HSA		/ell Screene				
Samp				Split-spoon		creen Slot S		0.10 inches		
		ype/We		140		ilter Pack U		#10/20		
		ng Dept		10.5 10		urface Seal:		Concrete		
		Depth: ID No.:		3IP 873	-	nnular Seal Ionument Ty		Bentonite Flushmount		1 - 1 -
Jiale	WEII	ייסאו קו:		טוט ווכ	"	ionument 1)	γpe.	Tustimount	Page:	1 of 2



Logged by: CMP Date Started: 7/15/14 Surface Conditions: Concrete

85 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 9 feet East of NE corner of Bldg

Reviewed by: JAC/CCC **Date Completed:** 7/15/14



Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

Water Depth

After Completion 23.84 feet bgs

L						7,10,			
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv	Sample ID	e USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
25 —								Drilled to 40.5 feet bgs with no samples collected Strong petroleum hydrocarbon odor in soil	1
30 —								cuttings. Wet at 30 feet bgs.	
35 —									
-								Boring was terminated at 40.5 feet bgs. Four-inch-diameter well RW06 was installed to a depti of 40 feet bgs, screened from 25 to 40 feet bgs, silica sand from 21 to 40.5 feet bgs, bentonite seal from 3 to 21 feet bgs, concrete from 0 to 3 feet bgs, and finished at surface grade with a flushmount monument.	1
Drillin Samp Hamn Total Total	g Eq ler Ty ner T Borir Well	ype/We ng Dept Depth:	ight: h:	Holt/Derek HSA Split-spoon 140 40.5 40	lbs Feet bgs feet bgs F	Well/Auger Di Well Screene Screen Slot S Filter Pack Us Surface Seal: Annular Seal:	d Interval: size: sed:	0.10 inches #10/20 Concrete Bentonite	
State	Total Well Depth: State Well ID No.:			BIP 873	N	Monument Ty	/pe:	Flushmount Page:	2 of 2



Logged by: CMP
Date Started: 7/15/14
Surface Conditions: Concrete

Well Location N/S: 84 feet North of NE corner of Bldg
Well Location E/W: 4 feet West of NE corner of Bldg

Reviewed by: JAC/CCC
Date Completed: 7/15/14

BORING | RW07 LOG |

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

25

feet bgs

Water Depth

After Completion 24.10 feet bgs

L					te Complete	u. //15/	14	/itti completion 2	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
0 -								Concrete (6 inches thick).	
5		2 2 3 3	30	4.0	RW07-05	ML		Moist, medium stiff, sandy SILT, trace clay, brown, no petroleum hydrocarbon odor (80-20-0).	
10		1	15	8.7	RW07-10	ML		Moist, very soft, sandy SILT, brown, no petroleum hydrocarbon odor (65-35-0).	
15		8 17 20	60	2.1	RW07-15	SM		Moist, medium dense, silty SAND, trace gravel, brown and gray, no petroleum hydrocarbon odor (30-65-5).	
20 —		7 13 17	75	109.4	RW07-20	SM		Moist, medium dense, silty fine SAND, gray, strong petroleum hydrocarbon odor (15-85-0).	
Drilling Sampl Hamm Total I	g Eq ler Ty ler Ty Borin Well	./Drillei uipmen /pe: ype/We ig Dept Depth: ID No.:	nt: HS Sp sight: 14 th: 40	.5	W Solbs Fi feet bgs Aifeet bgs Air	/ell/Auger Di /ell Screene creen Slot S ilter Pack Us urface Seal: nnular Seal: lonument Ty	d Interval: iize: sed:	4" ID/10" OD inches feet bgs 0.10 inches #10/20 Concrete Bentonite Flushmount inches inches place inches #10/20 Page:	1 of 2



Logged by: CMP Date Started: 7/15/14 Surface Conditions: Concrete

84 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 4 feet West of NE corner of Bldg

Reviewed by: JAC/CCC Date Completed: 7/15/14



Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 24.10 feet bgs

1				ра	te Complete	d: //15/	14	Alter Completion	24.10 leet bgs
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
25 —	X	12 17 23	70	11.0	RW07-25	SM		Wet, dense, silty fine SAND, gray with some brown, moderate petroleum hydrocarbon odor (15-85-0).	
30 —	X	11 15 22	70	33.8	RW07-30	SM		Same as above, moderate petroleum hydrocarbon odor.	
35 — -	X	10 19 25	100	3.4	RW07-35	SM		Wet, dense, silty fine SAND, grayish brown, no petroleum hydrocarbon odor (15-85-0).	
40 —	X	10 13 19	100	3.7	RW07-40	SM		Wet, dense, silty fine SAND, grayish brown, no petroleum hydrocarbon odor (25-75-0).	
-								Boring was terminated at 40.5 feet below grou surface (bgs). Four-inch-diameter well RW07 v installed to a depth of 40 feet bgs, screened from 25 to 40 feet bgs, silica sand from 21 to 40.5 fe bgs, bentonite seal from 2.5 to 21 feet bgs, concrete from 0 to 2.5 feet bgs, and finished a surface grade with a flushmount monument.	vas om eet
45 —									
1	-	./Drille		lolt/Derek		ell/Auger D		4" ID/10" OD inches Notes/Comments	s:
Drillin Samp	-	uipmer vpe:		ISA plit-spoon		'ell Screene creen Slot S		: 25 to 40 feet bgs 0.10 inches	
1		ype/We			-	Iter Pack U	-	#10/20	
Total	Bori	ng Dept	th: 40		٠ ا	urface Seal:		Concrete	
1		Depth:			٠ ١	nnular Seal:		Bentonite	
State	weil	ID No.:	В	IP 872	M	onument Ty	/pe:	Flushmount Page:	2 of 2



Logged by: CMP Date Started: 7/14/14 Surface Conditions: Concrete 84 feet North of NE corner of Bldg Well Location N/S:

Well Location E/W: 17 feet West of NE corner of Bldg Reviewed by: JAC/CCC **Date Completed:**

7/14/14

BORING | LOG

RW08

Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At - Time of Drilling

feet bgs

Water Depth

After Completion 24.8 feet bgs

Drilling Co-Drilling Equipment: HSA Sampler Type: HSA Silk-spon Hammer Type) Weight: HSA Sampler Type: HSA Silk-spon HSA Sampler Type: HSA Silk-spon HSA Sampler Type: HSA Silk-spon HSA Silk-spon HSA Sampler Type: HSA Silk-spon HSA Silk-spon HSA Silk-spon HSA Sampler Type: HSA Silk-spon HSA Sil	L						// 1/			· · · · · · · · · · · · · · · · · · ·	
Drilling CovDriller: Holl/Derek Trilling Equipment: HSA Sampler Type: HSA Sampler Type: HSA Sampler Type: HSA Sampler Type: HSA	Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic De	escription	I I
Drilling Co./Driller: Holl/Derek Drilling Equipment: HSA Sampler Type: Spilt-spoon Hammer Type/Weight: 140 lbs Flet bgs Spread Spilt-spoon Hammer Type/Weight: 140 lbs Flet bgs Spilt-spoon Hammer Type-Weight: 140 lbs Spilt-spoon Hammer Type-Weight:	0								Concrete (6 inches thick).		
Drilling Co./Driller: Drilling Equipment: Sampler Type: HSDR Well Screened Interval: HSDR Well Screened Interval: Screen Stol Size: United Screened Interval: Screen Stol Size: Screen Stol Size	-										
Drilling Co./Driller:									Drilled to 40.5 feet below g	round surface (bgs)	
Drilling Co./Driller: Holt/Derek Holt/	1								with no samples collected.		
Drilling Co./Driller: Holt/Derek Holt/	-										
Drilling Co./Driller: Holt/Derek Holt/											
Drilling Co./Driller: Holt/Derek Holt/											
Drilling Co/Driller: Holl/Derek Brilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 lbs Filter Pack Used: #10/20 Surface Seal: Concrete Total Well Depth: 40.5 feet bgs Incla Well Depth: 40.5 feet bgs Annular Seal: Bentonite	5-										
Drilling Co/Driller: Holl/Derek Brilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 lbs Filter Pack Used: #10/20 Surface Seal: Concrete Total Well Depth: 40.5 feet bgs Incla Well Depth: 40.5 feet bgs Annular Seal: Bentonite											
Drilling Co/Driller: Holl/Derek Brilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 lbs Filter Pack Used: #10/20 Surface Seal: Concrete Total Well Depth: 40.5 feet bgs Incla Well Depth: 40.5 feet bgs Annular Seal: Bentonite											
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Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Ibs Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite	10 —										
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Ibs Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite											
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Ibs Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite											
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Ibs Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite	-										
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Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Ibs Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite											
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Ibs Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite	-										
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Holt-Derek Well/Auger Diameter: 4" ID/10" OD inches feet bgs Well/Auger Diameter: 4" ID/10" OD inches Well Screened Interval: 25.5 to 40.5 feet bgs Screen Slot Size: 0.10 inches Filter Pack Used: #10/20 Surface Seal: Concrete Annular Seal: Bentonite	15 —										
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Holt-Derek Well/Auger Diameter: 4" ID/10" OD inches feet bgs Well/Auger Diameter: 4" ID/10" OD inches Well Screened Interval: 25.5 to 40.5 feet bgs Screen Slot Size: 0.10 inches Filter Pack Used: #10/20 Surface Seal: Concrete Annular Seal: Bentonite											
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Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Holt-Derek Well/Auger Diameter: 4" ID/10" OD inches feet bgs Well/Auger Diameter: 4" ID/10" OD inches Well Screened Interval: 25.5 to 40.5 feet bgs Screen Slot Size: 0.10 inches Filter Pack Used: #10/20 Surface Seal: Concrete Annular Seal: Bentonite											
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Holt-Derek Well/Auger Diameter: 4" ID/10" OD inches feet bgs Well/Auger Diameter: 4" ID/10" OD inches Well Screened Interval: 25.5 to 40.5 feet bgs Screen Slot Size: 0.10 inches Filter Pack Used: #10/20 Surface Seal: Concrete Annular Seal: Bentonite	-										
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Holt-Derek Well/Auger Diameter: 4" ID/10" OD inches feet bgs Well/Auger Diameter: 4" ID/10" OD inches Well Screened Interval: 25.5 to 40.5 feet bgs Screen Slot Size: 0.10 inches Filter Pack Used: #10/20 Surface Seal: Concrete Annular Seal: Bentonite	20 —										
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Filter Pack Used: #10/20 Surface Seal: Concrete Annular Seal: Bentonite											
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Well/Auger Diameter: 4" ID/10" OD inches Well Screened Interval: 25.5 to 40.5 feet bgs Screen Slot Size: 0.10 inches #10/20 Surface Seal: Concrete Annular Seal: Bentonite											'.1 .'.
Drilling Co./Driller: Holt/Derek Drilling Equipment: HSA Sampler Type: Split-spoon Hammer Type/Weight: 140 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Well/Auger Diameter: 4" ID/10" OD inches Well Screened Interval: 25.5 to 40.5 feet bgs Screen Slot Size: 0.10 inches #10/20 Surface Seal: Concrete Annular Seal: Bentonite	-										
Drilling Equipment:HSAWell Screened Interval:25.5 to 40.5feet bgsSampler Type:Split-spoonScreen Slot Size:0.10inchesHammer Type/Weight:140lbsFilter Pack Used:#10/20Total Boring Depth:40.5feet bgsSurface Seal:ConcreteTotal Well Depth:40.5feet bgsAnnular Seal:Bentonite											
Sampler Type:Split-spoonScreen Slot Size:0.10inchesHammer Type/Weight:140lbsFilter Pack Used:#10/20Total Boring Depth:40.5feet bgsSurface Seal:ConcreteTotal Well Depth:40.5feet bgsAnnular Seal:Bentonite										Notes/Comments:	
Hammer Type/Weight: 140 lbs Filter Pack Used: #10/20 Total Boring Depth: 40.5 feet bgs Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite									_		
Total Boring Depth: 40.5 feet bgs											
Total Well Depth: 40.5 feet bgs Annular Seal: Bentonite											
State Well ID No.: BIP 871 Monument Type: Flushmount Page: 1 of 2	Total	Well I	Depth:	4	0.5	feet bgs A					
	State	Well	ID No.:	B	871 	M	onument Ty	/pe:	Flushmount	Page:	1 of 2



Logged by: CMP Date Started: 7/14/14 Surface Conditions: Concrete

84 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 17 feet West of NE corner of Bldg

Reviewed by: JAC/CCC **Date Completed:** 7/14/14



Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At - Time of Drilling

30 feet bgs

Water Depth

After Completion 24.8 feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sampl ID	e USCS Class	Graphic	Lithologic Description		ell Detail/ ater Depth
25 —								Wet at 30 feet bgs. Weak petroleum hydrocart odor associated with groundwater.		
- - - 45 —								Boring was terminated at 40.5 feet bgs. Four-inch-diameter well RW08 was installed to a de of 40.5 feet bgs, screened from 25.5 to 40.5 feet bgs, silica sand from 20.5 to 40.5 feet bgs, bentonite seal from 2 to 20.5 feet bgs, concret from 0 to 2 feet bgs, and finished at surface grade with a flushmount monument.	et	
Drillir Samp Hamn Total Total	ng Equation	./Drille uipmer /pe: ype/We ig Dept Depth: ID No.:	nt: F Sight: 1 th: 4	0.5	lbs feet bgs feet bgs	Well/Auger Di Well Screene Screen Slot S Filter Pack Us Surface Seal: Annular Seal: Monument Ty	d Interval: Size: sed:	0.10 inches #10/20 Concrete Bentonite	s: 2 of	2
							•	Page:	2 01	4



Logged by: CMP Date Started: 7/11/14 Surface Conditions: Concrete

84 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 34.5 feet West of NE corner of Bldg

Reviewed by: JAC/CCC Date Completed: 7/14/15



Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 25.5 feet bgs

L				Da	te Complete	a: //14/	15	Aiter Completion	20.0 1001.093
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Detail/ Water Depth
0 - - - -								Concrete (6 inches thick).	
5		1 1 3	40	0.0	RW09-05	SM		Moist, very loose, silty SAND, trace gravel, brown, no petroleum hydrocarbon odor (40-45-(Fill).	.5)
10		4 6 6	60	6.3	RW09-10	SM ML		Same as above, no petroleum hydrocarbon ode Moist, stiff, sandy SILT, gray, no petroleum hydrocarbon odor (60-40-0).	or.
15		7 18 23	100	1,054	RW09-15	SM		Moist, dense, silty fine SAND, gray, strong petroleum hydrocarbon odor (40-60-0).	
20 —		9 13 22	65	15.9	RW09-20	SM		Moist, dense, silty fine SAND, gray, weak petroleum hydrocarbon odor (35-65-0).	
Drillin Samp Hamm Total	g Eq ler Ty ler T Borir Well	o./Driller uipmen ype: ype/We ng Dept Depth: ID No.:	nt: HS Sp ight: 14 h: 40	.5	W Sollbs Fi feet bgs Aifeet bgs Air	/ell/Auger Di /ell Screened creen Slot S ilter Pack Us urface Seal: nnular Seal: lonument Ty	d Interval: iize: sed:	4" ID/10" OD inches 25.5 to 40.5 feet bgs 0.10 inches #10/20 Concrete Bentonite Flushmount	
Jiale	***	ווו שו	וט	. 570	IVI	onument Ty	he.	Page:	1 of 2



Logged by: CMP Date Started: 7/11/14 Surface Conditions: Concrete

84 feet North of NE corner of Bldg Well Location N/S: Well Location E/W: 34.5 feet West of NE corner of Bldg

Reviewed by: JAC/CCC Date Completed: 7/14/15



Site Address: 3901 SW Alaska Street

Seattle, WA

Water Depth At Time of Drilling

feet bgs

Water Depth

After Completion 25.5 feet bgs

				Du	te Complete	:u. //14/	10		/iitoi Gompiotion Z	
Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	e USCS Class	Graphic	Lithologic De	scription	Well Detail/ Water Depth
25 — -		13 18 22	80	15.7	RW09-25	SM		Wet, dense, silty fine SAND, petroleum hydrocarbon odd	gray, moderate r (40-60-0).	
30 —		10 28 27	100	0.0	RW09-30	ML		Wet, hard, SILT with fine sai petroleum hydrocarbon odd		
35 —		10 13 21	100	0.0	RW09-35	ML		Same as above, no petroleu (75-25-0).	m hydrocarbon odor	
40 —	X	5 15 18	100	0.0	RW09-40	ML		Wet, hard, SILT, some fine s petroleum hydrocarbon odd	eand, gray, no or (90-10-0).	
- - - 45 —								Boring was terminated at 40 surface (bgs). Four-inch-dia installed to a depth of 40 fee 25.5 to 40 feet bgs, silica sa feet bgs, bentonite seal fron concrete from 0 to 3 feet bg surface grade with a flushm	meter well RW09 was et bgs, screened from nd from 20.5 to 40.5 n 3 to 20.5 feet bgs, s, and finished at	
Drillir Samp Hamr Total Total	ng Eq oler T ner T Borir Well	o./Drille uipmer ype: ype/We ng Dept Depth: ID No.:	nt: HS Sp eight: 14 th: 40	.5	lbs Ffeet bgs Sfeet bgs A	Vell/Auger Di Vell Screene Screen Slot S Filter Pack Us Surface Seal: Annular Seal: Monument Ty	d Interval: ize: sed:	4" ID/10" OD inches 25.5 to 40.5 feet bgs 0.10 inches #10/20 Concrete Bentonite Flushmount	Notes/Comments:	2 of 2
							•		Page: 2	2 01 2

APPENDIX C DEWATERING SYSTEM MASS CALCULATIONS



Table C-1 Estimated Volume and Mass Calculations for GRPH in Soil and Groundwater SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

GRPH Concentration ⁽¹⁾	Area ⁽²⁾	Thickness ⁽³⁾	Volume		Total Soil Mass ⁽⁴⁾	Total Soil Mass	Total Soil Mass	GRPH Mass Subtotal	GRPH Mass Subtotal	GRPH Mass Subtotal	GRPH Mass Subtotal ⁽⁵⁾
(mg/kg)	(square feet)	(feet)	(cubic feet)	Porosity	(tons)	(pounds)	(kilograms)	(milligrams)	(kilograms)	(pounds)	(gallons)
25,000	1,750	13	22,750	0.2	1,475	2,957,500	1,341,522	33,538,050,000	33,538	73,951	12,025
2,750	3,800	13	49,400	0.2	3,202	6,422,000	2,913,019	8,010,802,800	8,011	17,664	2,872
Totals								41,548,852,800	41,549	91,615	14,897

NOTES:

(1) Assumed soil is saturated near the USTs based on the presence of SPH in GLMW-2; used a GRPH concentration of 25,000 mg/kg for this area; the average soil concentration from 18 to 22 feet bgs was used to estimate the mass for the remaining area of the GRPH soil contamination.

(2) The aerial extent of contamination is based on subsurface investigations completed at the SKS Shell Property, reference draft RIFS report dated January 14, 2013.

bgs = below ground surface

GRPH = gasoline-range petroleum hydrocarbons

mg/kg = milligrams per kilogram

RIFS = Remedial Investigation/Feasibility Study

SPH = seperate-phase hydrocarbons

UST = underground storage tank

	GRPH				Total Groundwater	Total Groundwater				
	Concentration ⁽¹⁾	Area ⁽²⁾	Thickness ⁽³⁾		Volume	Volume	GRPH Mass Subtotal	GRPH Mass Subtotal	GRPH Mass Subtotal	GRPH Mass Subtotal ⁽⁵⁾
	(μg/L)	(square feet)	(feet)	Porosity ⁽⁴⁾	(cubic feet)	(liters)	(micrograms)	(grams)	(pounds)	(gallons)
SPH	25,000	190	1	0.2	38	1,076	26,900,960	27	0.1	0.01
ND to SPH	5,500	5,360	17	0.2	18,224	516,045	2,838,249,498	2,838	6	1
Totals							2,865,150,458	2,865	6	1

NOTES:

Total Estimated Mass

Total Estimated GRPH Mass in Soil 14,897 gallons
Total Estimated GRPH Mass in Groundwater 1 gallon

Total Estimated Area with GRPH Exceedances

14,898 gallons 5,550 square feet μ g/L = micrograms per liter

GRPH = gasoline-range petroleum hydrocarbons

ND = non-detect

RIFS = Remedial Investigation/Feasibility Study

SPH = separate-phase hydrocarbons

⁽³⁾ Thickness was estimated at 13 feet based on existing cross-sections - reference draft RIFS report dated January 14, 2013.

⁽⁴⁾Assumed a multiplier of 1.75 from bank yards to tons.

⁽⁵⁾ Weight of gasoline ranges from 5.8 to 6.5 pounds per gallon; used a value of 6.15 pounds per gallon.

⁽¹⁾ Assumed an 8-foot radius around SPH well GLMW-2; used the average groundwater concentration for the remaining wells to estimate the mass for the remaining area of the GRPH groundwater contamination.

⁽²⁾ The aerial extent of contamination is based on subsurface investigations completed at the SKS Shell Property, reference draft RIFS report dated January 14, 2013.

⁽³⁾ Thickness was estimated at 17 feet based on existing cross sections and well screen intervals, reference draft RIFS report dated January 14, 2013.

⁽⁴⁾ Porosity is estimated at 0.20 due to the low groundwater yield during a pump test performed at the SKS Shell Property on March 19, 2013.

⁽⁵⁾ Weight of gasoline ranges from 5.8 to 6.5 pounds per gallon; used a value of 6.15 pounds per gallon.



Table C-2 Assumption for Mass Balance SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

Porosity

The porosity value of 0.20 was estimated by a licensed Professional Geologist and Professional Hydrogeologist based on the available data and their professional experience. The data reviewed included the sieve analysis from MW104 and the geology beneath the Property/Site from the boring logs.

Mass Partitioning

The mass was partitioned between soil and groundwater based on soil and groundwater samples collected from the Property/Site.

The area of impacted soil and groundwater is based on the soil and groundwater samples collected from the Property/Site.

Soil Mass Estimate

Based on soil analytical data across the Property/Site, there are soil exceedances above the Washington State Model Toxics Control Act Method A cleanup levels for chemicals of concern from 12 to 25 feet below ground surface for an impacted soil thickness of 13 feet.

Based on the presence of separate-phase hydrocarbons in GLMW-2, it was assumed that the soil is saturated around the underground storage tank bed, which is why product is evident in GLMW-2. A gasoline-range petroleum hydrocarbon concentration of 25,000 milligrams per kilogram (mg/kg) was assumed for the soil saturation limit.

For the remaining impacted soil area, we evaluated the average concentration from 12 to 17 feet below ground surface (bgs), 18 to 22 feet bgs, and 23 to 25 feet bgs. The average concentration for each range was 1,356, 2,755, and 609 mg/kg, respectively. We used the highest concentration average of 2,750 mg/kg from 18 to 22 feet bgs and applied that to the remaining area for a conservatively high mass estimate.

Groundwater Mass Estimate

Based on the analytical results from wells screened on the Property/Site, it was assumed that impacts to saturated zone extend from approximately 23 to 40 feet bgs for an impacted groundwater zone 17 feet thick.

Based on the presence of separate-phase hydrocarbons in GLMW-2, we extended an 8-foot radius around the well.

The groundwater concentration assumed for the remaining area of the groundwater plume was based on the historical average groundwater concentrations, a conservative approach.

Uncertainties

Concentration ranges for soil and groundwater are based on the historical laboratory analytical data for the Property/Site.

Extent of soil and groundwater contamination beneath the building and underground storage tank bed.

The extent of soil contamination/mass in the right-of-way can be further refined after the installation of the remaining 7 dewatering/remediation wells.



Table C-3 Actual Volume and Mass Calculations for GRPH in Groundwater SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

		Extracted Gr	oundwater		Hydrocarbon Recovery—Aqueous-Phase								
	Recovere		Recovered		GRPH		Benzene						
		Discharge	Between	Influent GRPH	GRPH	Cumulative	Influent Benzene	Benzene	Cumulative				
Sample	Pore	Flow Totalizer	Visits	Concentration ⁽¹⁾	Removed ⁽²⁾⁽³⁾	Removed ⁽³⁾⁽⁴⁾	Concentration ⁽¹⁾	Removed ⁽²⁾⁽³⁾	Removed ⁽³⁾⁽⁴⁾				
Date	Volume	(gallons)	(gallons)	(μg/L)	(lb)	(lb)	(μg/L)	(lb)	(lb)				
04/06/15	1	45,000	45,000	3,100	1.2	1	78	0.03	0.03				
04/13/15	2	90,000	45,000	5,300	2.0	3	333	0.13	0.15				
05/29/15	3	135,780	45,780	1,300	0.5	4	60	0.02	0.18				

NOTES:

μg/L = micrograms per liter

GRPH = gasoline-range petroleum hydrocarbons

⁽¹⁾Influent samples collected prior to discharging into the water storage tank and being removed by Marine Vacuum Services.

 $^{^{(2)}}$ Mass removal weight (lb) = gallons recovered x concentration (μ g/L) x conversion factor (8.344E-9 lb-L/ μ g-gallon).

⁽³⁾ Nondetectable influent concentrations assumed to be 50% of the laboratory's lower reporting limit. Removal rates based upon this assumption are lb = pound(s) shown in *italics*.

⁽⁴⁾ Cumulative mass of GRPH or benzene removed (lb) = mass removal between sampling visits (lb) + previous cumulative total (lb).



Table C-4 Groundwater Laboratory Analytical Results for Dewatering System Performance SKS Shell Property 3901 Southwest Alaska Street Seattle, Washington

			Analytical	Results ⁽¹⁾ (microgran	ns per liter)			
Sample Location	Sample Date	GRPH ⁽²⁾	DRPH ⁽³⁾	ORPH ⁽³⁾	Benzene ⁽⁴⁾	Toluene ⁽⁴⁾	Ethylbenzene ⁽⁴⁾	Total Xylenes ⁽⁴⁾
				Groundwater Influen				, , ,
HOLDING TANK	04/06/15	3,100	1,100 ^X	<250	78	9.3	120	460
RW02	04/13/15	4,400	2,800 ^X	440 ^x	<1	2.7	120	520
RW04	04/13/15	7,100	2,200 ^X	370 ^x	120	23	400	890
RW07	04/13/15	4,900	6,800 ^x	920 ^x	1,200	16	8.3	58
RW09	04/13/15	4,800	2,200 ^X	440 ^X	13	25	150	56
HOLDING TANK	05/29/15	1,300	1,400	<250	60	2.8	7.7	100

NOTES:

Laboratory Note:

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

DRPH = diesel range petroleum hydrocarbons

GRPH = gasoline range petroleum hydrocarbons

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil range petroleum hydrocarbons

 $^{^{(1)}}$ Sample location is given in the first column and is assumed to be representative of the pore volume.

 $^{^{(2)}}$ Analyzed by Method NWTPH-Gx.

⁽³⁾Analyzed by Method NWTPH-Dx

 $^{^{(4)}}$ Analyzed by U.S. Environmental Protection Agency Method 8060C.

^xThe sample chromatographic pattern does not resemble the fuel standard used for quantitation.

APPENDIX D UST DECOMMISSIONING DOCUMENTS



Request to Waive 30 Day Waiting Period **To be completed by Person Submitting Request**

UST ID # (if known):			
Full Site Address: 3901 SW	/ Alaska Street, Seattle WA		
Owner/ Operator: LMI We	st Seattle		
Contact Phone #: 206-708-	2296		
Waiver Requested for 3 (Circle one or both)		IMISSION	INSTALL
Person and Company Subm	nitting Request: Rob Roberts	w/SoundEarth Strategie	<u> </u>
Contact phone #: 206-245-	1184		
Reason for Submitting Req (Circle all that apply)	uest: ENVIRONMENTA	L HAZARD OTHER	HEALTH HAZARD
Explain Reason: Two UST	s are holding up construction	project	
Date Request Submitted: A	pril 2, 2015		
Date and Time of Construc	tion: April 2-3, 2015	L. T.	
For all that apply	Name	Contact Phone Number	ICC Certification Number
INSTALLER			
DECOMMISSIONER	Filco	206-547-8384	1033517
SITE ASSESSOR	Elizabeth Forbes	802-238-3203	8163382
Completed 30 Day Notice	Attached to Waiver Reques	et Form? (Circle one)	YES NO
Department of Ecology	Response to Request (to b	e completed by UST	Inspector):
WAVIER GRAN	TED WAIVER D	ENIED	.11
Inspector: Andrew	A. Tuelo Signature	and Date: Charles	Of the 04032015

DECOMMISSIONER(S) SHALL HAVE A COPY OF 30 DAY NOTICE AND A COPY OF THE WAIVER REQUEST FORM ON SITE DURING ALL DECOMMISSIONG RELATED ACTIONS *



underground storage tank (ust) 30-DAY NOTICE

(See back of form for instructions)

FOF	OFFICI	E USE O	NLY	
Site ID#			•	
FSID#				
		· · · · · · · · · · · · · · · · · · ·	Marie e e e e e e e e e e e e e e e e e e	**********

JLUGY of Washington		
Please ✓ the appropriate box:	☐ Intent to Install	Intent to Close

HQ (360)407-7170 / Central (509)575-2490 / Eastern (509)	9)329-3400 / Northwest (425)649-7000 / Southwest (360)407-6300	
SITE INFORMATION	OWNER INFORMATION (this form will be returned to this address)	
	LM WEST SEATTLE	
Tag or UBI number ALASKA STAKKS TEXALO	UST Owner/Operator 1325 Uth Aut. Suite 1700	
Site Name 390 SW AZASKA ST	Mailing Address PO Box VA 98/01	
Site Physical Address SEATTLE	City Kella Kahat 206-708-2296	
City Zip Code	Owner/Operator Phone Number Lelly, Kahort @ lennar. Com	
Site Phone Number	Owner/Operator Email Address	
TANK INFORMATION		
	e Project is Comments:	
	1 ZOIS SEE ATTACKTO 31-DAY WAIVER REQUEST	
	·	
1) SERVICE PROVIDER INFORMATION - check the appropriate boxes	3	
	UST services MUST be ICC certified or have pproved by the Department of Ecology.	
☐ Installer ☐ Decommissioner ☐ Site Assessor	Nathan Montagner	
Service Provider Company Name Contact Person 547-8384		
Certified Service Provider Name Contact Phone Number Note Contact Phone Number Note Contact Phone Number		
CC Certification # 033517 Contact Email Address		
2) SERVICE PROVIDER INFORMATION (REQUIRED IF USING MOR	E THAN ONE PROVIDER) - check the appropriate boxes	
Installer Decommissioner At Site Assessor	Pub Poblas	
Service Provider Company Name	Contact Person	
Certified Service Provider Name	Contact Phone Number (1) Sector Sounder hinc. Com	
ICC Certification #	Contact Email Address	

ECY 020-95 (Rev. Feb. 2012)

Imke, Andrew (ECY)

From:

Rob Roberts [rroberts@soundearthinc.com]

Sent:

Thursday, April 02, 2015 12:51 PM

To:

Imke, Andrew (ECY)

Cc:

Goldstein, Libby (ECY)

Subject:

SKS Alaska Street Texaco 30-day wiaver

Attachments:

3901 SW Alaska 30 Day Waiver Request Apr02 2015.doc.pdf

Hi Drew,

Today we encountered 2 USTs at 3910 SW Alaska Street. These are at our Consent Decree site in West Seattle being managed by Libby Goldstein.

The tanks were discovered during removal of the top few feet of soil in an area not previously known to contain tanks. They appear very old and are likely from the original 1930s-era service station. The tanks may contain waste oil and/or gasoline.

The tanks are holding up the excavation in the area. Can you issue a waiver for the 30-day notice? Please find attached documents.

Thank you

Rob Roberts Senior Scientist



SoundEarth Strategies, Inc. 2811 Fairview Ave East, Suite 2000

Seattle, Washington 98102 Main: 206.306.1900

Direct: 206.245.1184 Mobile: 425.985.6253

Your Seattle Fire Department

APPLICATION FOR TEMPORARY PERMIT



Code 7908	Commercial Tank Removal/Decommissioning
Permit Fee: \$218.00	Date Issued: 4/8/2015
TO BE COMPLETED BY PERMI	Tank(s) must be removed from site on the same day as permit is issued!
FIRM NAME SOUND	EARTH STRATEGIES CONSTRUCTION LLC
MAILING ADDRESS 28	I FAIRVIEW AVE EAST # 2000
	WAT STATE WA ZIP 98102
	101 SW ALASKA- 8T STATILE
CONTACT PERSON 'CA'	MULLENDORF PHONENUMBER (206) 455-4849
	Tank Size(s): 500 1000 Aboveground tank
Product(s) Previously Contain	ned: GAS/OIL Underground tank
	nt inspection and certificate required for all tanks regardless of size or contents)
Abandonment-in-Place (and/or unknowns)	Marine Chemist certificate required for tanks previously containing Class I flammable liquids
Hot work being conduct	d: No
Permit applications may be s	abmitted in person weekdays from 8:00 a.m. to 5:00 p.m., or mailed to:
Seattle Fire Department	To pay with a Visa or Master Card: Fax or email this application
Fire Marshal's Office -]	
220 Third Ave S, 2 nd Flo Seattle, WA 98104-260	· · · · · · · · · · · · · · · · · · ·
	t least 24 hours prior to needed inspection time to arrange for an appointment.
	REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
	WED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!
Downingion is hereby granted	to remove or decommission the tank(s) identified in this permit in accordance with the attached
conditions, all noted specia	conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local is NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED
	Tank removal/decommissioning must be performed, or directly supervised, by an ICC certified individual (IVAC 173-360-600)
pheciai beamit commingue:	and telegrands contains sometimes are becoming a survey of survey of
FMO USE:	APPROVED BY
Chook No.: 00030020	1406/5 Inspector: 10 H- LOW TRACE SFD ID# SFD
Receipt No.: 5-2440	Name of Marine Chemist States Botton Certificate # 827

COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS

- 1. Two (2) portable fire extinguishers each having a minimum rating of 40 BC shall be on site within 50 feet of the operation. Fire extinguishers shall be inspected, approved and certified annually.
- Rope or ribbon barricades located at least 10 feet from the tank shall surround every outdoor storage tank removal or decommissioning operation or the operation shall be enclosed in a fenced yard.
- 3. "No Smoking" signs shall be posted in readily visible locations.
- 4. No hot work is allowed on a tank system prior to issuance of this permit and the tank is certified "Safe for Hot Work" by a Certified Marine Chemist. Hot work means any activities involving riveting, welding, burning, brazing, soldering, heating, chopping, grinding, ripping, drilling, cutting with a chop saw or "Sawzall", abrasive blasting, use of powder-actuated tools or similar spark-producing operations, crushing or mechanically shearing to facilitate opening for cleaning, disposal, scrapping for recycling purposes.
- 5. A separate temporary Seattle Fire Department permit (Code 4913) or a validation number assigned in conjunction with an annual hot work permit (Code 4911 or 4912) is required prior to any hot work operations.
- 6. Permits may cover multiple tanks located at the same address. If additional tanks are to be removed or abandoned at later dates, separate permits shall be obtained. Each address location requires a separate permit application regardless of whether multiple address locations are physically next to one another.
- 7. Additional fees will be charged if inspectors are required to work other than normal business hours. (Normal business hours are Monday through Friday, 8:00 a.m. to 4:30 p.m.)
- 8. No excavation of an underground tank is permitted prior to inspection by the Seattle Fire Marshal's Office. Exception: Removal of the top layer of asphalt or concrete only with no removal of dirt, pea gravel or soil over the underground storage tank. Further excavation may be allowed by a Seattle Fire Department Special Hazards Unit Inspector prior to the initial inspection depending on conditions and if the tank has been inerted by a Marine Chemist who is present on site. The name of the inspector and the time permission was given shall be made available at time of inspection.
- 9. Prior to inspection, to ensure tanks and connected piping are completely free of all flammable or combustible liquids, a receipt or certificate must be on site indicating the tanks have been pumped and rinsed by an approved company. Product and rinse water must be disposed of in an approved manner.
- 10. For tanks being decommissioned in place that previously contained Class I liquids, a Certified Marine Chemist certificate must be issued and available on site for inspection certifying that the tank has been properly inerted prior to filling.
- 11. No tank shall be filled prior to an inspection by the Seattle Fire Marshal's Office.
- 12. Tanks being decommissioned in place must be filled with a lean concrete mixture. Filling with foam is prohibited.
- 13. A Marine Chemist's certificate verifying the tank has been properly inerted or is otherwise certified "Safe for Hot Work" shall be issued and available on site for inspection for each underground and aboveground tank being removed regardless of the product previously contained.
- 14. If tanks are being removed, the tanks' atmosphere must be inert using one of the following approved methods:
 - Dry ice (pellets or chunks of solid CO₂). Minimum 40 lbs per 1000 gallons of tank capacity is recommended.
 - Compressed CO₂ gas in cylinders (Note: This method may only be performed by a Certified Marine Chemist).
 - Purging with air (gas-freeing) using Venturi tube apparatus, with proper bonding and grounding and after the tank has been pumped and rinsed by an approved company.
- 15. A maximum reading of less than 6% of oxygen must be obtained prior to the removal of the tanks if CO₂ or another inert gas, as approved by the Marine Chemist, is used to inert the tank or, a reading of 0% LEL must be obtained prior to removal of the tank if the air-purging (Venturi air moving devices) method is used.
- 16. All local, state and federal regulations for confined space entry shall be complied with prior to entering an underground storage tank.
- 17. Tanks with baffles to prevent movement of liquid must be certified gas-freed or inerted by a Certified Marine Chemist or a Petroleum Industry Safety Engineer regularly engaged in that business prior to removal.
- 18. Tanks being removed must be removed from the site and relocated to a remote, approved facility on the same day that the permit is issued.
- 19. During the hot work operations, digging, excavating, hauling or transport of petroleum storage tanks that have not been cleaned and gas-freed, tanks must be inerted to less than 6% oxygen. All openings are to be cap closed and secured except for one 1/8" hole drilled through a cap. These tanks are to be sprayed painted with "INERTED, DO NOT ENTER" or "INERTED WITH CO₂, NOT SAFE FOR WORKERS".

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR
CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124
Telephone (206) 762-0240
FAX (206) 763-8084
1-800-540-7491

MARINE VACUUM SERVICE, INC.

TRIPLE RINSE CERTIFICATE

Tank Size: 10869015
Tank Description: Heat Oil TANK
Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard and that all rinsate has been disposed of in accordance with Federal, State and Local regulations.
Tank Owner: CHINN CONST.
Sub-Contractor: Sound FARTH STRAT.
M.V.S. Representative:
Date: 4-8-15
Notes:

Marine Vacuum Service, Inc. PO. Box 24263 Seattle, Washington 98124

GENERAL CONTRACTOR
CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

MARINE VACUUM SERVICE, INC.

TRIPLE RINSE CERTIFICATE

Tank Size: 500 gals.
Tank Description: Heat Oil Tank
Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard and that all rinsate has been disposed of in accordance with Federal, State and Local regulations.
Tank Owner: CHINN CONST.
Sub-Contractor: SOUND FARTH STRAT.
M.V.S. Representative:
Date: 4-8-15
Notes:

George D Blair - Northwest Marine Chemist, Inc. P. O. Box 7084, Tacoma, WA 98406

Office: 253-752-0149 Fax: 253-759-3523

Email: gbcmc637@gmail.com

MARINE CHEMIST CERTIFICATE

Serial

637-00408 Page 1 of 1

Rivers Edge Environmental, Inc. LMI West Seattle Apr 8, 2015

outself house in the

Underground Storage Tank 391 SW Alaska St.

Specific intention of Vesse

Waste Oil/Heating Oil

O2, LEL, Visual

10:22

ers warfn ma.

SHVON CONTIN

Inspected Spaces:

Tank Farm

Group 1, 1-1,000 Gal. UST Group 2. 1-500 Gal. UST

Safety Designations:

NOT SAFE FOR WORKERS SAFE FOR LIMITED HOT WORK

LIMITATIONS:

Specific Location: At job site.

Hot Work Type: These Tanks have been purged with CO2 to <6% Oxygen and are safe for excavation and cutting of access.

inert Medium: Carbon Dioxide (CO2)

Method for maintaining safe conditions: All openings are and

must remain secured.

Measures for safe disposal of inert gas: Ventilate and test for

20.8% Охудел to properly dispose of inerting gas.

Instructions

Maintain firewatch with charged extinguisher at ready during hot work operations.

Test Results Inspected spaces group 1

% O₂ 5.8%

% LEL N/A

N/A

Inspected spaces group 2

4.9%

In the event of physical or atmospheric changes affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, this certificate is voided; spaces not listed on the Certificate are not to be entered unless authorized on another Certificate and/or maintained in accordance with OSHA 29 CFR 1915; or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist. Unless otherwise stated on the Certificate, all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the competent person or the authority having jurisdiction as applicable in support of work prior to entry or recommencement of work.

QUALIFICATIONS: Transfer of ballast, cargo, fuel or manipulation of valves or closure equipment tending to alter conditions in pipelines, tanks, or compartments subject to gas accumulation, unless specifically approved on this Certificate, requires inspection and a new Certificate for spaces so affected. All lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated. Movement of the vessel from its specific location voids the Certificate unless shifting of the vessel within the facility has been specifically authorized on this certificate. STANDARD SAFETY DESIGNATIONS: (partial list, paraphrased from NFP 306, Subsections 4.3.1 through 4.3.6)

ATMOSPHERE SAFE FOR WORKERS: In the compartment or space so designated (a) the oxygen content of the atmosphere shall be at least 19.5 percent and not greater than 22 percent by volume; (b) the concentration of flammable materials is below 10 percent of the lower explosive limit; (c) any toxic materials in the atmosphere associated with cargo, fuel, tank coatings, inerting mediums, or furnigants are within permissible concentrations at the time of the inspection.

NOT SAFE FOR WORKERS: In the compartment or space so designated, entry shall not be permitted.

ENTER WITH RESTRICTIONS: In the compartment or space so designated, entry for work is permitted only if conditions of proper protective equipment, or clothing, or lime, or all of the aforementioned, as appropriate, are as specified.

SAFE FOR HOT WORK: In the compartment or space so designated (a) the oxygen content of the atmosphere is not greater than 22 percent by volume; (b) the concentration of flammable materials in the atmosphere is less than 10 percent of the lower explosive limit, (c) the residues, scale, or preservative coatings are cleaned sufficiently to prevent the spread of fire and are not be capable of producing a higher concentration than permitted by (a) or (b); (d) all adjacent spaces, containing or having contained flammable or combustible materials shall be sufficiently cleaned of residues, scale, or preservative coatings to prevent the spread of fire; or they are inerted. Ship's fuel tanks, Iube tanks, or engine room or fire room bilges, or other machinery spaces, are treated in accordance with the Marine Chemist's

SAFE FOR LIMITED HOT WORK: In the compartment or space so designated (a) portions of the space meet the requirements Safe for Hot Work and Partial Cleaning, as applicable, or (b) the space is inerted, adjacent spaces meet the requirements for Safe for Hot Work, and hot work is restricted to specific locations; (c) portions of the space shall meet the requirements for Safe for Hot Work, as applicable; and the nature or type of hot work shall be limited or restricted.

NOT SAFE FOR HOT WORK. In the compartment or space so designated, hot is not permitted.

CHEMISTS ENDORSEMENT. This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation

es receipt of this Certificate under NFPA 306 and understands conditions and limitations under which it was issued, and the requirements for maintaining its validity."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Apr 8, 2015

Rivers Edge Environmental,

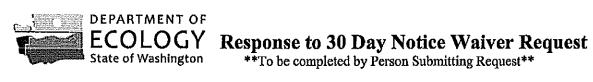
637 CMC No.

Authorized Representative

Date

Company

Signed Marine Chemist



UST ID #
Full Site Address: 3901 SW Alaska Street, Seattle WA
Owner/ Operator: LMI West Seattle
Contact phone #: 206-708-2296
Waiver Requested for 30 Day Notice to: (Circle one or both) DECOMMISSION INSTALL
Person and Company Submitting Request: ROB POBFORS W/ Source Earth
Contact phone #: 766-245-1184
Reason for Submitting Request: A UST 18 HOLOING UP CONSTRUCTION
Date Request Submitted: APRIL 15, LOIS
Date and time of Construction: APRIL 16, 2015
Name, Contact Phone Number, and ICC Certification Number for all that apply:
INSTALLER:
DECOMMISSIONER: FILCO \$1033517
SITE ASSESSOR: L12 FOR BES & 8163382
Completed 30 Day Notice Attached to Waiver Request Form? (Circle one) NO
Department of Ecology Response to Request (to be completed by UST Inspector):
WAVIER GRANTED WAIVER DENIED Inspector: Signature and Date: Signature and Date: **DECOMMISSIONER(S) SHALL HAVE A COPY OF 30 DAY NOTICE AND A COPY OF THE WAIVER REQUEST FORM ON SITE DURING ALL DECOMMISSIONG RELATED ACTIONS ****

LETTER OF CERTIFICATION

April 16th, 2014

Sound Earth Strategies 2811 Fairview Ave E, Suite 2000 Seattle, Washington 98102

RE: Commercial Underground Heating Oil Tank at 3901 SW Alaska Street Seattle, Washington 98116

This is to certify that Filco Company, Inc. has removed one approximate 1,000 gallon underground commercial gasoline tank from the above named property. The tank and its contents were disposed of according to the codes and guidelines set forth by the Washington State Department of Ecology and local Fire Department regulations and the decommissioned tank meets these standards.

Phil Suetens

Phil Suetens President Filco Co., Inc.

BILL OF LADING PRODUCT TRANSPORT MANIFEST MARINE VACUUM SERVICE, INC.

Nº 11802

24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240 FAX NUMBER 206-763-8084 TRUCK NUMBER DATE 416

TRUCK NUMBER_

TO DESTINATION MAY Vac NAME STREET CITY/STATE	FROM SHIPPER FICO NAME STREET CITY/STATE	Co.	
QUANTITY PROPER SHIPPING NAME		UN (PLACARD) NUN	MBER
200 gax Dilu Water.	\cap		
HOOK IKTANKAPOYLDISAGS	d		
dwash bul	out to action		and the second second second second
5000 Sand SLUDGE on -	he Tank		
RECEIVER J DATE 4 16 15	SHIPPER		DATE ALL IS
NOTE:			,

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminates including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectable levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recover Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

MANINE GILLING CLARIFICATE SOUND TESTING, INC. SERIAL NO. 0178379 206-932-0206 24 HOUR SERVICE Page_ F.LCO Vessel Owner or Agent Survey Requested by Date A 5 US Specific Location of Vessel Type of Vessel 02, 1302 HRS Last Three (3) Loadings Tests Performed Time Survey Completed SA 457 000 RANSPORT 0 0 5K313 00037 In the event of physical or atmospheric changes affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, this certificate is voided, spaces not listed on the Certificate are not to be entered unless authorized on another Certificate and/or maintained in accordance with OSHA 29 CFR 1915; or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist. Unless otherwise stated on the Certificate, all spaces and affected adjacent spaces are to be reinspected daily or more often as necessary by the competent person in support of work prior to entry or CUALIFICATIONS: Transfer of ballast, cargo, fuel, or manipulation of valves or closure equipment tending to alter conditions in pipelines, tanks, or compartments subject to gas accumulation, unless specifically approved on this Certificate, requires inspection and a new Certificate for spaces so affected. All lines, vents, heating coils, valves, and similar enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated. Movement of the vessel from its specific location voids the Certificate unless shifting of the vessel within the facility has been specifically authorized on this Certificate. STANDARD SAFETY DESIGNATIONS: (partial list, paraphrased from NFPA 306, Subsections 4.3.1 through 4.3.6). ATMOSPHERE SAFE FOR WORKERS: In the compartment or space so designated (a) the oxygen content of the atmosphere is at least 19.5 percent and not greater than 22 percent by volume; (b) the concentration of flammable materials is below 10 percent of the lower explosive limit; (c) any toxic materials in the atmosphere associated with cargo, fuel, tank coatings, inerting mediums, or furnigants are within permissible concentrations at the time of the inspection. NOT SAFE FOR WORKERS: In the compartment or space so designated, entry is not permitted. ENTER WITH RESTRICTIONS: In the compartment or space so designated, entry for work is permitted only if conditions of proper protective equipment, or clothing, or time, or all of the aforementioned, as appropriate, are as specified. SAFE FOR HOT WORK: In the comparison, as appropriate, are as specimed.

SAFE FOR HOT WORK: In the comparison to space so designated (a) the oxygen content of the atmosphere is not greater than 22 percent by volume; (b) the concentration of flammable materials in the atmosphere is less than 10 percent of the lower explosive limit; (c) the residues, scale, or preservative coatings are cleaned sufficiently to prevent the spread of fire and are not capable of producing a higher concentration than permitted by (a) or (b); (d) all adjacent spaces, containing or having contained flammable or combustible; materials shall be sufficiently cleaned of residues, scale, or preservative coatings to prevent the spread of fire, or they are interest. Ship's fuel tanks, lube tanks, or engine room or fire room bilges, or other machinery spaces, are treated in accordance with the Marine Chemist's requirements. SAFE FOR LIMITED HOT WORK: In the compartment or space so designated (a) portions of the space meet the requirements for Safe for Hot Work and Partial Cleaning, as applicable, or (b) the space is inerted, adjacent spaces meet the requirements for Safe for Hot Work, and hot work is restricted to specific locations; (c) portions of the space shall meet the requirements for Safe for Hot Work, as applicable, and the nature or type of hot work is limited or restricted. NOT SAFE FOR HOT WORK: In the compartment or space so designated, hot work is not permitted. CHEMISTS ENDORSEMENT. This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation. "The undersigned acknowledges receipt of this Certificate under NFPA 306 and understands conditions and limitations under which it was issued, and the requirements for maintaining its validity."

71100

Signed _____Name

20M-11-08

1-11/0 / the # 725

Marine Chestown Testing, Inc. Co. 206-932-0206

24 HOUR SERVICE

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Your Seattle Fire Department

APPLICATION FOR TEMPORARY PERMIT



Code 7908

Commercial Tank Removal/Decommissioning

Permit Fee: \$218.00	T	Date Issued:
TO BE COMPLETED BY PERMIT APPLIC	Tank(s) must be removed fr	om site on the same day as permit is issued!
FIRM NAME Filco Compan	y, Inc.	3
MAILING ADDRESS PO Box 31228		SUITE
CITY Seattle	STATE WA	ZIP 98103
JOBSITE ADDRESS 3901 SW Alask	a St	
CONTACT PERSON Nate Montgo	mery PHONE NUMBER	(206)423-1791
Abandonment-in-Place (Marine Cand/or unknowns) Hot work being conducted: Permit applications may be submitted Seattle Fire Department	tion and certificate required for all tanks regard. Chemist certificate required for tanks previously No Yes (If yes, a sepa I in person weekdays from 8:00 a.m. to 5:00 p	p.m., or mailed to: er Card: Fax or email this application
Fire Marshal's Office – Permits 220 Third Ave S, 2 nd Floor Seattle, WA 98104-2608	THEN CALL US TO CONFIRI Tel: (206) 386-1450 / Fax: (E-mail: <u>permits@seattle.go</u>	
TANKS MAY BE REMOV	24 hours prior to needed inspection time to PED/DECOMMISSIONED ONLY AFTER FIR N A TANK SYSTEM PRIOR TO ISSUANCE	E DEPARTMENT INSPECTION
conditions, all noted special conditions regulations. THIS PERMIT IS NULL	ve or decommission the tank(s) identified in ons, and all applicable provisions of the Stand VOID IF PERMIT CONDITIONS A val/decommissioning must be performed, or directly sup	Seattle Fire Code, federal, state and local
FMO USE:	A BAD OVER DV	
Check No.:	APPROVED BY:	CPD ID#
Receipt No.:		SFD ID# Certificate #
Application ID#:		Confidence #

APPENDIX E SOIL REMOVAL SUMMARY



				Class of		Volume	(tons)
Ticket #	Truck Company	Truck Number	Date	Material	Destination	Class 2	Class 3
S001	Silver Streak	97	3/26/2015	3	Cemex	Class E	33.34
S002	Silver Streak	108	3/26/2015	3	Cemex		34.46
S003	Silver Streak	33	3/26/2015	3	Cemex		34.78
S004	Silver Streak	57	3/26/2015	3	Cemex		33.67
S005	Silver Streak	103	3/26/2015	3	Cemex		33.03
S006	Silver Streak	95	3/26/2015	3	Cemex		33.81
S007	Gary McCann	991	4/14/2015	2	Cemex	27.87	
S008	Silver Streak	119	4/14/2015	2	Cemex	32.91	
S009	Silver Streak	37	4/14/2015	2	Cemex	34.08	
S010	Silver Streak	161	4/14/2015	2	Cemex	34.87	
S011	Silver Streak	161	4/14/2015	2	Cemex	31.78	
S012	Silver Streak	43	4/14/2015	2	Cemex	30.42	
S013	Silver Streak	171	4/14/2015	2	Cemex		30.38
S014	Silver Streak	95	4/17/2015	3	Cemex		35.26
S015	CTI	410	4/17/2015	3	Cemex		35.88
S016	Rivers Edge	5789-12	4/17/2015	3	Cemex		30.54
S017	Silver Streak	91	4/17/2015	3	Cemex		29.44
S018	Girard	3	4/17/2015	3	Cemex		34.45
S019	OMA	157	4/17/2015	3	Cemex		40.76
S020	OMA	156	4/17/2015	3	Cemex		41.61
S021	OMA	127	4/17/2015	3	Cemex		30.54
S022	Silver Streak	95	4/17/2015	3	Cemex		37.6
S023	CTI	410	4/17/2015	3	Cemex		37.81
S024	Silver Streak	91	4/17/2015	3	Cemex		34.38
S025	Rivers Edge	5789-12	4/17/2015	3	Cemex		32.23
S026	OMA	157	4/17/2015	3	Cemex		30.92
S027	OMA	156	4/17/2015	3	Cemex		33.42
S028	OMA	127	4/17/2015	3	Cemex		27.86
S029	СТІ	410	4/17/2015	3	Cemex		33.28
S030	Silver Streak	165	4/17/2015	3	Cemex		25.16
S031	Silver Streak	91	4/17/2015	3	Cemex		26.88
S032	Rivers Edge	5789-12	4/17/2015	3	Cemex		25.37
S033	Silver Streak	114	4/23/2015	3	Cemex		32.87
S034	Silver Streak	169	4/23/2015	3	Cemex		33.61
S035	Silver Streak	177	4/23/2015	3	Cemex		29.1
S036	Silver Streak	91	4/23/2015	3	Cemex		29.74
S037	Elk Heights	1	4/23/2015	3	Cemex		28.3
S038	Silver Streak	51	4/23/2015	3	Cemex		31.96
S039	Silver Streak	41	4/23/2015	3	Cemex		28.94
S040 S041	Silver Streak	127 49	4/23/2015	3	Cemex Cemex		32.98 31.72
	Silver Streak	_	4/23/2015				
S042	Silver Streak	55	4/23/2015	3	Cemex		34.18
S043	Silver Streak	47	4/23/2015	3	Cemex		35.94
S044	Silver Streak	93	4/23/2015 4/23/2015	3	Cemex		30.62 35.42
S045 S046	Fruhling Silver Streak	119	4/23/2015	3	Cemex Cemex		34.22
S046 S047	Nelson Layman	60	4/23/2015	3	Cemex		34.22
S047 S048	Silver Streak	175	4/23/2015	3			33.08
S048 S049	CTI	341	4/23/2015	3	Cemex Cemex		31.14
S050	Silver Streak	43	4/23/2015	3			33.4
S050 S051	Silver Streak	49	4/23/2015	3	Cemex		32.87
S051 S052	Silver Streak	177	4/24/2015	3	Cemex Cemex		31.39
S052 S053	Silver Streak	169	4/24/2015	3	Cemex		31.73



					Class of		Volume (tons)	
Ticket #	Truck Company	Truck Number	Date	Material	Destination	Class 2	Class 3	
S054	Silver Streak	127	4/24/2015	3	Cemex	Clubb L	29.71	
S055	Silver Streak	117	4/28/2015	3	Cemex		35.48	
S056	Silver Streak	129	4/28/2015	3	Cemex		33.83	
S057	Silver Streak	109	4/28/2015	3	Cemex		33	
S058	Silver Streak	93	4/28/2015	3	Cemex		28.8	
S059	Silver Streak	173	4/28/2015	3	Cemex		27.31	
S060	Silver Streak	37	4/28/2015	3	Cemex		25.9	
S061	Silver Streak	107	4/28/2015	3	Cemex		26.82	
S062	J2	J2	4/28/2015	3	Cemex		30.16	
S063	Nelson Layman	58	4/28/2015	3	Cemex		29.07	
S064	Silver Streak	108	4/28/2015	3	Cemex		26.58	
S065	CTI	422	4/28/2015	3	Cemex		27.44	
S066	CTI	420	4/28/2015	3	Cemex		28.28	
S067	Silver Streak	55	4/28/2015	3	Cemex		31.47	
S068	Silver Streak	117	4/28/2015	3	Cemex		25.72	
S069	Silver Streak	129	4/28/2015	3	Cemex		25.95	
S070	Silver Streak	109	4/28/2015	3	Cemex		29.41	
S071	Silver Streak	169	4/28/2015	3	Cemex		27.4	
S072	Silver Streak	173	4/28/2015	3	Cemex		26.28	
S073	Silver Streak	103	4/28/2015	3	Cemex		23.41	
S074	JJ	J2	4/28/2015	3	Cemex		30.81	
S075	Silver Streak	97	4/28/2015	3	Cemex		27.38	
S076	Nelson Layman	58	4/28/2015	3	Cemex		27.24	
S077	Silver Streak	108	4/28/2015	3	Cemex		29.53	
S078	Silver Streak	55	4/28/2015	3	Cemex		28.84	
S079	СТІ	422	4/28/2015	3	Cemex		24.65	
S080	СТІ	410	4/28/2015	3	Cemex		31.46	
S081	CTI	424	4/28/2015	3	Cemex		27.28	
S082	Silver Streak	117	4/28/2015	3	Cemex		32.77	
S083	Silver Streak	129	4/28/2015	3	Cemex		30.29	
S084	Silver Streak	109	4/28/2015	3	Cemex		28.72	
S085	Silver Streak	173	4/28/2015	3	Cemex		31.25	
S086	Silver Streak	J2	4/28/2015	3	Cemex		30.98	
S087	Silver Streak	97	4/28/2015	3	Cemex		29.05	
S088	Silver Streak	95	4/28/2015	3	Cemex		25.48	
S089	Nelson Layman	58	4/28/2015	3	Cemex		27.48	
S090	CTI	422	4/28/2015	3	Cemex		28.92	
S091	CTI	410	4/28/2015	3	Cemex		30.52	
S092	Silver Streak	125	4/28/2015	3	Cemex		28.99	
S093	Silver Streak	108	4/28/2015	3	Cemex		26.15	
S094	Silver Streak	117	4/28/2015	3	Cemex		30.06	
S095	Silver Streak	109	4/28/2015	3	Cemex		30.51	
S096	Silver Streak	51	4/28/2015	3	Cemex		31.83	
S097	Silver Streak	117	5/8/2015	3	Cemex		29.45	
S098	Silver Streak	175	5/8/2015	3	Cemex		29.79	
S099	Silver Streak	97	5/8/2015	3	Cemex		31.15	
S100	Girard	15	5/8/2015	3	Cemex			
S101	OMA	151	5/8/2015	3	Cemex		29.29	
S102	OMA	127	5/8/2015	3	Cemex		25.3	
S103	Silver Streak	114	5/8/2015	3	Cemex		25.31	
S104	Fischer	7	5/8/2015	3	Cemex		27.94	
S105	Silver Streak	91	5/8/2015	3	Cemex		27.08	
S106	Silver Streak	117	5/8/2015	3	Cemex		29.56	
S107	Gary McCann	991	5/8/2015	3	Cemex		22.44	
S108	Gary McCann	1075	5/8/2015	3	Cemex		31.33	
J±00	Cary Wiccarill	10/3	3/0/2013		CCITICA		31.	



\$110 Riv \$111 Silv	Truck Company						
S109 Silv S110 Riv S111 Silv	Truck Company			Class of		Volume	e (tons)
S109 Silv S110 Riv S111 Silv	Truck company	Truck Number	Date	Material	Destination	Class 2	Class 3
\$110 Riv \$111 Silv	ver Streak	95	5/8/2015	3	Cemex	Class E	31.83
S111 Silv	vers Edge	12	5/8/2015	3	Cemex		28.09
S112 Silv	ver Streak	169	5/8/2015	3	Cemex		29.69
	ver Streak	91	5/11/2015	3	Cemex		27.91
S113 Silv	ver Streak	95	5/11/2015	3	Cemex		29.05
S114 Silv	ver Streak	107	5/11/2015	3	Cemex		29.29
S115 Riv	vers Edge	12	5/11/2015	3	Cemex		28.34
S116 Ne	elson Layman	60	5/11/2015	3	Cemex		26.8
S117 Ne	elson Layman	58	5/11/2015	3	Cemex		26.57
S118 Silv	ver Streak	169	5/11/2015	3	Cemex		28.9
S119 ON	MA	132	5/11/2015	3	Cemex		27.47
S120 ON	MA	151	5/11/2015	3	Cemex		28.83
S121 ON	MA	153	5/11/2015	3	Cemex		27.42
S122 ON	MA	117	5/11/2015	3	Cemex		25.63
S123 ON	MA	130	5/11/2015	3	Cemex		29.25
S124 JJV	N	J2	5/11/2015	3	Cemex		29.63
S125 JJV	N	J3	5/11/2015	3	Cemex		27.51
	son	10	5/11/2015	3	Cemex		29.72
S127 ON	MA	154	5/11/2015	3	Cemex		28.74
	ver Streak	173	5/11/2015	3	Cemex		29.33
S129 Silv	ver Streak	95	5/11/2015	3	Cemex		29.19
S130 Riv	vers Edge	12	5/11/2015	3	Cemex		28.28
S131 ON		132	5/11/2015	3	Cemex		28.64
	elson Layman	58	5/11/2015	3	Cemex		26.87
S133 ON		151	5/11/2015	3	Cemex		26.56
S134 ON		153	5/11/2015	3	Cemex		30.46
	MA	130	5/11/2015	3	Cemex		26.93
S136 JJV		J2	5/11/2015	3	Cemex		27.82
S137 JJV		J3	5/11/2015	3	Cemex		26.7
	son	10	5/11/2015	3	Cemex		29.03
	ver Streak	117	5/11/2015	3	Cemex		29.58
	ver Streak	161	5/11/2015	3	Cemex		30.78
	ver Streak	107	5/11/2015	3	Cemex		29.29
S142 ON	ver Streak	117	5/11/2015	3	Cemex		24.72
	ver Streak ver Streak	95	5/11/2015	3	Cemex		29.6
	ver Streak MA	173 132	5/11/2015 5/11/2015	3	Cemex Cemex		29.19 29.51
	rard	17	5/11/2015	3	Cemex		29.51
	rard	11	5/11/2015	3	Cemex		24.67
	ver Streak	109	5/11/2015	3	Cemex		29.72
	ver Streak	169	5/11/2015	3	Cemex		27.65
	MA	12	5/11/2015	3	Cemex		27.81
	elson Layman	60	5/11/2015	3	Cemex		28.19
	MA	153	5/11/2015	3	Cemex		29.04
	elson Layman	58	5/11/2015	3	Cemex		31.31
	MA	130	5/11/2015	3	Cemex		25.59
S155 JJV		J3	5/11/2015	3	Cemex		27.19
	MA	151	5/11/2015	3	Cemex		29.08
	MA	154	5/11/2015	3	Cemex		29.94
	ver Streak	93	5/12/2015	3	Cemex		26.94
	ver Streak	107	5/12/2015	3	Cemex		26.85
	ver Streak	55	5/12/2015	3	Cemex		28.05
	MA	154	5/12/2015	3	Cemex		29.01
	ver Streak	95	5/12/2015	3	Cemex		29.28
S162 Silv		109	5/12/2015	3	Cemex		28.9



						Class of		Volum	e (tons)
Ticket #	Truck Company	Truck Number	Date	Material	Destination	Class 2	Class 3		
S164	Silver Streak	177	5/12/2015	3	Cemex	Class 2	28.98		
S165	Red-E Trucking	R38	5/12/2015	3	Cemex		28.69		
S166	Nelson Layman	60	5/12/2015	3	Cemex		25.28		
S167	OMA	153	5/12/2015	3	Cemex		29.71		
S168	OMA	151	5/12/2015	3	Cemex		30.92		
S169	OMA	132	5/12/2015	3	Cemex		27.68		
S170	OMA	131	5/12/2015	3	Cemex		30.87		
S171	11M	J2	5/12/2015	3	Cemex		29.26		
S172	11M	J3	5/12/2015	3	Cemex		30.45		
S173	Silver Streak	107	5/12/2015	3	Cemex		27.28		
S174	Silver Streak	51	5/12/2015	3	Cemex		27.79		
S175	Silver Streak	95	5/12/2015	3	Cemex		29.37		
S176	Silver Streak	177	5/12/2015	3	Cemex		29.03		
S177	Silver Streak	109	5/12/2015	3	Cemex		29		
S178	Red-E Trucking	R38	5/12/2015	3	Cemex		27.45		
S179	Nelson Layman	60	5/12/2015	3	Cemex		26.63		
S180	OMA	132	5/12/2015	3	Cemex		28.29		
S181	OMA	152	5/12/2015	3	Cemex		26.68		
S182	OMA	151	5/12/2015	3	Cemex		28.19		
S183	OMA	153	5/12/2015	3	Cemex		27.67		
S184	11M	J2	5/12/2015	3	Cemex		29.23		
S185	OMA	155	5/12/2015	3	Cemex		30.9		
S186	OMA	131	5/12/2015	3	Cemex		30.98		
S187	Nelson Layman	58	5/12/2015	3	Cemex		28.68		
S188	JJW .	J3	5/12/2015	3	Cemex		30.16		
S189	Silver Streak	117	5/12/2015	3	Cemex		28.98		
S190	Rivers Edge	5789-12	5/12/2015	3	Cemex		29.17		
S191	Silver Streak	107	5/12/2015	3	Cemex		30.6		
S192	Silver Streak	51	5/12/2015	3	Cemex		30.78		
S193	Silver Streak	93	5/12/2015	3	Cemex		26.28		
S194	Silver Streak	95	5/12/2015	3	Cemex		27.29		
S195	Silver Streak	187	5/22/2015	3	Cemex		24.61		
S196	Silver Streak	91	5/22/2015	3	Cemex		24.82		
S197	Silver Streak	41	5/22/2015	3	Cemex		27.6		
S198	Silver Streak	49	5/22/2015	3	Cemex		26.24		
S199	Silver Streak	171	5/22/2015	3	Cemex		28.23		
S200	Silver Streak	93	5/22/2015	3	Cemex		26.07		
S201	Silver Streak	45	5/22/2015	3	Cemex		25		
S202	Silver Streak	121	5/22/2015	3	Cemex		24.37		
S203	Silver Streak	95	5/22/2015	3	Cemex		28.17		
S204	Silver Streak	109	5/22/2015	3	Cemex		26.2		
S205	Silver Streak	108	5/22/2015	3	Cemex		27.33		
S206	Nelson Layman	60	5/22/2015	3	Cemex		25.03		
S207	Lloyd	86	5/22/2015	3	Cemex		26.95		
S208	Lloyd	186	5/22/2015	3	Cemex		25.43		
S209	Lloyd	108	5/22/2015	3	Cemex		28.63		
S210	Lloyd	112	5/22/2015	3	Cemex		27.57		
S211	11M	J2	5/22/2015	3	Cemex		32.04		
S212	Red-E Trucking	R39	5/22/2015	3	Cemex		30.3		
S213	Silver Streak	114	5/22/2015	3	Cemex		28.55		
S214	Silver Streak	49	5/22/2015	3	Cemex		27.05		
S215	Silver Streak	171	5/22/2015	3	Cemex		28.5		
S216	Silver Streak	45	5/22/2015	3	Cemex		28.79		
S217	Silver Streak	93	5/22/2015	3	Cemex		29.09		
S218	Silver Streak	95	5/22/2015	3	Cemex		28.34		
	ou car		5,, 2015	,	12001		20.54		



				Class of		Volum	e (tons)
Ticket #	Truck Company	Truck Number	Date	Material	Destination	Class 2	Class 3
S219	Silver Streak	109	5/22/2015	3	Cemex		28.08
S220	Silver Streak	121	5/22/2015	3	Cemex		29.27
S221	Nelson Layman	60	5/22/2015	3	Cemex		27.76
S222	Lloyd	86	5/22/2015	3	Cemex		28.36
S223	Lloyd	108	5/22/2015	3	Cemex		28.97
S224	Lloyd	106	5/22/2015	3	Cemex		29.89
S225	Lloyd	112	5/22/2015	3	Cemex		28.04
S226	Silver Streak	41	5/22/2015	3	Cemex		27.52
S227	11M	J2	5/22/2015	3	Cemex		31.66
S228	Red-E Trucking	R39	5/22/2015	3	Cemex		32.65
S229	11M	J2	5/26/2015	3	Cemex		33.95
S230	Newell Bros Inc	3201	5/26/2015	3	Cemex		30.55
S231	Silver Streak	41	5/26/2015	3	Cemex		29.94
S232	Silver Streak	93	5/26/2015	3	Cemex		27.66
S233	Silver Streak	95	5/26/2015	3	Cemex		24.36
S234	Silver Streak	175	5/26/2015	3	Cemex		27.03
S235	Silver Streak	109	5/26/2015	3	Cemex		26.07
S236	Silver Streak	108	5/26/2015	3	Cemex		27.63
S237	Silver Streak	43	5/26/2015	3	Cemex		27.08
S238	Silver Streak	31	5/26/2015	3	Cemex		27.3
S239	Silver Streak	107	5/26/2015	3	Cemex		26.4
S240	CTI	412	5/26/2015	3	Cemex		30.11
S241	CTI	420	5/26/2015	3	Cemex		26.45
S242	CTI	341	5/26/2015	3	Cemex		27.68
S243	Newell Bros Inc	3201	5/26/2015	3	Cemex		27.76
S244	СТІ	356	5/26/2015	3	Cemex		28.94
S245	CTI	313	5/26/2015	3	Cemex		27.26
S246	СТІ	364	5/26/2015	3	Cemex		26.48
S247	Lloyd	11	5/26/2015	3	Cemex		27.59
S248	Lloyd	112	5/26/2015	3	Cemex		27.18
S249	СТІ	340	5/26/2015	3	Cemex		28.35
S250	11M	J2	5/26/2015	3	Cemex		28.27
S251	Silver Streak	41	5/26/2015	3	Cemex		28.65
S252	Silver Streak	93	5/26/2015	3	Cemex		28.82
S253	Silver Streak	175	5/26/2015	3	Cemex		31.05
S254	Silver Streak	95	5/26/2015	3	Cemex		30.88
S255	Silver Streak	109	5/26/2015	3	Cemex		30.22
S256	CTI	341	5/28/2015	3	Cemex		31.53
S257	Lloyd	108	5/28/2015	3	Cemex		26.68
S258	Lloyd	116	5/28/2015	3	Cemex		29.64
S259	Lloyd	112	5/28/2015	3	Cemex		27.61
S260	Lloyd	114	5/28/2015	3	Cemex		27.39
S261	Silver Streak	55	5/28/2015	3	Cemex		30.62
S262	Silver Streak	173	5/28/2015		Cemex		27.21
S263	Silver Streak Silver Streak	31	5/28/2015	3	Cemex		27.05
S264		93	5/28/2015	3	Cemex		29.02
S265	Silver Streak	109	5/28/2015		Cemex		29.9
S266	Silver Streak	41	5/28/2015	3	Cemex		26.96
S267	Silver Streak	108	5/28/2015	3	Cemex		25.96
S268	Newell Bros Inc	3201	5/28/2015	3	Cemex		28.12
S269	JJW	J2	5/28/2015	3	Cemex		25.96
S270	CTI	313	5/28/2015	3	Cemex		29.05
S271	CTI	341	5/28/2015	3	Cemex		28.16
S272 S273	Lloyd Lloyd	86 112	5/28/2015 5/28/2015	3	Cemex Cemex		26.38 24.97



				Class of		Volum	e (tons)
Ticket #	Truck Company	Truck Number	Date	Material	Destination	Class 2	Class 3
S274	Silver Streak	175	5/28/2015	3	Cemex		28.25
S275	Lloyd	114	5/28/2015	3	Cemex		27.91
S276	Lloyd	116	5/28/2015	3	Cemex		32.06
S277	Lloyd	108	5/28/2015	3	Cemex		30.59
S278	Silver Streak	55	5/28/2015	3	Cemex		27.3
S279	Silver Streak	167	5/28/2015	3	Cemex		25.52
S280	Silver Streak	173	5/28/2015	3	Cemex		30.19
S281	Silver Streak	31	5/28/2015	3	Cemex		27.37
S282	Silver Streak	109	5/28/2015	3	Cemex		29.67
S283	Newell Bros Inc	3201	5/28/2015	3	Cemex		34.72
S284	Lloyd	86	5/29/2015	3	Cemex		28.94
S285	Lloyd	112	5/29/2015	3	Cemex		26.15
S286	Silver Streak	183	5/29/2015	3	Cemex		27.65
S287	Silver Streak	109	5/29/2015	3	Cemex		27.47
S288	Silver Streak	95	5/29/2015	3	Cemex		26.26
S289	Newell Bros Inc	3201	5/29/2015	3	Cemex		29.02
S290	Silver Streak	91	5/29/2015	3	Cemex		28.57
S291	Silver Streak	83	5/29/2015	3	Cemex		25.3
S292	Nelson Layman	60	5/29/2015	3	Cemex		30.83
S293	Silver Streak	107	5/29/2015	3	Cemex		29.93
S294	Silver Streak	108	5/29/2015	3	Cemex		28.19
S295	Lloyd	114	5/29/2015	3	Cemex		28.24
S296	Lloyd	116	5/29/2015	3	Cemex		29.61
S297	JJW	J2	5/29/2015	3	Cemex		27.61
S298	Silver Streak	41	5/29/2015	3	Cemex		27.48
S299	Silver Streak	183	5/29/2015	3	Cemex		29.96
\$300	Lloyd	86	5/29/2015	3	Cemex		29.35
S301	Red-E Trucking	R39	6/1/2015	3	Cemex		29.86
S302	Red-E Trucking	32	6/1/2015	3	Cemex		31.2
\$303	Red-E Trucking	R48	6/1/2015	3	Cemex		29.97
\$304	Silver Streak	183	6/1/2015	3	Cemex		29.06
\$305	Silver Streak	187	6/1/2015	3	Cemex		29.11
\$306	Red-E Trucking	R38	6/1/2015	3	Cemex		29.56
\$307	Silver Streak	109	6/1/2015	3	Cemex		28.54
\$308	Silver Streak	173	6/1/2015	3	Cemex		25.1
\$309	Silver Streak	169	6/1/2015	3	Cemex		32.19
S310	Silver Streak	108	6/1/2015	3	Cemex		27.59
S311	Silver Streak	125	6/1/2015	3	Cemex		28.74
S312	JJW	J2	6/1/2015	3	Cemex		31.84
S313	Silver Streak	129	6/1/2015	3	Cemex		30.27
S314	Rivers Edge	5789-12	6/1/2015	3	Cemex		28.94
S315	Newell Bros Inc	3201	6/1/2015	3	Cemex		33.11
S316	Lloyd	86	6/1/2015	3	Cemex		29.18
S317	Lloyd	108	6/1/2015	3	Cemex		27.66
S318	Silver Streak	167	6/1/2015	3	Cemex		31.15
S319	Lloyd	114	6/1/2015	3	Cemex		29.74
S320	Lloyd	112	6/1/2015	3	Cemex		29.85
S321	Silver Streak	45	6/1/2015	3	Cemex		32.99
S322	Silver Streak	117	6/1/2015	3	Cemex		32.93
S323	Silver Streak	95	6/1/2015	3	Cemex		31.8
S324	Silver Streak	183	6/1/2015	3	Cemex		35.63
S325	Silver Streak	187	6/4/2015	3	Cemex		27.78
S326	Silver Streak	175	6/4/2015	3	Cemex		27.87
S327	Silver Streak	108	6/4/2015	3	Cemex		27.87
S327 S328		60	6/4/2015	3			27.96
S328 S329	Nelson Layman Newell Bros Inc	3201	6/4/2015	3	Cemex		31.68
		-		1	Cemex		
S330 S331	Silver Streak JJW	47 J2	6/4/2015 6/4/2015	3	Cemex Cemex		29.38 30.62



				Class of		Volume	e (tons)
Ticket #	Truck Company	Truck Number	Date	Material	Destination	Class 2	Class 3
S332	Olson	22	6/4/2015	3	Cemex		27.8
S333	PGH	5	6/4/2015	3	Cemex		29.43
S334	Girard	12	6/4/2015	3	Cemex		28.48
S335	Silver Streak	125	6/4/2015	3	Cemex		23.41
					Total:	191.93	9562.67

APPENDIX F VAPOR BARRIER TECHNICAL COMPONENTS



Submittal Cover

PROJECT: The Fauntleroy Mixed Use Project

PROJECT NO: 14-0903

DATE: 04/08/2015

SUBMITTAL NO.: 07-1700-02

SUBMITTAL FOR: Below grade waterproofing at contaminated area

SUBMITTED TO: Kevin Kirk – LMI West Seattle Holdings, LLC

SUB / SUPPLIER: Division 7

DOCUMENTS SUBMITTED: Via e-mail

NO. of COPIES TO RETURN: 1 via e-mail (to CHINN Construction)

PLEASE RETURN BY: ASAP 04/15/15

NOTES: Please indicate your approval for the item(s) below. We'd like to request a one week turnaround, if not earlier, for this submittal in order to meet installation schedule.

Item	Description	Qty	Type*
1	Cetco Voltex DSCR, Liquid Boot products and application details	1	Е
			ļ

^{*}E:Electronic copy; H: Hardcopy; S: Sample

		1
	reviewed - no comments revise and resubmit reviewed - comments noted returned without reviewed. Review is for general conformance with the design concept and the information provided in the contract documents. Contractor is responsible for confirming dimensions, quantities, fabrication processes, assembly techniques, coordination, and satisfactory performance of the work. It is assumed that this document has been reviewed by the general contractor prior to submittal.	RUN VOLTEX DS (CR) AND LIQUID BOOT 10' PAST BOUNDARY OF CONTAMINATION
by:_	4-9-15 date:	
by.	CROSS 2 DESIGN GROUP	
The footh	VEBER THOMPS Content and the Architect's review is for the limited purpose of rear general compliance with the design intent express e contract documents.	viewing essed in
de th Sa sp tic w sh in	the Contractor shall not be relieved of responsibility viations from requirements of the Contract Docume Architect's approval of Shop Drawings, Product mples or similar submittals unless the Contract ecifically informed the Architect in writing of such at the time of submittal and the Architect has ritten approval to the specific deviation. The Cotall not be relieved of responsibility for errors or on Shop Drawings, Product Data, Samples, or similar is by the Architect's approval thereof.	nents by ct Data, ctor has n devia- as given ntractor nissions
all m wo	ne Contractor is responsible for: confirming and cor quantities and dimensions; selecting fabrication prethods, and techniques of construction; coordina ork with that of all other trades; and performing his safe and satisfactory manner in accordance with loderal requirements.	ocesses, ting his work in
	No exception taken	
X	Make corrections noted	
	Revise and resubmit	

Rejected

Date Received: 4/7/15

Date Reviewed: 4/9/15

Review by Weber Thompson PLLC is limited to architectural components only

Josh McDonald

VOLTEX® DS(CR)

CHINN CONSTRUCTION, LLC SUBMITTAL FOR: 14-0903-07-1700-02 Below grade WP at contaminated

APPROVED FOR SUBMITTAL
APPROVE FOR SUBMITTAL AS NOTED
NOT APPROVED FOR SUBMITTAL - RESUBMIT

This submittal REVIEW shall not be construed as a complete check and indicates only that the information presented conforms generally with Contract Documents; in no case is the Subcontractor of Supplier relieved of full responsibility for adherence to the Contract Documents and satisfactory construction of all work. Submitted to Owner, Architect-Engineer and for final approval.

Thang Do

04/08/2015 Date

BENTONITE GEOTEXTILE WATERPROOFING SYSTEM WITH INTEGRATED HDPE LINER (Contaminant Resistant)

DESCRIPTION

Voltex DS® is a highly effective waterproofing membrane designed for below-ground applications. Voltex DS is a composite of two high-strength geotextiles, 4.88 kg of sodium bentonite per square metre, and a HDPE Liner integrally bonded to the non-woven geotextile. The high swelling, low permeability sodium bentonite is encapsulated between the two geotextiles. A patented needlepunching process interlocks the geotextiles together forming an extremely strong composite that ensures uniformity of the bentonite layer, in addition to protecting the product from inclement weather and construction site related damage.

Voltex DS works by forming a low permeability membrane upon contact with water. Upon hydration, unconfined bentonite can swell up to 15 times its dry volume. When confined under pressure the bentonite swells, forming a dense, impervious waterproofing membrane. The swelling action of the Voltex DS can self-seal small concrete cracks caused by ground settlement, concrete shrinkage, or seismic action – problems over which there is normally no control. Voltex DS forms a strong mechanical bond to concrete when the geotextile fibers are encapsulated by the concrete poured against it.

APPLICATIONS

Voltex DS is designed for below-ground vertical and horizontal structural foundation surfaces. Typical applications include backfilled concrete walls, earth-covered roofs, structural slabs, tunnels, and property line construction. Property line construction applications include secant and contiguous piling, skin wall, metal sheet piling, shotcrete and stabilized earth retention walls. Applications may include structures under continuous or intermittent hydrostatic pressure.

Voltex DS is particularly appropriate for use in conditions where excessive precipitation and / or contamination exist.

INSTALLATION

GENERAL

Install Voltex DS in strict accordance with the manufacturer's installation guidelines. Use accessory products as recommended. Install Voltex DS with the dark grey (woven) geotextile side against the concrete to be waterproofed. Install Waterstop RX101 in all applicable horizontal and vertical concrete construction joints. Schedule waterproofing material installation to permit prompt placement of backfill material or concrete. For applications not covered herein, refer to Voltex Product Manual or contact CETCO for specific installation guidelines.

STORAGE

Store Voltex DS and all accessory products in a dry shelter. If stored outside protect with weatherproof cover on all sides and top. Block up or pallet materials to prevent contact with ground surface water.

PREPARATORY WORK

Substrate should be smooth and Compacted to a minimum of 85% Modified Proctor density. Concrete surfaces should be free of voids and sharp projections. Surface irregularities should be removed before installation. Honeycombing and other surface voids must be filled with mortar or Bentoseal, and tie-bolt holes must be filled with proprietary non-shrink mortar/grout.

UNDER CONCRETE FLOOR SLABS

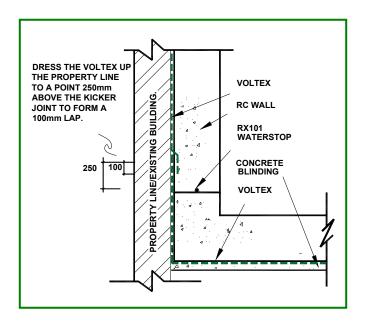
Voltex DS is recommended for use under structural reinforced concrete slabs 150 mm thick, or greater, over a compacted earth/gravel substrate, or 50 mm lean-mix concrete, Install Voltex DS around all foundations (ground beams pads, pile caps etc).

Place Voltex DS over the properly prepared substrate with the dark grey (woven) geotextile side facing the concrete to be waterproofed. Overlap all adjoining edges a minimum 100 mm and stagger ends a minimum 300 mm. Staple or nail edges together as required to prevent any displacement before and during concrete placement.

Voltex DS should not extend into foundation bearing planes (i.e. pile caps, ground beams, pads etc.,) but should completely envelop them. Where this is not possible / desirable, VolSeal 20 (cementitious waterproofing by crystallization) or similar can be used as a continuity 'membrane' through the bearing plane, to which Voltex DS can be sealed using a 100 mm lap, incorporating a 5 mm X 50 mm fillet of Bentoseal.

Cut Voltex DS to provide a snug fit around all applicable penetrations (pipes, piles etc).

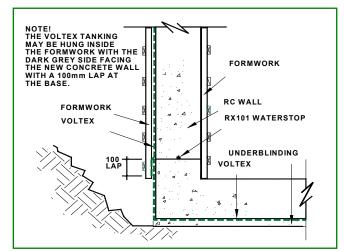
Detail all penetrations with a 40 mm fillet of Bentoseal or Volclay Paste (granules & water) around the penetration on top of the Voltex DS. Where concrete underblinding is not used, detail an additional 50 mm chase filled with Volclay Granules around the penetration under the Voltex DS.



Where property line construction, such as secant / contiguous piling, metal sheet piling, skin wall etc., is used as the outside concrete form, continue the underslab Voltex DS installation up the property line a minimum 250 mm above the top edge of the finished floor slab foundation, or kicker level. The extra 250 mm is very important since there is no access to the outer edge after the concrete pour, and the top 100 mm needs to be kept free of concrete splashes to enable a clean lap later.

BACKFILLED CONCRETE WALLS

Voltex DS can be applied to backfilled walls in two ways: mechanically fastening to cast concrete just prior to backfilling (post-applied), or preferably, by utilizing the peel-adhesion properties of the Voltex DS (preapplied). The needle-punched geotextile fibres, which have been forced from the white (spun) side through the bentonite and dark grey (woven) side, will be trapped within the wet concrete, and allow the Voltex DS to remain firmly attached to the concrete after the formwork has been removed.



All through concrete tie holes, etc., must be filled, from the outside, using a proprietary non-shrink grout or similar, covered in a 'mushroom' of Volclay Paste or Bentoseal, either prior to Voltex DS (post-fix) application, or prior to backfilling (pre-fix/peel-adhered application), where additional Voltex DS patching will be required.

Detail all pipe penetrations with Waterstop RX101 as a 'puddle flange' within the concrete, ensuring no less than 75 mm concrete cover to all sides, and where penetrations pass through Voltex DS, ensure that Voltex DS is cut to provide a snug fit, and detail with a 40 mm X 40 mm fillet of Volclay Paste (granules & water) or Bentoseal, prior to backfilling.

BACKFILLED CONCRETE WALLS cont.

Backfill material shall be compactable soils and free of construction debris. Backfill shall be clean, well grounded, and compacted every 300 mm to 85% modified proctor (as defined by ASTM 1557), and meet these general specifications:

- ➤ No rocks, stones or boulders larger than 50 mm
- > 90% minimum soil particles smaller than 5 mm
- ➤ 10% maximum soil particles finer than 74 micron (200 mesh)

Terminate Voltex DS at ground level, etc., integrating the Voltex with a damp proof course/cavity tray (as per architects arrangement), by extending the DPC to overlap Voltex DS a minimum of 150 mm. The Voltex/DPC lap should be enhanced by the inclusion of a 5 mm X 50 mm fillet of Bentoseal, centrally located.

PRE-APPLIED

Apply Voltex DS to timber formwork, either horizontally or vertically, by nailing or stapling, following general application guidelines for lapping all adjacent edges 100 mm, and staggering adjacent roll ends no less than 300 mm (avoiding four-way laps), and additionally ensuring that laps face downwards, as applicable. The HDPE side should be against the formwork, and the dark grey (woven) side should face the concrete to be waterproofed.

Extend Voltex the full depth of the formwork, so that the Voltex laps 100 mm over the Voltex already cast into the slab edge and wall kicker, and allow no less than 150 mm at the top of the formwork, to provide ground slab continuity later, if required.

Position formwork as required, and tie/space forms, penetrating Voltex DS as necessary. Normal concrete practice is sufficient in terms of striking times for formwork, but due care should be taken to ensure that Voltex DS remains bonded to green concrete.

Where a slab 'toe' exists, and underslab Voltex DS has terminated at the top edge of slab, additional Voltex DS will be required to link underslab/edge of slab Voltex DS with wall Voltex DS. Apply a 40 mm X 40 mm fillet of Volclay Paste (granules & water) at the internal wall/slab corner, and place additional Voltex DS over the slab 'toe' lapping 100 mm over the edge of slab Voltex DS, and continue over the 'toe' terminating under the unbonded wall Voltex DS 'flap' at the back of the kicker.

POST-APPLIED

Apply Voltex DS vertically or horizontally against concrete, starting with a 100 mm lap with the underslab/edge of slab Voltex (peel-adhered to concrete), using CETCO's proprietary shot-fired 'softwasher' fasteners, and following general application guidelines for lapping all adjacent edges 100 mm, and staggering adjacent roll ends no less than 300 mm (avoiding four-way laps), and additionally ensuring that laps face downwards, as applicable. The dark grey HDPE side should be against the concrete, and the white (spun) side facing the installer.

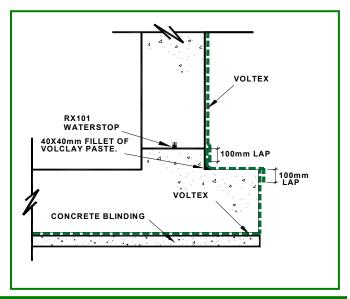
Detail all horizontal and vertical internal corners with a 40 mm X 40 mm fillet of Volclay paste (granules & water) or Bentoseal, prior to Voltex DS application.

NOTE: Voltex DS is not recommended for masonry block walls.

PROPERTY LINE CONSTRUCTION

Voltex DS is used to waterproof various types of property line construction, including metal sheet piling, secant and contiguous piling, skin wall, shotcrete and stabilized-earth retention walls. Shotcrete can be applied directly against Voltex DS.

Concrete surfaces shall be free of large voids or projections. Voids, pits, and cracks in excess of 20 mm, shall be parged to flush condition using cement grout, Volclay Bentoseal or Volclay paste (granules & water). Projections greater than 20 mm shall be removed or smoothed flush. Generally, gradual undulating surfaces are acceptable, sudden changes in level, i.e. ridges and hollows, are not.



PROPERTY LINE CONSTRUCTION cont.

When working against property line, always start with the vertical installation, prior to installing Voltex DS under slab. Apply the bottom run of Voltex DS lengthways/horizontally against the property line, approximately 1,100 mm from the substrate/blinding level, allowing 150 mm of Voltex DS to extend under slab. On profiled property line (metal sheet piling, secant and contiguous piling, etc) the 150 mm base 'flap' will need to be cut and splayed as necessary, to allow the material to lay flat.

Using CETCO's proprietary shot-fired 'soft-washer' fasteners, and following general application guidelines for lapping all adjacent edges 100 mm, and staggering adjacent roll ends no less than 300 mm (avoiding fourway laps), and additionally ensuring that laps face downwards, as applicable, ensure that Voltex DS closely contours the application surface. For secant piling, locate fixings close to cleavages. On contiguous piling, ensure that soil columns between piles are cut back to no less than one third of the pile diameter, to create a fixing cleavage, and reduce the likelihood of soil dislodging behind the membrane.

Detail all through wall pipe/sleeve penetrations with Waterstop RX101 as a 'puddle flange' within the concrete, ensuring no less than 75 mm concrete cover to all sides. Where pipe, tie-back etc., penetrations pass through Voltex DS, ensure that Voltex DS is cut to provide a snug fit, and detail with a 40 mm X 40 mm fillet of Bentoseal. Where through wall removable formwork ties are used, as opposed to 'lost' ties, please consult CETCO for guidance.

Due consideration should be given to termination levels and details, with reference to the height of the property line construction, since cutting down the property line after Voltex DS installation/concrete placement, will inevitably destroy the waterproofing.

LIMITATIONS

Horizontal installation surfaces shall be free of excessive* standing water, particularly where concrete underblinding is not utilized. (*Voltex DS can be installed in almost all inclement weather conditions, providing the quality/accuracy of the installation is not affected eg Voltex DS floating, Waterstop RX submersed, etc). If ground water contains strong acids, alkalis, or is of a conductivity of 2,500 umhos or greater, submit water samples to the manufacturer for compatibility testing. If contaminated ground-water or saltwater conditions exist. please contact manufacturer.

Voltex DS is not designed for unconfined aboveground waterproofing applications or below-ground masonry block foundation walls. Voltex DS is engineered for use under reinforced structural concrete slabs of 150 mm thick or greater. Do not install Voltex DS in horizontal split-slab, plaza deck and roof applications that will receive a poured concrete wear surface or other solid topping.

Voltex DS is not designed to waterproof expansion joints. Expansion joints require a properly engineered expansion joint sealant product manufactured by other companies.

SIZE & PACKAGING

Voltex DS is supplied in rolls, measuring 1.15 m X 5.0 m, each weighing 35 - 40 Kg. There are 32 rolls per pallet ($184m^2$). Large rolls are also available, but require special handling equipment.

ACCESSORY PRODUCTS

Volclay Voltex DS accessories include:

BENTOSEAL®

Patented trowel grade sodium bentonite compound used as a detailing mastic around penetrations and corner transitions. Bentoseal is packaged in 14.25 litre tubs.

VOLTEX® GRANULES®

Pure granular Volclay Bentonite used to detail critical areas that may require extra Volclay protection. Voltex Granules are packaged in 20 kg bags.

WATERSTOP RX101®

Expanding bentonite-based concrete joint strip waterstop for use in non-moving concrete construction joints. Waterstop-RX101 is manufactured in flexible strips.

T	TECHNICAL DATA								
PROPERTY	TEST METHOD	TYPICAL VALUE							
BENTONITE MASS PER UNIT AREA	ASTM D 3776 (mod)	4.88 kg/m²							
PEEL ADHESION TO CONCRETE	ASTM D 903 (mod)	15llb/in (2.5 KN per m width)							
HYDROSTATIC PRESSURE RESISTANCE	ASTM D 5385 (mod)	70 m							
PERMEABILITY	ASTM D 5084	1 X 10 ⁻⁹ cm/sec							
PERMEABILITY AT MEMBRANE SEAM	ASTM D 5084	1 10 ⁻⁹ cm/sec							
GRAB TENSILE STRENGHT	ASTM D 4632	530N							
PUNCTURE RESISTANCE	ASTM D 4833	620N							
LOW TEMPERATURE FLEXIBILITY	ASTM D 1970	UNAFFECTED @-32°C							



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LIQUID BOOT®

SPRAY-APPLIED GAS VAPOR BARRIER

DESCRIPTION

LIQUID BOOT® is a seamless, spray-applied, water-based membrane containing no VOCs, which provides a barrier against vapor intrusion into structures. LIQUID BOOT® is installed under slab and on below grade vertical walls as a gas vapor barrier to minimize vapor and nuisance water migration into buildings. LIQUID BOOT® spray-application directly to penetrations, footings, grade beams, pile caps and other irregular surfaces, provides for a fully-adhered gas vapor barrier system.

APPLICATIONS

LIQUID BOOT® is used as an underslab and below-grade vertical wall gas vapor barrier, used to minimize vapor and nuisance water (non-hydrostatic conditions) migration into buildings. LIQUID BOOT® is ideal for methane migration control. LIQUID BOOT® is also NSF® certified for use as a potable water liner in concrete water reservoirs and tanks greater than 300,000 gallons to protect the concrete from water seepage.

BENEFITS

- Spray-application provides excellent sealing of penetrations, eliminating the need for mechanical fastening
- Seamless, monolithic membrane eliminates seaming-related membrane failures
- Unique formulation provides superior protection from methane gases and water vapor
- Fully adhered system reduces risk of gas migration
- Protection from methane gas, VOCs, chlorinated solvents and other contaminates

INSTALLATION

Protect all adjacent areas not to receive gas vapor barrier. Ambient temperature shall be within man-ufacturer's specifications. All plumbing, electrical, mechanical and structural items to be under or passing through the gas vapor barrier shall be secured in their proper positions and appropriately protected prior to membrane application. Gas vapor barrier shall be installed before placement of rein-forcing steel. Expansion joints must be filled with a conventional waterproof expansion joint material. Surface preparation shall be per manufacturer's specification. A minimum thickness of 60 dry mils, unless specified otherwise.

LIMITED WARRANTY

CETCO warrants its products to be free of defects. This warranty only applies when the product is applied by Approved Applicators trained by CETCO. As factors which affect the result obtained from this product, including weather, equipment, construction, workmanship and other variables are all beyond CETCO's control, we warrant only that the material herein conforms to our product specifications. Under this warranty we will replace at no charge any product proved to be defective within 12 months of manufacture, provided it has been applied in accordance with our written directions for uses we recommend as suitable for this product. This warranty is in lieu of any and all other warranties expressed or implied (including any implied warranty of merchantability or fitness for a particular use), and the Manufacturer shall have no further liability of any kind including liability for consequential or incidental damages resulting from any defects or any delays caused by replacement or otherwise. This warranty shall become valid only when the product has been paid for in full.



In addition to superior chemical resistance performance, LIQUID BOOT* spray-application effectively seals penetrations, footings, grade beams and other irregular surfaces that are considered critical vapor intrusion pathways.

EQUIPMENT

- COMPRESSOR: Minimum output of 155-185 cubic feet per minute (CFM)
- PUMPS: For "A" drum, an air-powered piston pump of 4:1 ratio (suggested model: Graco, 4:1 Bulldog). For "B" drum, an air-powered diaphragm pump (0 -100 psi)
- HOSES: For "A" drum, ½" wire hose with a solvent resistant core (for diesel cleaning flush), hose rated for 500 psi minimum. For "B" drum, a 3/8" fluid hose rated at only 300 psi may be used.
- SPRAY WAND: Only the spray wand sold by CETCO is approved for the application of LIQUID BOOT®.
- SPRAY TIPS: Replacement tips can be purchased separately from CETCO.

PACKAGING

LIQUID BOOT® is available in the following packaging options:

- 55 Gallon Drum
- 275 Gallon Tote



LIQUID BOOT ®

SPRAY-APPLIED GAS VAPOR BARRIER

TESTING DATA

CHEMICAL & PHYSICAL PROPERTIES							
CHEMICAL PROPERTY	TEST METHOD	RESULT					
Acid Exposure (10% H ₂ SO ₄ for 90 days)	ASTM D543	Less than 1% weight change					
Benzene Diffusion Test	Tested at 43,000 ppm	2.90 x 10 ⁻¹¹ m ² /day					
Chemical Resistance: VOCs, BTEXs (tested at 20,000 ppm)	ASTM D543	Less than 1% weight change					
Chromate Exposure (10% Chromium6+ salt for 31 days)	ASTM E96	Less than 1% weight change					
Diesel (1000 mg/l), Ethylbenzene (1000 mg/l), Naphthalene (5000 mg/l) and Acetone (500 mg/l) Exposure for 7 days	ASTM D543	Less than 1% weight change; Less than 1% tensile strength change					
Hydrogen Sulfide Gas Permeability	ASTM D1434	None Detected					
Methane Permeability	ASTM 1434-82	Passed*					
Microorganism Resistance	ASTM D4068-88	Passed*					
Oil Resistance	ASTM D543-87	Passed*					
PCE Diffusion Coefficient	Tested at 120 mg/L	1.32 x 10 ⁻¹³ m ² /sec					
Radon Permeability	Tested by US Dept. of Energy	Zero permeability to Radon (222Rn)					
TCE Diffusion Coefficient	Tested at 524 mg/L	9.07 x 10 ⁻¹³ m ² /sec					

PHYSICAL PROPERTY	TEST METHOD	RESULT
Accelerated Weathering and Ultraviolet Exposure	ASTM D822	No adverse effect after 500 hours
Air Infiltration	ASTM E283-91	0 cfm/sq. ft.
Bonded Seam Strength Tests	ASTM D6392	Passed*
Coefficient of Friction (with geotextile both sides)	ASTM D5321	0.72
Cold Bend Test	ASTM D146	Passed. Ø cracking at -25°F
Dead Load Seam Strength	City of Los Angeles	Passed*
Electric Volume Resistivity	ASTM D257	1.91 x 1010 ohms-cm
Elongation	ASTM D412	1,332% Ø reinforcement, 90% recovery
Elongation w/8 oz. non-woven geotextile both sides	ASTM D751	100% (same as geotextile tested separately)
Environmental Stress-Cracking	ASTM D1693-78	Passed*
Flame Spread	ASTM E108	Class A with top coat (comparable to UL790)
Freeze-Thaw Resistance (100 Cycles)	ASTM A742	Meets criteria. Ø spalling or disbondment
Heat Aging	ASTM D4068-88	Passed*
Hydrostatic Head Resistance	ASTM D751	Tested to 138 feet or 60 psi
Potable Water Containment	ANSI/NSF 61	NSF Certified for tanks >300,000 gal
Puncture Resistance w/8 oz. non-woven geotextile both sides	ASTM D4833	286 lbs. (travel of probe = 0.756 in)
Sodium Sulfate (2% water solution)	ASTM D543, D412, D1434	Less than 1% weight change
Soil Burial	ASTM E154-88	Passed
Tensile Bond Strength to Concrete	ASTM D413	2,556 lbs/ft² uplift force
Tensile Strength	ASTM D412	58 psi without reinforcement
Tensile Strength w/8 oz. non-woven geotextile both sides	ASTM D751	196 psi (same as geotextile tested separately)
Toxicity Test	22 CCR 66696	Passed
Water Penetration Rate	ASTM D2434	<7.75 x 10 ⁻⁹ cm/sec
Water Vapor Permeance	ASTM E96	0.069 perms

^{*}Passes all Los Angeles City and County Methane Criteria

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VI-20™ GEOMEMBRANE

HIGH-PERFORMANCE VAPOR INTRUSION BARRIER

DESCRIPTION

VI-20™ is a 7-layer co-extruded geomembrane made using high quality virgin-grade polyethylene and EVOH resins that provide unmatched impact strength as well as superior resistance to VOC vapor transmission. EVOH technology serves as a highly resilient underslab and vertical wall barrier designed to restrict methane, radon and other harmful chemicals. Applications for EVOH originated in the manufacturing of automotive fuel systems to control emissions of hydrocarbons, whose use was mandated by the US EPA and the CA Air Resources Board (CARB) to reduce VOC emissions.

APPLICATION

VI-20™ is a 20-mil, high performance poly-ethylene-EVOH copolymer geomembrane, specially designed for use as a VOC barrier when used in conjunction with LIQUID BOOT® spray-applied vapor intrusion membrane to minimize vapor intrusion and nuisance water (non-hydrostatic conditions) migration into buildings. VI-20™ is ideal for applications with chlorinated solvents, BTEX and other PAHs.

EVOH technology provided in $VI-20^{TM}$ geomembrane has been shown to have VOC diffusion coefficients 20 times lower than an 80 mil (2 mm) HDPE geomembrane.

BENEFITS

- Polyethylene layers provide excellent chemical resistance and physical properties
- EVOH barrier technology provides superior protection against diffusion of chemicals when compared to typical HDPE geomembranes
- Manufactured at ISO 9001:2008 certified plant

PACKAGING

VI-20™ Geomembrane is available in the following packaging option:

• 10 ft. x 150 ft. (3 m x 45 m) Rolls

INSTALLATION

For use as a component of the LIQUID BOOT® Plus system, VI-20™ geomembrane is rolled out on prepared sub-grade, overlapping seams a minimum of six inches (6"). The geomembrane is cut around penetrations so that it lays flat on the sub-grade and tight at all inside corners. A thin (20 mil) tack coat of LIQUID BOOT® ("A" side without catalyst) is sprayed within the seam overlap. Once the VI-20™ geomembrane is installed, penetrations are then treated with VI-20™ Detailing Fabric prior to installation of the LIQUID BOOT® spray-applied vapor intrusion membrane and ULTRASHIELD™ G-1000 protection course.

VI-20™ CHEMICAL & PHYSICAL PROPERTIES						
CHEMICAL PROPERTY	TEST METHOD	RESULT				
Benzene Diffusion Coefficient	EPA Method 8260	4.5 x 10 ⁻¹⁵ m ² /s				
Ethylbenzene Diffusion Coefficient	EPA Method 8260	4.0 x 10 ⁻¹⁵ m ² /s				
m&p-Xylenes Diffusion Coefficient	EPA Method 8260	3.7 x 10 ⁻¹⁵ m ² /s				
Methane Permeance	ASTM D1434	< 1.7 x 10 ⁻¹⁰ m ² /d • atm				
o-Xylene Diffusion Coefficient	EPA Method 8260	3.7 x 10 ⁻¹⁵ m ² /s				
Radon Diffusion Coefficient	SP Test Method	<0.25 x 10 ⁻¹² m ² /s				
Toluene Diffusion Coefficient	EPA Method 8260	4.2 x 10 ⁻¹⁵ m ² /s				

PHYSICAL PROPERTY	TEST METHOD	RESULT	
Membrane Composite Thickness	ASTM D5199	20 mil (0.5 mm)	
Impact Resistance	ASTM D1709	2,600 g	
Tensile Strength	ASTM E154 Section. 9	58 lbf/in (1.0 N/m)	
Water Vapor Transmission	ASTM E154 & E96	0.004 grains/hr-ft² (0.0028 g/hr-m²)	
Water Vapor Retarder Classification	ASTM E1745	Class A, B & C	

Note: These are typical property values.

UPDATED: FEBRUARY 2014

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VI-20™ DETAILING FABRIC

VOLATILE ORGANIC COMPOUND VAPOR INTRUSION BARRIER

DESCRIPTION

 $VI-20^{TM}$ Detailing Fabric is a seven-layer co-extruded membrane made from polyethylene and EVOH resins to provide strength as well as resistance to VOC vapor transmission. $VI-20^{TM}$ Geomembrane is an underslab and vertical wall barrier that, when used in conjunction with Liquid Boot®, will inhibit volatile organic compound vapor migration through the concrete.

APPLICATION

 $VI-20^{TM}$ Detailing Fabric is a material designed for use around penetrations and is used in conjunction with the $VI-20^{TM}$ Geomembrane.

BENEFITS

- Polyethylene layers provide excellent chemical resistance and physical properties
- Manufactured at an ISO 9001:2008 certified plant



EVOH technology provided in VI- 20^{TM} Detailing Fabric has been shown to have VOC diffusion coefficients 20 times lower than an 80 mil (2 mm) HDPE geomembrane.

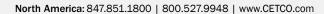
TESTING DATA

VI-20™ DETAILING FABRIC PHYSICAL & CHEMICAL PROPERTIES						
PROPERTY TEST METHOD RESULT						
Thickness, nominal	ASTM D5199	15 mil (0.38 mm)				
Tensile Strength	ASTM D882	29 lbf (128 N) machine direction				
Puncture Strength	ASTM D4833	50 lbf (220 N)				
Impact Resistance	ASTM D1709 Method A	1.9 lbf (8 N)				

PACKAGING

VI-20™ Detailing Fabric is available in the following packaging option:

• 51 in. x 50 ft. (1.3 m x 15.2 m) Rolls



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LIQUID BOOT® TROWEL GRADE

TROWEL-APPLIED GAS VAPOR BARRIER

DESCRIPTION

LIQUID BOOT® is a trowel-applied, water-based membrane containing no VOCs, which provides a barrier against vapor intrusion into structures. LIQUID BOOT® Trowel Grade is installed in conjunction with the LIQUID BOOT® gas vapor barrier to minimize vapor and nuisance water migration. LIQUID BOOT® Trowel Grade offers additional protection around penetrations, providing for a fully-adhered gas vapor barrier system.

APPLICATIONS

LIQUID BOOT® Trowel Grade is used for detailing around penetrations and for repairs in LIQUID BOOT® gas vapor barrier applications.

AVAILABILITY

LIQUID BOOT® Trowel Grade is available from the following CETCO plant locations:

- 1001 S Linwood Ave., Santa Ana, CA
- 218 NE Industrial Park Rd., Cartersville, GA

BENEFITS

- Trowel application provides excellent sealing of penetrations
- Seamless, monolithic membrane means no mechanical fastening required
- Protection from methane gas, VOCs, chlorinated solvents and other contaminates
- Also protects against water vapor

LIMITATIONS

- Do not allow materials to freeze in containers.
- Store LIQUID BOOT® Trowel
- Grade at site in strict compliance with manufacturer's instructions.
- When applying material below 45°F, contact your local technical sales manager.

In addition to superior chemical resistance performance, LIQUID BOOT* Trowel Grade effectively seals penetrations, which are considered critical vapor intrusion pathways.

PACKAGING

LIQUID BOOT® Trowel Grade is available in the following packaging options:

• 1 Gallon Bucket (8 oz. bottle of catalyst uncluded)

TESTING DATA

CHEMICAL & PHYSICAL PROPERTIES							
CHEMICAL PROPERTY	TEST METHOD	RESULT					
Acid Exposure (10% H ₂ SO ₄ for 90 days)	ASTM D543	Less than 1% weight change					
Benzene Diffusion Test	Tested at 43,000 ppm	2.90 x 10 ⁻¹¹ m ² /sec					
Chemical Resistance: VOCs, BTEXs (tested at 20,000 ppm)	ASTM D543	Less than 1% weight change					
Chromate Exposure (10% Chromium6+ salt for 31 days)	ASTM E96	Less than 1% weight change					
Diesel (1000 mg/l), Ethylbenzene (1000 mg/l), Naphthalene (5000 mg/l) and Acetone (500 mg/l) Exposure for 7 days	ASTM D543	Less than 1% weight change; Less than 1% tensile strength change					
Hydrogen Sulfide Gas Permeability	ASTM D1434	None Detected					
Methane Permeability	ASTM 1434-82	Passed*					
Microorganism Resistance	ASTM D4068-88	Passed*					
Oil Resistance	ASTM D543-87	Passed*					
PCE Diffusion Coefficient	Tested at 6,000 mg/m ³	2.74 x 10 ⁻¹⁴ m ² /sec					
Radon Permeability	Tested by US Dept. of Energy	Zero permeability to Radon (222Rn)					
TCE Diffusion Coefficient	Tested at 20,000 mg/m ³	8.04 x 10 ⁻¹⁴ m ² /sec					

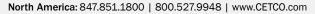


LIQUID BOOT® TROWEL GRADE

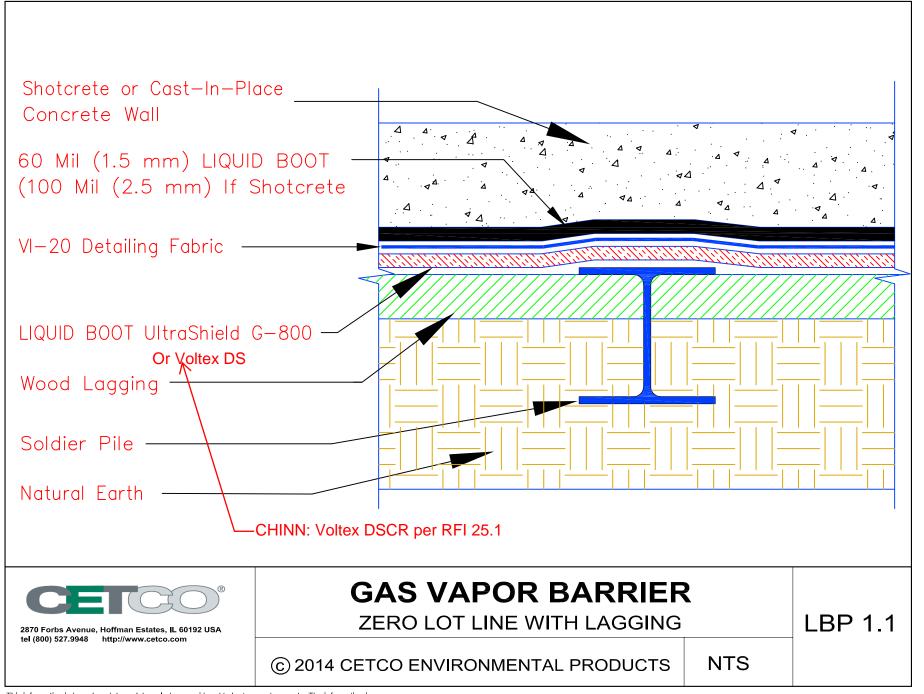
TROWEL-APPLIED GAS VAPOR BARRIER

TESTING DATA cont'd.

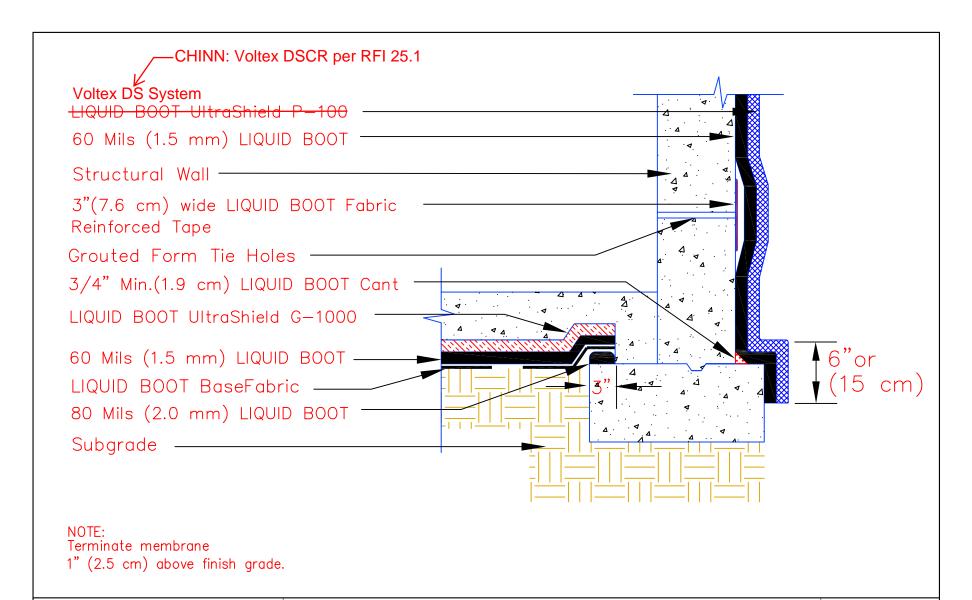
PHYSICAL PROPERTY	TEST METHOD	RESULT	
Accelerated Weathering and Ultraviolet Exposure	ASTM D822	No adverse effect after 500 hours	
Air Infiltration	ASTM E283-91	0 cfm/sq. ft.	
Bonded Seam Strength Tests	ASTM D6392	Passed*	
Coefficient of Friction (with geotextile both sides)	ASTM D5321	0.72	
Cold Bend Test	ASTM D146	Passed. Ø cracking at -25°F	
Dead Load Seam Strength	City of Los Angeles	Passed*	
Electric Volume Resistivity	ASTM D257	1.91 x 1010 ohms-cm	
Elongation	ASTM D412	1,332% Ø reinforcement, 90% recovery	
Elongation w/8 oz. non-woven geotextile both sides	ASTM D751	100% (same as geotextile tested separately)	
Environmental Stress-Cracking	ASTM D1693-78	Passed*	
Flame Spread	ASTM E108	Class A with top coat (comparable to UL790)	
Freeze-Thaw Resistance (100 Cycles)	ASTM A742	Meets criteria. Ø spalling or disbondment	
Heat Aging	ASTM D4068-88	Passed*	
Hydrostatic Head Resistance	ASTM D751	Tested to 138 feet or 60 psi	
Potable Water Containment	ANSI/NSF 61	NSF Certified for tanks >300,000 gal	
Puncture Resistance w/8 oz. non-woven geotextile both sides	ASTM D4833	286 lbs. (travel of probe = 0.756 in)	
Sodium Sulfate (2% water solution)	ASTM D543, D412, D1434	Less than 1% weight change	
Soil Burial	ASTM E154-88	Passed	
Tensile Bond Strength to Concrete	ASTM D413	2,556 lbs/ft² uplift force	
Tensile Strength	ASTM D412	58 psi without reinforcement	
Tensile Strength w/8 oz. non-woven geotextile both sides	ASTM D751	196 psi (same as geotextile tested separately)	
Toxicity Test	22 CCR 66696	Passed	
Water Penetration Rate	ASTM D2434	<7.75 x 10 ⁻⁹ cm/sec	
Water Vapor Permeability	ASTM E96	0.24 perms	
Water Vapor Transmission	ASTM E96	0.10 grains/h-ft ²	







This information is based on data and knowledge considered to be true and accurate. The information is offered for the users' consideration, verification, and requires project designer's approval before installation. CETCO does not warrant the results obtained and assumes no liability for the use of the information.





GAS VAPOR BARRIER

UNDER SLAB AND WALLS

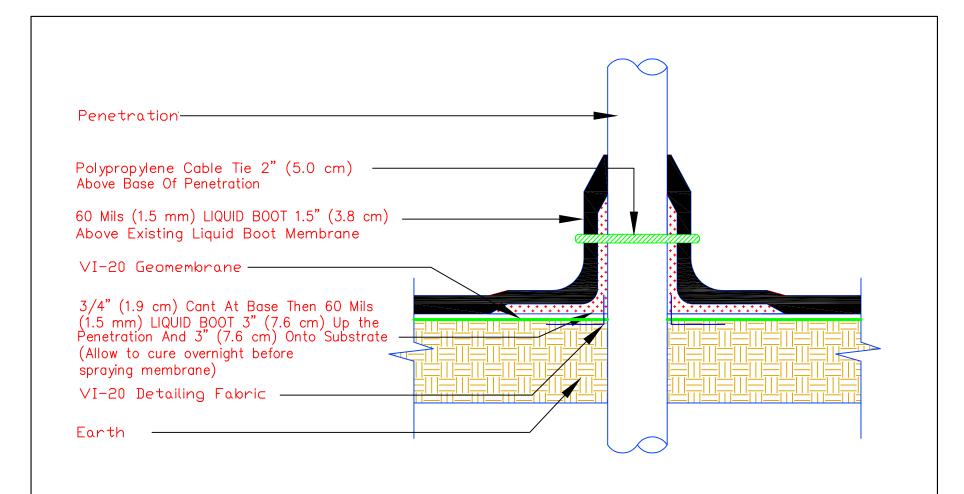
LB 2.2

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tel (800) 527.9948 http://www.cetco.com



NOTF:

All penetrations shall be cleaned per specification before LIQUID BOOT is applied.



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GAS VAPOR BARRIER

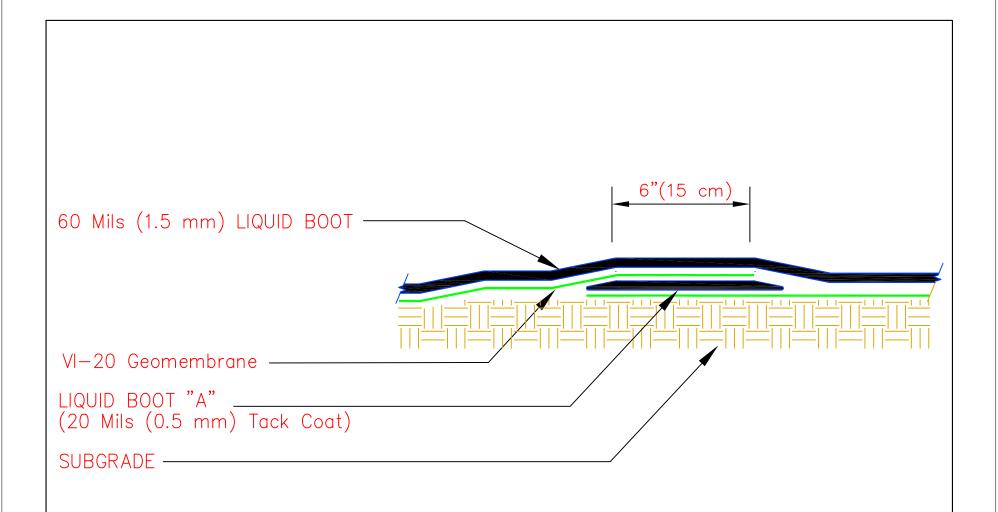
PENETRATIONS ON EARTH SUBSTRATE (Option 1)

LBP 4.3

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GAS VAPOR BARRIER

MEMBRANE LAP JOINTS ON GEOTEXTILE

LBP 3.3

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APPENDIX G AIR MONITORING LOGS



AIR MONITURING LOG Whittaker Property Fauntieroy Way SW and SW Alaska Street Seattle, Washington

					Colorimetric Tube	Comments/Notes
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	
1515	0849	EBF	Manitoring Station 1	0.0		Baseline (prior to exactiva)
	0850	EBF	Statun 2	0.0		Base line
	0863	EBF	Station 3	0.0		Boseine
	0865	EBF	Station 4	0.0		Baseline
<u> </u>	0857	EBF-	Station 5	0.0		Baseline
15/8	0956	EBF	6D	0.0	-	Ex area AIZ
1/6/15	1330	EBF	IB	0.0		Er area A15
14/15	ેળાડ	EBF	Status 5	0.0		Daily
	On 19	#Bt	Startin 1	0.6		Deals
	09.21	EBF	Statum 2	0.0		Daily
	0930	#BF	Status 3	0.1	and the same	Dulling piles
	0946	EBF	Statum 9	0.0		Dayly
	1240	EBF	~E19	0.1		Many Creasek oder
115/15	0630	EBF	A25	0,0	, -tha	Exauchy exting course of
	8435	GRE	Statum 3	· U.O		Darlo
	<i>ે</i> પા		Statu 2	0.0		
	0641		Stalin 1	0.0		
	e43		Stahm 5	0.0		
7	0245	-	Stahm 4	00	_	and a



AIR MONITURING LOG

Whittaker Property Fauntieroy Way SW and SW Alaska Street Seattle, Washington

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
11515	1050	BF	t21- E16	0.0		Dozing AZ goods E-21-E0)
\mathcal{T}	1300	183F	VE13	0.0	-	Localing at Class 3
الواح-	Ocos	EBF	Statton 5	0.0		Daily
	9607-		Ч	0.0		Derly
	0° 20		3	0.0		Daily > Sharing nearby area
	0822		2	0.0		
, <u>, , , , , , , , , , , , , , , , , , </u>	0025	-		g.0	_	
1/10/15	1300	护下	ELS by sharing	0.0	S	drilling 5/2
119/15	0900	EBF	Station 5	0:0	_	Duly
	10015		Station 1	۵.0		Daily
	09.3		Statum.2	0.0		Daily-dulling snowing E-18
	0915		Statu 3	0.0		Dalv
<u> </u>	5917		Statu 4	8,0		Danko
1/20/15	0740	EBK	Sahm 5	0.0		Daily
	0742		4	0.0		
	0745		3	0.0		
	<i>0748</i>		2	0.0		
	0750		1	0.0		1
	1000	488	EB	D.0		Showing Stockpilm



AIR MONITORING LOG

Whittaker Property Fauntleroy Way SW and SW Alaska Street Seattle, Washington

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
1/20/15	1410	EBF	A25	0-1	× "	Moving checkete - oder soil from soil now
1/21/15	1058		Shihm 5	0.0	William y	Parly
	1100		4	0.0	_	Daily - Kelchin orthung inter
	hog		3	0.0	,,_	Duly
	1104		2	0.0		Denly
<u></u>	1105)	3.0	and the same of th	Daily
12115	1320	EBF	E15	0.0		Lording CLOSS S. HI Oden
7	1345	EBF	EIS	0.0		loading Class >
1/22/15	0757	EBF	Statum 5	0.0	×	Dayly
	075%	Î	Stahun II	0.0	_	
	0800		u 2	0.0		
	0803	-	3	0.0	_	
	0805		" 4	0.0	_	T
	0808	Promision in the case of	69 gnd, area A12	0.0	_	load out Class 2
	1055		69 area A1Z	6.0	-6.1	Load at Class 2
1 23 15	1135		Spalm 3	5.0		Daylo
	1:37		4	0.0	-	Dair - Whiten dully
	1140		5	0.0		Daly
2	1142	2		00)	Daily



AIR MONITURING LOG

Whittaker Property Fauntleroy Way SW and SW Alaska Street Seattle, Washington

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
1/13/4	1150	63F	Statu 2	0.0	-	Baily - while duties
	1230	6BF	84	0.0		Lost of Sess 5
4	1345	-6F7	eri:	0.2	Manage	Local at Class 3 mean new Contract Class 3
1/26/0	0715	ESF	E14	00		
1	0940	EBF	E14	0.0	~	want out Class 3
	1220	EBF	EIR	0.0		Agra AZ
	1225	EBF	Skipu 4	0.0		De. ly
	1228	EBF	Sapan 5	0.0		
	1229	EBF	Sphn 1	0.0		
	1231	EBF	Station 2	a		
1/27/15	0715	EBF	69	0.0	-	Load at Class 2
•	1200	675 F	B15	0.0	_	Load at Class 3
	1368	EBF	BIS	0.70		luad at Class 3
1/28/15	0600	EBF	Bran Stupun 3	0.0		Dall
	0003	FFF	Station 4	0.0		
	0805	EBF	Station 5	0.0		
	0806	A1,F	Station 1	0.0		
	0008	部户	Shipm 2	0.0		
1	0845	EBF	BIS	0.0		Load at Class 3



AIR MONITORING LOG

Whittaker Property Fauntleroy Way SW and SW Alaska Street Seattle, Washington

	100		Location/Grid Location	PID Reading	Colorimetric Tube	
Date	Time	Sampler	(eg A2)	(rru)	Benzene (ppm)	Comments/Notes
MON 1/22/	5 1100	EBF	CB	0.0		Luad at Class 3
4	1420	EBF	C15	0.0		Load at Class 3
1/30/15	1215	135E	Ely	0.0		Load at Class 3
	1320	ロシエ	4 4	0.0		Load Class 3
2/6/15	1000	ebF	E14	0.0		Load Class 1
2/1/15	1325	EST	B14	0.0		Load Class 3
	1340		Statum 4 Statum 5	0.0		Daily
	1342		Status 5	0.0		
	1400		Shihm !	0.0		-
	1401		Shhu 2	0.0		
	1405"	7	Stahu 3	0,0		9
2/10/15	0 %70	OBF	A21	0.0	_	Executing A77 crowsole color
	1210	EBF	AIY	0.0	~	excavaling A10 > fount-HC
	1230	EBIE	AIY	0.0	_	
	1400	EBF	Station 1	0.0		Douly
	1402	EBF	S/rha-2	0.0		
1	1406	EBF	Statum 3	0.0	_	
2/11/15	1120	#BF	CZY	0.0		Ner creak piler
	1240	USE	Slahm 2	0.0		Daily



AIR MONITURING LOG Whittaker Property Fauntieroy Way SW and SW Alaska Street Seattle, Washington

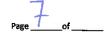
0			Location/Grid Location	PID Reading	Colorimetric Tube	
Oate	Time	Sampler	(eg A2)	(mu)	Benzene (ppm)	Comments/Notes
2/11/15	1242	EBS	Statem 1	00		Drilling strong 7 strong HC acer
	1245	EKT	Slahm 5	0,0		Daily
	1247	est	Shhn 4	0,0		
	1250	er8F	Statum 3	0,0		
	1300	TBF	Cl	00		next to dolling all He oak
2/11/15	08080		Station 2	0.5	gastinida	Daly
ì	09.09		Statum I	00	de la constantina della consta	Daily of dulling snowing and tel
	000		BI	٥, ٥		next to dulling sutrings w
	0011		Station 5	00		Darly
	C817		Station 4	0.0		Disk
	0214		Sahun 3	6.0		Daily
	1330	ව විද	E25	0.0		aven A2
2/13/15	0853	JSL	Station 3	0,0		Daily -> Near excavator while digging in EZ5
	0858	JSL	Station 4	0.0	14-	Daily
	1090	JSL	Station 5	0.0		Paily
	0903	JSL	Station (0.0		Daily
	0905	JSL	Station 2	0.0		Daily
2/10/15	1205	む 3ド	B19	0.0		Dozony Class !
İ	1415	EBF	Stahm 3	0.0		Duly





AIR MONITURING LOG Whittaker Property Fauntieroy Way SW and SW Alaska Street Seattle, Washington

Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Colorimetric Tube	
					Benzene (ppm)	Comments/Notes
2/16/15	1418	est-	Skhm 2	00		Daly
	G1426	EBF	Station I	0.0		
	71422		Station 5	0,0		
	7423	EBIF	Station 4	0.0		
2/18/15	08240	EBE	station 3	0.0	-	Duh
	0842	EBC.	Statum 4	0.0		
	0643	es F	Starton 5	0.0		
	0644	野尼	Statu 1	0.0		
	0845	EBF	Statura	0.0		
	0046	OSF	Aly	0.0		Load (lus 1-2
	0950	EBF	Di3	0.0	_	Lood cressote oder soil
	1210	EBF	D13	0.0		Load creosote/class 3
2/25/15	0718	₩3F	Status 3	0.0		Dailu
	0 +20	EBF	4	2,3		
	0721	ESF	5	20		
	0727	SH-	1	20	age mark title	
	4724	ENT.	2	0,0		+
	0%08	87F	F5	0.0		Wood (lass)
	1145	也亦	Dr	0.0		tx(awayng D)





AIR MONITURING LOG

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
2/24/15-	0621	CBF	Station 3	0.0		Duily
	0025	EBF	Status 4	0.0		
_	CEZE	63 F	Statum 5	0.0		
	0827	EBF	Statum 1	0.0		
	0029)	EBIF	Stahm 2	0,0		1
2/24/15	0910	日子	Fo	0.0		Lood Cless 1 A
4	1400	1 23+	H7-	0.0		Dzing Class 100
2/25/15	0750	FBF	Salm 4	0.0		Daily
- Version	0751	684	Station 5	0.0	7)
	072	BAF	Station 1	0.0	-	
	0753	6912	Station 2	0.0		
	0755	68 1	Sphm 3	0.0		4
and the second s	0815	EBF	H2	0-0	_	Loading Class 3 (C-B), Shing Hoan
	0650	EBF	H2	0.0	-	TX K-10 > strong/mod H(odn
ļ	1350	セフろド	45	0.0		icad K-9, no odn
3/3/15	0920	EBF	Stahun 3	0.0	-	Daily
	0922	BC	Stalm 4	00		
	0924	EBF	Shla 5	0.0		
4	0925	· #3/6	Saha	0.0		



AIR MONITURING LOG

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
3/3/15	0926	でらド	Status 2	6.0		Dury
	1052	OBF	B28	0.0	_	Chescite ada, expansing pines
	1150	EBF	Biglaig	0.0	-	ti ti
	1330	EBF	C19	00		CVECSITE odar, exouthing piles
3/4/15	1030	EFF	Status 2	0.0	**	Darly
	1031		1 states	0.6		\
	1032	İ	Status 5	0.0		Kilchmanling Nic corne
	1034		Station 4	0.0		
	1030	- 10	Station 3	0.0		-s-L
	1150	-b3/F	822	00		lemany accessive piles, story
7	1242	专品厂	BZ	6.0		1 5 W
3/5/15	1105	1997	Station 3	0,0		Daile
(1107	EBF	Spekin 2	0,0		
	1108	EBF	Station 2	0.0		
	1109	EB3F	Station 5	0.0		
	1110	わろド	SAMO 6	0.0		
	1125	CBF	A15 1615	0.0		Class I shirpile acres
	1215	EBE	CZI	00		Dozing Class 3, Circison ada
حا	1300	EBF	CZO	0,0		Dozine Class /



					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
3/6/15	0855	EBF	<i>B25</i>	1.2		Shing HI odw, execuating
	0900	EBF	B25	0.9		Sing HC ode
	0962	EBF	B15 / C25	0.0	~	med HC ader
	0915	EBF	B25/025	0.0		mod He oder, breating zone
	0945	D3F	625/025	0.0	-	Paint HC odor, cross-te fait
	1100	EBF	A24/A23	6.0		Oreosok adv
	1350	#BF	Station 2	6.0		Daily
	135	EBF	Station 1	2.0	_	
	1352	ESF	Shahar 5	0.0	_	
	1354	EBF	Station 4	0.0	_	
	1356	EBF	Statron 3	1.2	-	Ahore generales Allegan er
	1415	BBF	M3	0.0		Kilchen work space
3 9/15	1030	BF	Station 3	0.0		Daily
	1033	the.	Station 4	00		
	1034	BBE	Statu 5	0.0	The state of the s	
	1035	ERF	Stahu 1	0,0	-	
	1036	est	Station)	0.0	and the same of	
	1043	EBF	A13/1513	0.0		Dunwind Itaal at Zines Chrss 14 Exchang for come
1	1224	むると	B25	0.0		transing ou come



Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Colorimetric Tube Benzene (ppm)	Comments/Notes
3/10/15	୍ଟେଥିବ	193F	e 22_	G.O	-	Strong cheosott
	06,44	EBF	D25	2.0	_	chansan exhaust
	1010	EBF	D75	1.5	.=	Exhoust finnes
	1040	国际	Station 2	0.0		Duly
	1042	LIST	Statum	0.0		
_	1043	EBF	Statum 5	0.0	-	
	1049	B F	Stahm 4	D. 0		Exhaust him zenent
	1046	EB (=	Statum 3	0.0		
	1123	erse	টা ঙ	0.0		Mount crecisite soil
	1240	EBF	D23	0.0	*	In Class 3 and no ode
7	1755	EBF	GZI	0.4		Strong HI odu Ella
3/11/15	0316	电影性	EZI	0.0	*	Faint He as EH morry
· ·	1030	EFF	E20/19	0.0		execually u/ Hl voler.
	(200	EBF	ζ.//	0 20	New	Short crossit oda
	1303	白矿	Statum 4	000	. سنسے میں	Daily
	1304	EBIE	Staper 5	0.0		
	1305	EBP	Station (0,0	75	
	1306	EBP	Station 2	0.0	-	
7	1307	CBP	Sphon 3	0=0		ط



AIR MONITURING LOG

				•	Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
3/12/15	6723	©8F	E7Z	0.0	6.0	Facine west wall HI order, creosek
	0745	EBF	E2	0.0		Crecsore oder
To the second of the least of t	0940	Ø3F	EIS	00		Chaosale ada
7 to be desired to the second	1310	EBF	EZC	0.0		HL odor
	1420	OBF	Statum Z	0.0		Daily
	1421	EBF	Slahn 1	0.0		
	1422	EBF	Shihan 5	0.0		
	1423	EBF	Sather 4	0,0		
	1425	EBT	Spiran 3	0.0		7
15	1500	D3F	Elle	6.0		remorns creasidepite,
3/13/15	0840	わみぞ	95	0.0		Exparanny area As-
1	0905	e13F	EST .	0.0		monny soilul tel l'eversate
	1100	EBF	A15	0.0	-	loading lass
	1200	毛3F	Statian 3	6.0		above docer
3/10/1	1032	ESF	Station 2	0.0		Daily
Ì	1033		Statum I	0.0		
	1034		Statum 5	0.0	_	
	1035		Statim 4	0.0		
	103%		Station 3	0.0		ط



AIR MONITURING LOG

Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Colorimetric Tube Benzene	
3/16/15	OIII	包午	EI	D.D	(ppm)	Gravatine Class (A
7	1310	ESF	£12	0.0		11
3/7/15	1033	TERF	Stahm 3	0.0		Daily
	1035	EST.	Statum 4	0.0		
	1036	EUF	Shahan 5	0.0		
	1037	FRE	Statem 1	0,0		
	1038	EBÝ	Statur.2	0.0		
	1045	BBF	<u> </u>	0.0		Loading Class !
	1200	LRI	All	0.0	-	Loading Class 1
3/19/15	CE15	er:1	116	0.0		West well.
	Mec	USF	EZO	0.0		West wall. From Creosote odus.
	1042	CPSF	Shihm 3	0.0		Paik
	1044	EBF	Shita Z	U. V		
	1045	#BF	Salar	0.0		
	1247	EPF	Statum 5	0.0		
7	1049	EBF	Station 6/	0.0		
3/23/15	0925	#BF	A32 (A3)	1.3		Bruting space purp text
	1200	#3F	ES .	0.0		Load Class 3
<u>)</u> .	1330	PBF_	36	0.0		God Cluss 3 from H-8



			2 2		Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
3/24/5	0888	CBF	Ele	6.0		Lond Class 3 H-8
	1008	EBF	B4	0,0	, <u></u>	Strong HL octor Rum Ht
	1210	EBF	34	0.0		Load fredes, He volve
	1225	松千	Sahu Z	DU		Daily
	1455	BY	Statu 4	5.0	سمحمي	
	1456	basic .	Station 5	00	William.	
1	1459	1894	Shihu 3	0.0	duncida — 1 °	4
5/2/1	0800	EBF	E6	UNU		Class 3 area, Faut H(
	09/11	B3F	Stohm 5	0,0		Daily
	0912	\$937	Skilin 42	0.0		
	0913	缺	Shhon 32	0.5		
	0915	B,F	Statum 3	0.0		
1	0917	EBF	Status 4	00		2
3 KK	1030	#BF	6 6C6	6.0	<u> </u>	Class 3, HC oder
لــــ	1141	EBY	CG	6.0		AC oder
3/26/5	0736	EBF	G5	0.0		Looding Ciais 3 Fun 169
Þ.	0856	ERF	£5	0.0		Load Class 3, H-7
	1100	EBE	B2	0.6		Load Class 3, SKS, Shing odn
-1	1011	EBF	AZ	12	_	LORA Class 3 15005 Shey



AIR MONITURING LOG

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
3/20/15	1103	a ² F	Station 2	0.3	<i>5</i> ==	The looding, Strong oder
	1104	26 7	Station 1	0.4		SKS loading, strong odw
	1106	LET	N 5	10.2		SKS, very strong oder
	1139	CEL	AY	29	·	SKS, Story Hoor
	1243	B.F	HY	0.0		SIS feart - 10 of HI sain
	1244	EBF	Station 1	0.0		Duly/loading fil oder
<u></u>	1310	EBP	Slahar 4	0,0	Management of the second	Daily
3/30/15	6742	世界下	Stations	0.0	-	Daily
1	0743	EBF	Station 1	0.0)
Į	0744	en en	Starbon 5	0.0		
	0746	EBF	Station4	0.0		-
	0316	EBF	Flo	0.0		Looding Class 3
	1010	EBF	117	0.0		Loading Class 3
4/2/15	1005	ERF	Cl	0.0		SKS exigna DI O-ST
C	1030	EBK	Cl	0.0		}. · · · · · · · · · · · · · · · · · · ·
	1240	ADJF	A	1.4		Shung All ede
	500	ETIF	A	3.3	_	Strong HI odin
	1855	- C	Spirkon 1	0.0		Daily
	1366	250	Slation 2	0.0		7



			Location/Grid Location (eg A2)		Colorimetric Tube	
Date	Time	Sampler		PID Reading (rru)	Benzene (ppm)	Comments/Notes
4/2/15	1357	ERF	Station 5	5.0		674 (a.ly
	1358	GFSF	Station 4	0.0		Ely
4	1408	ERE	Str. Iron 3	6.0	Secretarian P	-
4/3/m	07140	巧厂	5 Km 3	6.0	,. 	Darlo
	5942	***	Staten 4	<i>O.</i> 0	-	
	0943		Sahm 5	0.0	-	
	0945		Sintan	0.0		
d.	0974	ــــــــــــــــــــــــــــــــــــــ	Shiha 2	0.0	_	J
1/7/15	0740	ERF	Shabin 3	.0.0		Deile
	0762	OSF	Station 2	0.0 0.0	gade/de/de	
	1763	esis	Station 1	0.0	w ^{n d} i	
	6454	EBI	Saraba 5	02. =		
	2758	231	525A4	0.0	mate figure 1	
18/15	0827	JSL	Station 3	0.0		Daily
1	0828	JSL	Station 4	0.0		1
	0830	JSL	Station 5	0.0		
	0833	JSL	Station 1	0.0	_	
1	0935	JSL	Station 2	0.0		
1/10/15	0915	JSL	Station 2	0.0		Daily



		i i			Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
4/10/15	0917	JSL	Station 3	.0.0		Daily
	0919	JSL	Station 4	0,0		
	0922	JSL	Station 5	0.0		
	0925	JSL	Station	0.0		1
4/14/15	1038	JSL	Station 1	0.0	Description of the state of the	Daily (EH digging at SKS)
<u> </u>	1039	JSL	Station 2	0.0		
	1041	丁ジレ	Station 3	0.0		
	1043	JSL	Station 4	0.0		
	1045	JSL	Station 5	0.0		
4/15/15	1102	J5L	Station 1	0.0		Daily
	1105	J5L	Station 2	0.0		\
	1108	J5L	Station 3	0.0		
	mil	JSL	Station 4	0.0		
1	1113	JSL	Station 5	0.0		
4/16/16	1029	J5L	Station 1	0.0		Daily
}	1031	JSL	Station 5	0.0		
	1133	JSL	Station 4	0.0		
	1036	JSL	Station 3	0.1		
1	1038	J5 L	Station 2	0,0		



					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
4/17/15	0715	₽9F	Α\	1, 4		excusive were spend HI.
	5925	ENF	A2	6.2	_	growing AZ, siring the
	0990	€73F	AZ	10.1	-	excavate AZ SING /11
	1100	EBF	56 Avec 2	<i>9</i> . د		Parts, But He Rum Sheligh
	211	ECF	Station 1	24		Pale yound, no HK
	(CZ)	1.55	Stoffen S	0. 3		
	1103	GE 7	Statum 4	0.3		4
	:120	ERF	AZ	1. 7	4	Ambient A2 No executing
	1124	U S	A 2.	3.3	0.0	Etranore 12/82; pulkingene
	18,25	EEX	AZ	15.2.		
	1133	EGF	A2	22.1		PIDS: 1-3-22.1
A Control	1250	EBF	A1/B1	1.4		excende 61
4/20/15	2820	600	BI	0.4		Exidendity Class 14 in cl
	0825	EBT	AZ	0. 2		Telucks a/ Al uda
4/22/15-	0915	63 12	Slahon 3	0.0	~	Daily
	0917	BBF	Station 4	0.0		
	0918	E13F	Statu 5	0.0		
	0919	EBI-	Spekin 1	0.0	_	
	0926	12312	Show 2	03	~	ط



			Location/Grid Location	PID Reading	Colorimetric Tube	
Date	Time	Sampler	(eg A2)	(rru)	Benzene (ppm)	Comments/Notes
4 23 15	0420	Ebf	R2	3.6		Lording Class 3, ex class 3
1	0750	eef	BZ	1.7	_	Out of Class 3. Class 3 on flow
The second second second	080	BBF	Bif	2.0	~	Lowling Class 3
	1145	EBF	Statun 2	0.0	-	Daily
	1146	DBF	Station 1	0,0		
	447	5BF	Shipm 5	0.0		
	1148	EBF	Statum 4	0.0		
	1150	ebr	Spation 3	0.0		ما ا
12	1300	e bF	<i>t2</i>	0.0	-	Class 2 /encesm
4/24/15	1100	CF94	B5	0,0		Lead (lass 3
	1828	#F	B5 / CG	0.0		load Class 3
	1225	erit	5/2/1007 2	0,0		Every Tra
	1227	EBK	Spellen 1	0.0		4
	1325	EYSE	D4/05	0.6		CATES 5 mores
	1332	ABF	05	1. Z.		Cars 3 or bottom
4/27/5	0821	OF.	Shin Z	0.0		Pents
1	0822	eff:	Station 1	0.0	/	1
	0123	e Tiff	Station 5	Ø 0		
	0625	43	Station L1	0.0		



					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
12/15	ORCO	#	Show 3	<i>.</i> 0.0		Decly
	4130	ENA.	Al	20		000 3
	(MZ)	CRAY	N.Z	6. H		Clos 3
	482-	THE	AC.	60-03	0.0	CASS TATE AS SHIPE FALL DE
	1610		Shipper 7	0.1	10 - E	Almo VIII
	1511	CEV.	5/hhr 15	13.4	80 gr	
	THE	E.M.	Status 1	[1.7]	96-8	
	1514	ERM	Shahun 1.5 (A2)	17.4	0.0	Dantond Stelly Prone He
	1515	G TR	AL .	44.3		
	16.30	EU.	AH	206	-	Pommed Shoppile
	- Toylo	ECT	A	341		from a Ex airs treats
	12/4/1	193	Slation 1.5	21.4	_	Dummind Shong HC die, Al
	1ने पूर	eK.	Shha 1	1.1		dia, A)
	1643	1984	Closor Gidwain	04		no HC caw
	1555	La to	A	304	0.0	Sharg MC edu
UZXIS	0708	EBF	A5	(1.1		Load (lass 3
1	0710	763	A3	69	-	Executive Mass 3
	0730	Era	Spatian 2	10.6		Daily local Class 3
	0731	ERF	Sman)	04	~	No.



			Location/Grid Location	PID Reading	Colorimetric Tube	-
Date	Time	Sampler	(eg A2)	(rru)	Benzene (ppm)	Comments/Notes
4/74/5	67.37	CHAT	C1, sidewalk	0 (Logoi (1455 3
	2515	A.F	AZ.	60. 2		Load Class 3, evanuate A
	DK25	+MF	A2	118	_	tracate Al
	0841	83 7	Station 2	16.2	<u> </u>	Loading class 3
	28412	EBF	Statum 1	3.6		Occasiling At corner below
	0900	£157-	Ai	٩. ١.		Dig BI
	(010	BF.	BZ	3,2		Lagging BZ wail
	1040	b3r	BI	9.2		Execute BI, BZ
	1642	EBF .	BI AI	71.6/4.0		Execute C1 / (agoA1
	liSo	COSF	61	154		Exercise B1-A1
	1/5/	E131"	A2	4.1		Lagoring area
	1276-1235	EBT	AZ	246 - 61.4	0,0	Execute AI offencine / in strongers smaller
	1239	GLF	AS, lowled viel	3.0	estado —	
	1315	C3F	AZ	58.7	yer ali lina	Excapate \$2/AZ
	1345	包部	A)-A2_	11.60		home excavelling
	1432	CEST	Sighan 2	04		Load Mass 3
	1423	EBF	Station 1	0.3		Lond Mass 3
	1446	FET	D5, road	34.6		Panso det Stickpine
	1525	63F	CH	70.3	_	vhae Class Sport



					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
hales	677.	219	f.	17.2.		
1	57.0	67	140	52.4		Comme the
	453	B()	ä,s	102.4		CA See to M
	18 1 4		A 2			ė.
	0138	ERAF	Status 5	0.2		Daily
	0834	色的产	Station	6.4		Corona AZ Frint He
	O 5:40	EY F	Station 2	29		Garage H
	2543	母开	Station 3	6.0	~	
	₩945	CRY -	Station 4	6.6		
	0925	EBY"	A 3	22 4		logging, exim by
	J 17 1 1 2	47 15	AL	Sand Sand		we was a superior
	0957	681	113	76		the ex activity
	1020	EF1	13	2.2 (-	Parking transmorate status
	:21c	CHE	Ai	32	-	Lagran 10 01
J	1370	EBF	A4	0.4		Excamp A4/15-184/132
130/K	0730	emp.	°5	0.0	-	Oranale Clar 3
	1021	EBIF	Spaper 2	0.0		Duly
	1022	EBF	Stution 1	0.0	-	
7	1024	EP3F	Shipon 5	0.0		
1/22/15	1074	ENR	Station 3	0.0		-



					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
51115	0816	DBF	Station 5	0.0		Dute
	0818		Statum 1	0.0		
	0819		Statum Z	0.0		
	0822		Sphm 3	6.0		
	0824		Station 4	0.0		
	0932		C4	5-3		Execute Bricks
	1025		E5	0.2		Execute tricton
4	1141	1	J5	0.0	_	Execute soil of the oder
5/4/15	C736	.EBF	DO	0.3		Except D8
1	1005	ESF	C5	2.1		execute (1455)
	1037	EBF	12381 C4	5,1		example (5
	1045	EBF	Slaha 1	0.0	-	Daily
	1047	PBF	Shapa 2	0.0		Durly
5/5/15	1016	EBF	Spilm 3	00		Daily
	1016	EBF	Shihm 4	0.0		(
	1019	535 F	Sphm 5	0.0		
	1020	ERSP	Statum 1	D. 0		
	1021	EBI	Station 2	0.0		
	1130	EBE	AY	0.0		Example Ay wall



					Colorimetric Tube	
Date	Tîme	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
-5/4/18	şel	EBF	Station 5	0.0	T	Daily
T REPORT		LBF	Shipm 4	Ű, Ú		
		ese	Stahm 5	6.0		
		03F	Status 2	C.0	Secretaria.	
		BBF	Station 2	D. 0		3
<u> </u>		EB3F			* Committee Adminis	
5/2/5	0834	EP3F	Statu 2	0.0		Deily
	0835	也不	Stahm 1	0.5		1
	0836	asr	Statum 5	0.0		
	0237	BSF	Status 4	O. O	,	and the second
	0839	#3P	Sahan 3	0.0		
	1300	-EBF	AG	0.4		Mainy Class 3 stanfale, HC vain
-	1440	EBF	C6	3.3	— .	More class 3 Lipung, til och
	1442	EBF	Station 2	1. É		faint HC odo
	1443	EBF	Statum (0.5	_	No. He oda yound or Class
	1447	E73F	87	12.1		Dunmind Class 3, Sping HC
	1448	Č8 F	<i>C</i> 3	6.1	_	Noxt to examen
	1457-1500	EBT	B2 B3	2.2 - 6.0		pan in oche ex ever, shing
3	1515	E3F	32	41.2	-	ass 3



•					Colorimetric Tube	1
Date	Time	Sampler	Leication/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
5/6/15	0930	EST.	AE-Load at	2.3		on load wt paoi
	Û9.3Z	∂3≠	CZ	5.6		Excepte Class S
	0938	33¢	CZ	52.6		Extende (less 3 - Dun vesponeting
	1°C'7	田井	Status 2	0.8	;	Douby Upmand Chass &
	1006	CBF.	statum \	0.1		
	1009	es	CI Prostine sidecually	0.0		+
	1013-1022	E13F	CI	21.1-129	0.0	Excavale Bi
	1032	03+	DZ, up top	293		Exravak Bl chungl of 1311
	1055	EBF	De up lop	62.1		Execusive BI-AI
	1106	EBF	C2 up hop	15.3		Exercise (2.132
	1215	EBF	87	16.1		Bailing Cless 3
	1214		Station 2	6.D		Daily loading 1883
	1217		Station	0.4		
	1218		CI Sidecealk	0.3	Company of the Control of the Contro	
	1770		Shha5	6.2		
	1221		Statum 4	0.1		
	1223		Station 3	0.8	um i	
	1229		Äi0	6. E		July 100 d wh
	1250		Al 7 claim in ex	Z68		In excavalm, cligging AZ



					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
5/8/15	1305	EBF	C7 dimmend shitple/ex	26.8		Mang Slockple
	1337	PBF	B2/CZ up top	7.9	Legis	Jay packs in Class 3
Julis	6721	ear	SIGNOIK AZ	8.1		Local Troops
	0130	むた	CZ inpley	223	-	Extante (1465 3
-	0150	City	Chi in e,	243		Experience Civil 3
	09207	<i>B</i> ∂ <i>F</i>	34	2.0	_	Expant Pail Class 3
	0055	-CPF	AT Sidewalk / across Familia	103 /13		Load Cluss & / across sheet
	C856	475E	Status 1	6.1		Facult 11' oaks
_	0257	tr+	CI, side colk	0.7	WARRENCE C.	granical de Age Conta
	08052	-0°F	Sighon Ja	22 3		Strong HI valu
· · ·	<i>6</i> 930	er.F	C2, ve top	17.1		EX CAIS 3
<u> </u>	1020-28	EIBF	eleviste appropriate E.V	22 - 26 8 ppm	00	Pell the white heading
	(200	CBF	Status 2	34.2		Local Mais 3
	1201	€oF	3hhm 1	8.11	-	Local livish ?
	 	!	Ci sidewalk	5.4		Load Class 3
	1207	EBT .		85-1		Execult ony
	1404	D3F	<i>B3</i>			Errauate 83
I I	1500	EI)F	82	70.3		Execuste By
3/12/15	T	OBF	BY	7.5		Post holy AZ - 13, produs
T	2610	E1315	A 7	125	L	10), 100 110 110



Ī				Colorimetric Tube	
Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
0925	EBF	Sielewalk	5.2		Lood Class 3
		63	10.8		the some wall (84/Au)
1315	EBF	ES	7.1		Shing HC; EY
1856	ED)F	€5	34		mod HC
0125	-63F	Ay us alma	228		dig A3, Shung MI
		e u	63.7		Dig A3 ""
6729	4%F	A	698	_	Dry AR
0732	EBF	Stahun 2	13 7		Dig #2
	EBF		10.1		DIG AZ (A)
			4.0 ~ 35.4	0.0	Pul tike, Stury Acoder Wind towards Fourtlewy
T		100	28 (Strong HC solu
0812			9.8		Mux HCE
0613			2.0		Faut H(
	EBR		17.8		Stry HC, EX CI
		Cl, ex; bailing Class 3	72.3	-	Strong AC builty Class}
		te u	1.1	~	Mod HI
		0.1	7.8		Mod HC - done gr
		Total Control of the	·		Minister bother, no ex
1000	CBI=	A)	+50,pm		In ex avai Al. hear beefing
	0925 1R22 1315 1856 0725 2726 0732 0732 0733 0735-45 0010 0612 0613 0834 0638 0900 0120 0926	0925	## (eg A2) 0925	## Sampler (eg A2) (mu) 0925	Sampler Location (eg A2) PID Reading (rru) Benzene (ppm)



AIR MONITURING LOG Whittaker Property

Fauntleroy Way SW and SW Alaska Street Seattle, Washington

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
13/15	log k	EPSF	A)	125		noex, Kilebin laggins
10112	1010	PBF	El an bench	10.3		no ex "
	1100	EBF	Ci/DI	17.8		Ex CI/DI, Class 3
	1132	EBT	Station 2	0.5		Daily
	1147	EBF	Shihm 3	0.0		1
1 1-		EBF EBF	Sidewalf AZ	7.3		Marny Class 3
114/15	1	B30	AZ ex	22.1	_	money Class 3 A1
+-	0740	03F	Statum 2	1.)		Daily; dig (Ins: 3
	074S	B3F	Shhu 1	4. 8		Parly, " "
	DIVIV		CI, Bidewalk	32.6		String HI oder
	0747-50	EBF_	Statum 5	6.0	_	Daily
	0782	BBF	Stahm 1	23.7-		Br Class 3
	0610	EBF		1.3	-	Ex (1451)
	0812	E13F	Shipm 2	1/7		mare (lass 3
	0830	E1312		<37. E	_	No soil nuk, embient
<u>.</u>	0855	esf_	MF21 A1 - A3, B1, B2, C1			Sam side ex, nowax
	10001	EBF_	A3	11:3		und with soder off stuff
	1021	FBF	78.12 AZ	40.8		Marihr for a few min, fruit - mod
	1025	EBF		15.2		Lugging avea
1	1027	EAR	DI	4.2		



AIR MONITURING LOG

		Sampler	Location/Grid Location (eg A2)		Colorimetric Tube	Comments/Notes
Date	Time			PID Reading (rru)	Benzene (ppm)	
115/15	0727	63 F	Al	4.5		Drilling the back's Ad
1	0753	<i>B3F</i>	Bl	106.6		ex gnd CI
	<i>080</i> 7	BF	CI	57.6		Drawak CI/A
	0844	£3F	PILLI	Ø2. 6		Ambient, ex (1885 -1 west
	0915	#3F	eaplants DI	ළ, ම		Drill he-backs / lagging
	0935	£8F	A1.	, 9 . 1		Drill he-backs
	0949	€Br-	Statum 2	2.2	-	Daily
	0950	Đờ	Station 1	0,1		
	0152	BIST	Status S	0.0		
	0954	EB)-	Stabm 4	0.0	-	
1	0955	EBF	Stahm 3	0.0		1
18/15	0125	DSF	Chey	2.2	-	Dun in ex, no actualy
1	0735	EBF	85	5.1	1	Bail Class 3
	0737	EBF.	Station 2	0.0	<u> </u>	Buil + Laco Class 3
	7739	Ð3F	Stehun 1	0.0		
	0741	Đ3F	Station 5	0.1		4
	0754	E13F	Land at expansion	3.5		wad lass 3
	0757	e3F	CI	1. 8	_	Dall he-backs
	0815	€3F	Ble	32.7		Bail Class 3



AIR MONITURING LOG Whittaker Property

			Location/Grid Location (eg A2)		Colorimetric Tube	
Date	Time	Sampler		PID Reading (rru)	Benzene (ppm)	Comments/Notes
Slok	OSSV	- 13 3F	DI	26. 9		Pull the becks CI
	1000	O3T	<i>C3</i>	10.7	_	EB Bul (less)
	7920/250	D3F	E4	7.3	· ·	Ex In E4
	1420	EBF_	D2	36.2		EX DS
	1600	EBF	FY	3.1		Ex UST art-
120/15	0716	EBE	AG Sidewalk olumwind	37.1		Builing speepile
1	0720-035	tBF/Agiran	In leadest cale	220.8pm <50	<u> </u>	Aeron reports receivings in 2005 while loading (loss }
	्याउ	EBF	Ale Sielewak	13.5	-	Bail Class 3, Shing HC
	1045	EBF	A10 Sidewalk	2.0		Lond Cruss 3
	1319	'CBF	A2,ex	129		Bail Class 3
	1335-43	€8F	AREX	20-439	0.0	Bail Class 3
	1345	€BF	A7 sdewall	186		Bail Class 3, Start & Statepollo
	1340	OST	Station 2	52.4		shony HC, dissipates as many away from ex upmind bailing Olares 3
	1347	EBF	Stahm 1	1.3		upmind bailing Class
	1350	TBK	A2 sidewalk	51.7		Bailing Class 3
7	1353	EBL	Tuco shind across sheet	4.7		
1215	0715	EBIFIEH	road at cab	107	_	in exactly, Kenny reputs reading desi responsin
	0730	tBF.	81	0.0		Upund ex.
7	074851	己品厂	Statu 2	10 - 150	0.0	Pil le on sidewakisting HI oder



			= . va . va		Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
5/22/15	0755	CBF	Station 1	36.2		Story wind towards NE 3 hara #1 call
	0756	EPIF.	Ctysidewalk	0.3	-	Faint HI
	07914	03F	01, xx	986	7=	ex Class 3
	0948	E3F	BI	521	36	EX CI, kilchin lagging
	1140	03F	Ale sidenale	12.7	_	No ex or locating
	1125	EBK	ES	6.8		Execute E4 Class 3
5/20/15	0725	EBF	Alo Sidlwalk	3.3	and the same	Load Class 3
1	0740	EBF	El	59.7	-	Excovak A3
	2820	ロろド	Statu 2	13 3		Excavate Class 3
	orzi	EBR	AZ Adewalk	33.1		
	0822	EBF	Status 1	10.0		
	0823	EBF	CI Sidewalk	0.3		
	O83 E	EBI-	B2	670		Eviance Al to-25 (43),
	0922	EBP/Kenny	load at execusion cas	1-7	_	Kenny menter while loading her
	0955	D 3E	B2	60.3	_	sping HC, digs C/
	1030	GBF	H	58.7		In lugging avea
	1/35	OSF-	CZ	1.8	-	Ex Kuneov Class 3
	1240	-83)?	Ban (1930) (3	12.4		Bail Class 3
7	1438	BB F	A3	17-7		Only neball



					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
5/20/m	1510	EBF	Ale sidewalk/52	5,9	<i>\$</i> —	Beil Class 3 wp
1	1511	EBF	Shehm I	18	U-	Faint Hi, but Class 3
1/27/15	C737-39	613F	A7 STOLEWALK	61-6.6		Load Class 3 Kennelly
	0740	EBF	Stahu 2	4.1		Lodde Class 3
	0741	EBF	Statum 1	02		Load Class 3
De de la companya de	0925	63F	C2_	80.1		Ex C3
	1200	EBF	DI	68.7		EX DI/AZ
	1310	ESF	DI	ર્જી, ચ્		DX 01/02
	;5°5	日許	E4/e5	11.7	# 101 <u></u>	TOY U.S
	1540	O.F	//	7.1		ti ti
28/15	0705	EBL	POR Ale sidemalk	2.8		Load Class 3
<u> </u>	0714	EBF	A2	25%		Er BI, shing K(
	0749-55	<i>E</i> 322	A3	39-238	0.0	tx 81/81
	0823	EBF	statum 2	34.2		Load Class 3
	0824	E37	Stapm (1.4), R
	0930	EBP	BI	8.9		EX B3 Class 3
	1130	BBF	82	2.2	~	Bother Dx, load Chiss 3
-	1340	ESF	EZ	0.2		Ex BICESIN IN E3
27/1	0846	ERF	Statu 2	0.0		Daile



AIR MONITORING LOG

			Location/Grid Location	PID Reading	Colorimetric Tube	
Date	Time	Sampler	(eg A2)	(rru)	Benzene (ppm)	Comments/Notes
5/29/45	0841	EH	Statum (0.2		Darly
	0842	CHJ.	Station 5	0.0		
	0845	EBT	Statum 4	0.0		
	0847	EUF	Statum 3	97	<u> </u>	
	CASC	£6E	H2	/5	-	Ex A) others He
	0950	ERIC	Statu 2	1.2		Ex A2 below
	0952	EBF	Stellin 1	22.3		smoot according
	1218	49年	A 2	40_2		Ex 10 242
	1360	tr i	12	19 7		lagging
مك	412	EBE	H	16.4		Prace Soil against brands
Glilis	0734	-03F	AS	4,2	*	Boul Class ?
	0800	05F	62	0.0		Bail Class 3
	UNIV	t13	A2	1.3		t/A3
	tous.	1 Bt	13	2.4		Emildak Har 3
	1212	ERF	A7 sdrwak	B.O.	~	Mon skeel plater
	11214	1931°	Sphn 2	0-0	4	Only
	1215	EMF	S/aloin	0.0		1
21:13	0493	FRI	Flata .L	00		Daily
	93	72r	Sizihan (00		Si.

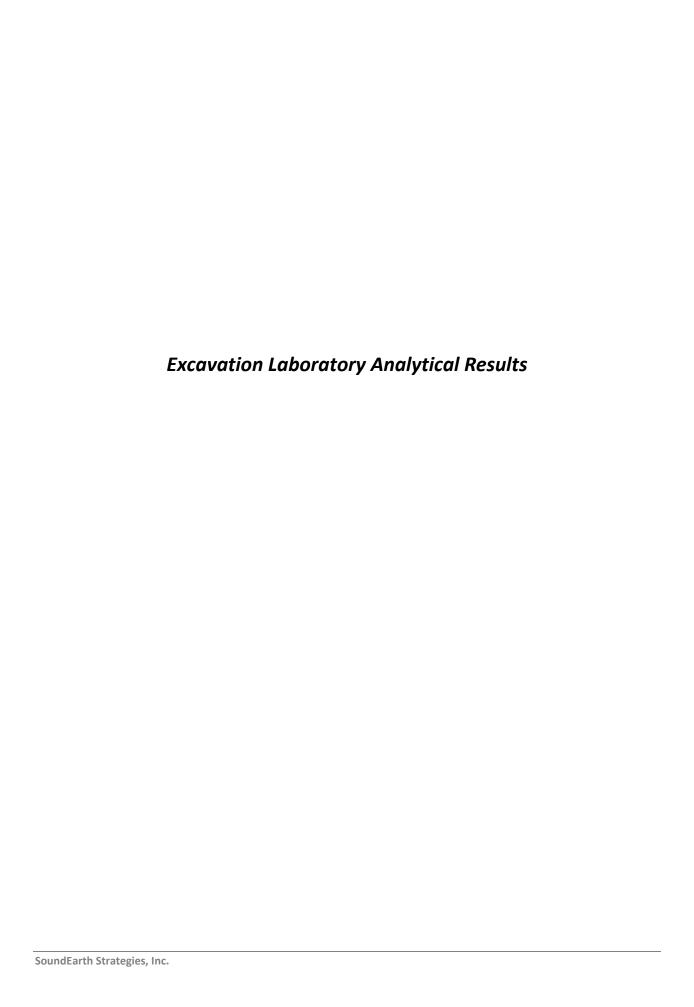
7.7	
Page	of

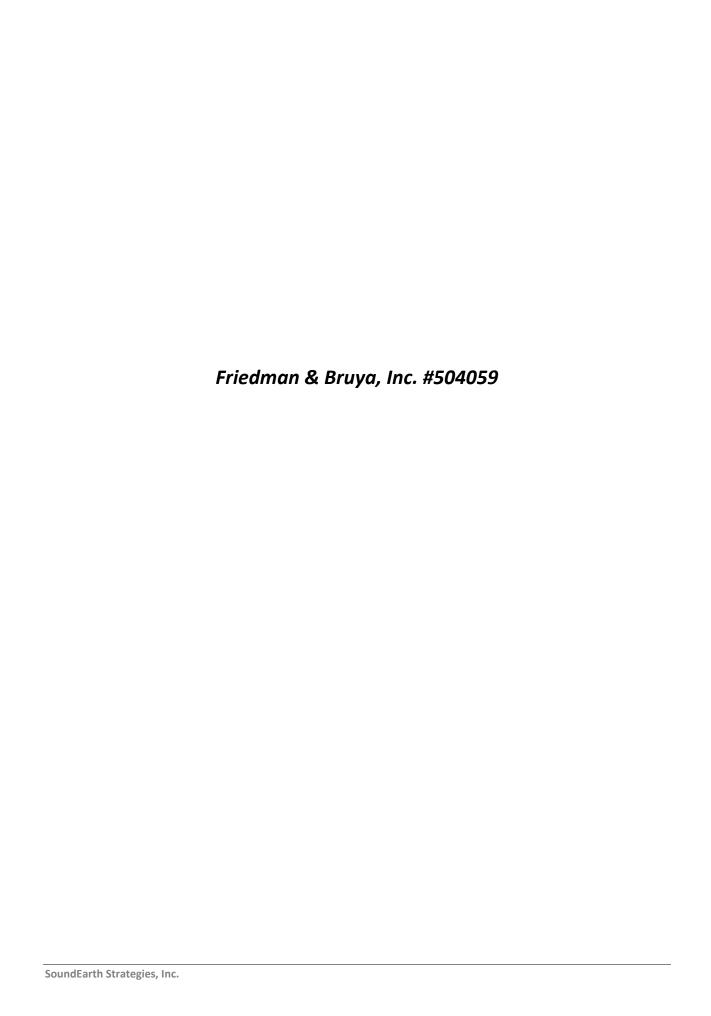


AIR MONITORING LOG

					Colorimetric Tube	
Date	Time	Sampler	Location/Grid Location (eg A2)	PID Reading (rru)	Benzene (ppm)	Comments/Notes
0/2/15	0733	EBF	Spahm 5	0.0		Park
	0734	EBF	Sapur 4	0.0		-
	0827	EBF	C5	6-0		Sampling, no ex
1	1315	EBF	Cl	0.1		Scrape bottom
0/3/15	0810	EBF	61	0.2		α 1/
	1125	砂片	A3	0.4	_	Ex. A3 lagging
1	1217	EBF	A3	0.0		Ex sump
6/9/15	0715	ERF	A7 sidewalk	ტ.0		Local Class 3
	0750	UBF	Slatin L	0.0		(1
	6751	EBF	Statum 1	0.0		A V
7	0935	EBF	A7 on plates	0.0		All class 3 remared
			,			

APPENDIX H LABORATORY ANALYTICAL REPORTS





ENVIRONMENTAL CHEMISTS

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

April 7, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 2, 2015 from the SOU_0914-001-12_20150402, F&BI 504059 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0407R.DOC

FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 2, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150402, F&BI 504059 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

504059 -01 S-BO1-A1-03

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504059

Date Extracted: 04/03/15 Date Analyzed: 04/03/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
S-BO1-A1-03 504059-01	< 0.02	<0.02	0.11	0.071	28	105
Method Blank	< 0.02	< 0.02	< 0.02	<0.06	<2	97

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504059

Date Extracted: 04/03/15 Date Analyzed: 04/03/15

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	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	$\frac{\text{Motor Oil Range}}{\text{(C}_{25}\text{-C}_{36}\text{)}}$	Surrogate (% Recovery) (Limit 56-165)
S-BO1-A1-03 504059-01	<50	<250	101
Method Blank	<50	<250	98

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504059

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: 504050-33 (Duplicate)

	_	Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	95	69-120
Toluene	mg/kg (ppm)	0.5	96	70-117
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123
Xylenes	mg/kg (ppm)	1.5	93	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504059

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504059-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	106	105	63-146	1

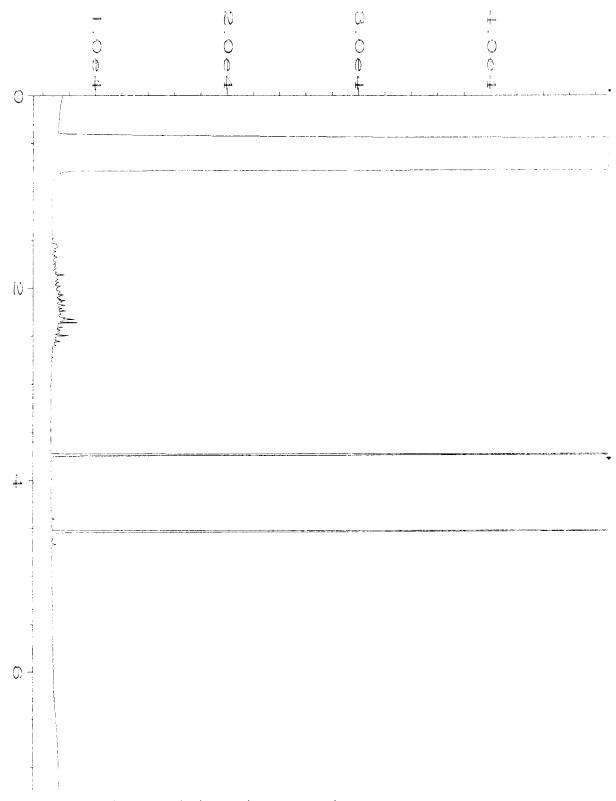
Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	79-144

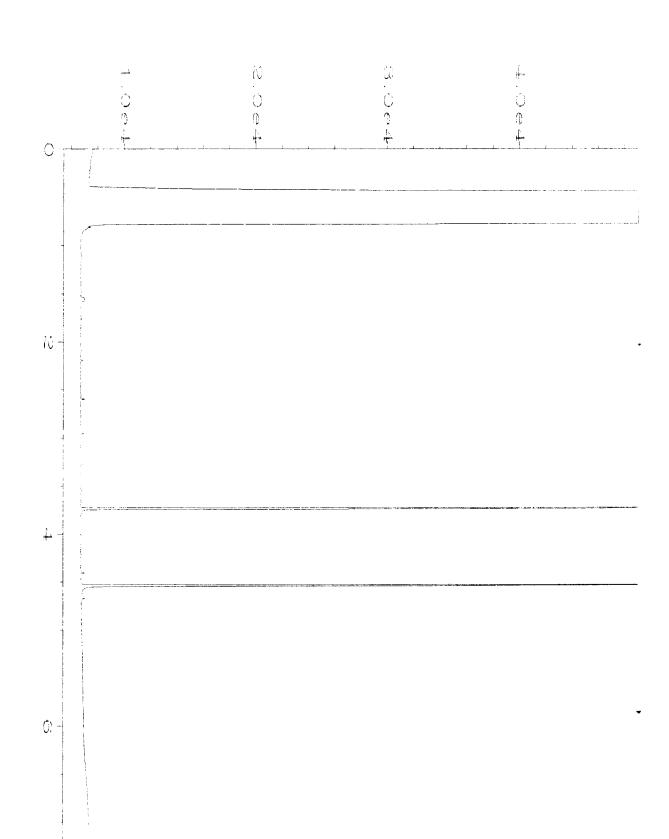
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

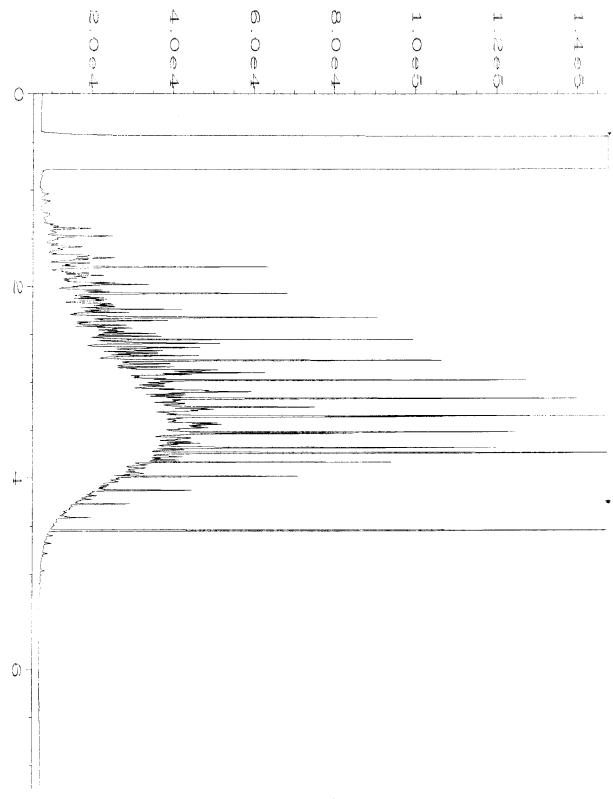
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



```
: C:\HPCHEM\1\DATA\04-03-15\010F0301.D
Data File Name
                                               Page Number
Operator
                 : mwdl
                                                                : 1
Instrument
                                               Vial Number
                                                                : 10
                 : GC1
                 : 504059-01
                                               Injection Number: 1
Sample Name
                                               Sequence Line
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on
                : 03 Apr 15 09:49 AM
Report Created on: 03 Apr 15 12:49 PM
                                               Analysis Method : DX.MTH
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: C:\HPCHEM\1\DATA\04-03-15\006F0301.D
Data File Name
                                               Page Number
Operator
                 : mwdl
Instrument
                                               Vial Number
                 : GC1
                                               Injection Number: 1
Sample Name
                 : 05-687 mb
Run Time Bar Code:
                                               Sequence Line
Acquired on : 03 Apr 15 09:07 AM
                                               Instrument Method: DX.MTH
Report Created on: 03 Apr 15
                            12:49 PM
                                               Analysis Method : DX.MTH
```



- - -

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: C:\HPCHEM\1\DATA\04-03-15\003F0201.D
Data File Name
Operator
                                               Page Number
                : mwdl
                                               Vial Number
Instrument
                : GC1
Sample Name
                : 500 Dx 44-94C
                                               Injection Number: 1
                                               Sequence Line
Run Time Bar Code:
Acquired on : 03 Apr 15 08:55 AM
                                               Instrument Method: DX.MTH
Report Created on: 03 Apr 15 12:49 PM
                                               Analysis Method : DX.MTH
```

(504059	SAMPLE CHA OF CUSTODY	ME 65 U	9-82-13 (CO)
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr			Page # of TURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	Standard (2 Weeks) RUSH 24 6 4
Address 2811 Fairview Avenue E, Suite 2000			Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS		SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907	_		Return samples Will call with instructions

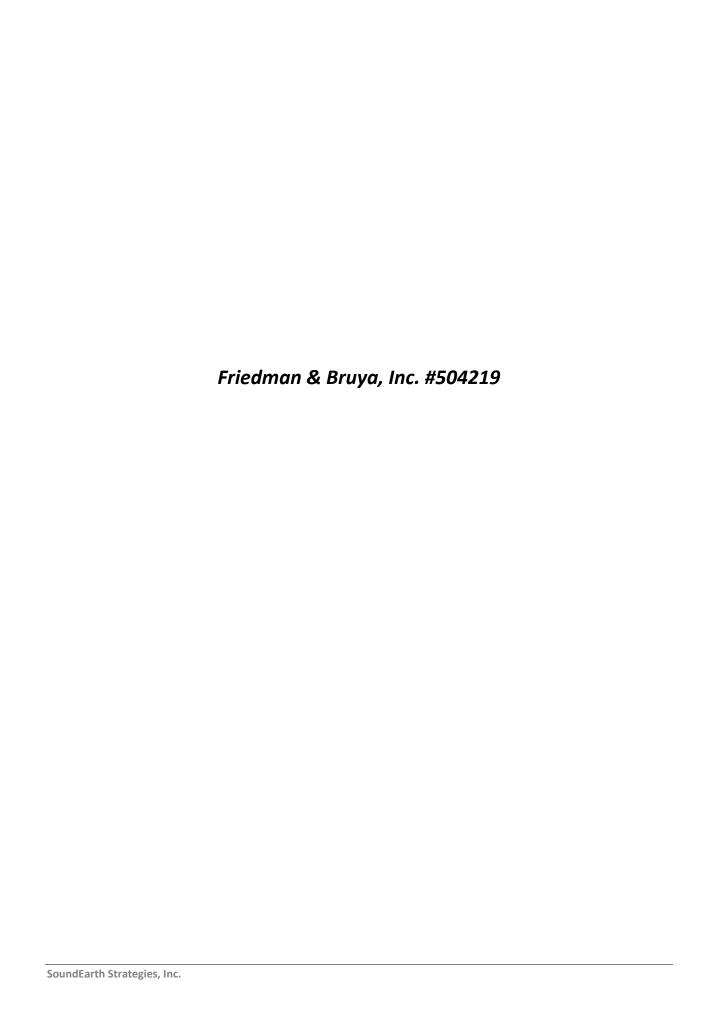
				T							A	NALYSI	ES REQI	UESTED		
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
5-BOLA1-03	A)	35	01 4.5	4/2/13	1350	Sol	5	χ	X	X						Marian Can
																9, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10
				K)												
													Sampl	es rec	ived a	t_4_°C

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

Fax (206) 283-5044

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Received b					
Treceived by					



ENVIRONMENTAL CHEMISTS

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

April 16, 2015

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 13, 2015 from the SOU_0914_20150413, F&BI 504219 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0416R.DOC

FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 13, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914_20150413, F&BI 504219 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

504219 -01 S-B01-A2-267

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/16/15 Date Received: 04/13/15

Project: SOU_0914_20150413, F&BI 504219

Date Extracted: 04/13/15

Date Analyzed: 04/13/15 and 04/14/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-A2-267 504219-01 1/5	<0.02 j	<0.1	7.6	6.0	1,600	118
Method Blank 05-0748 MB	< 0.02	< 0.02	<0.02	< 0.06	<2	87

ENVIRONMENTAL CHEMISTS

Date of Report: 04/16/15 Date Received: 04/13/15

Project: SOU_0914_20150413, F&BI 504219

Date Extracted: 04/14/15 Date Analyzed: 04/14/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 53-144)
S-B01-A2-267 504219-01	430 x	<250	94
Method Blank	<50	<250	92

ENVIRONMENTAL CHEMISTS

Date of Report: 04/16/15 Date Received: 04/13/15

Project: SOU_0914_20150413, F&BI 504219

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

Laboratory Code: 504208-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

			Percent		
	Reporting	Spike	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	Criteria	(Limit 20)
Benzene	mg/kg (ppm)	0.5	80	69-120	_
Toluene	mg/kg (ppm)	0.5	81	70-117	
Ethylbenzene	mg/kg (ppm)	0.5	79	65-123	
Xylenes	mg/kg (ppm)	1.5	79	66-120	
Gasoline	mg/kg (ppm)	20	95	71-131	

ENVIRONMENTAL CHEMISTS

Date of Report: 04/16/15 Date Received: 04/13/15

Project: SOU_0914_20150413, F&BI 504219

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504026-05 (Matrix Spike)

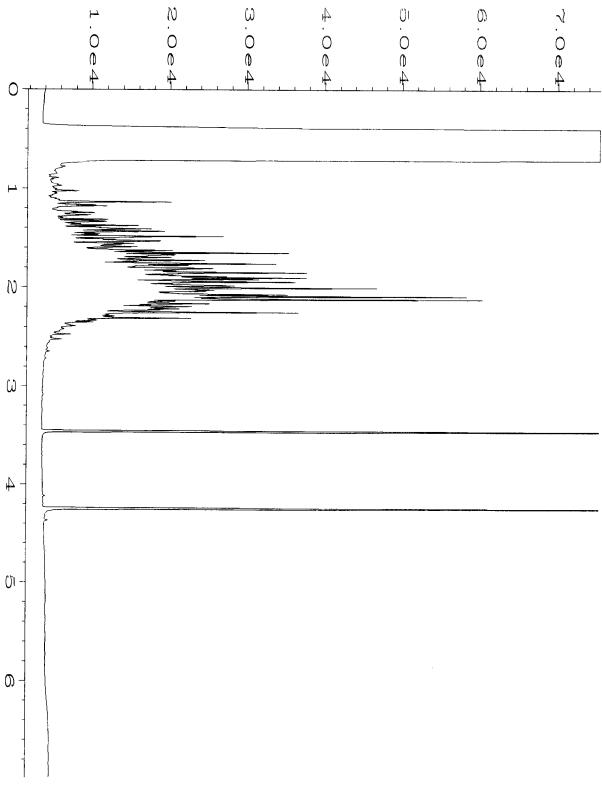
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	115	114	63-146	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	124	79-144

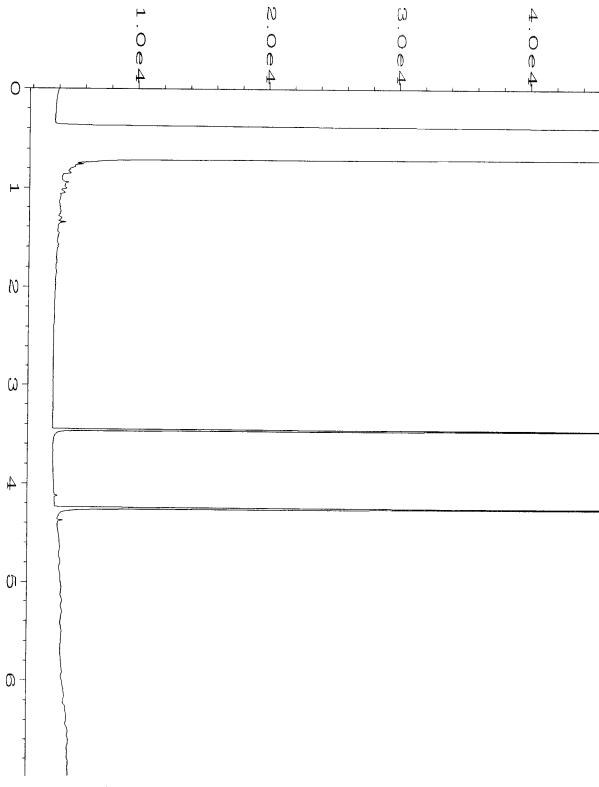
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

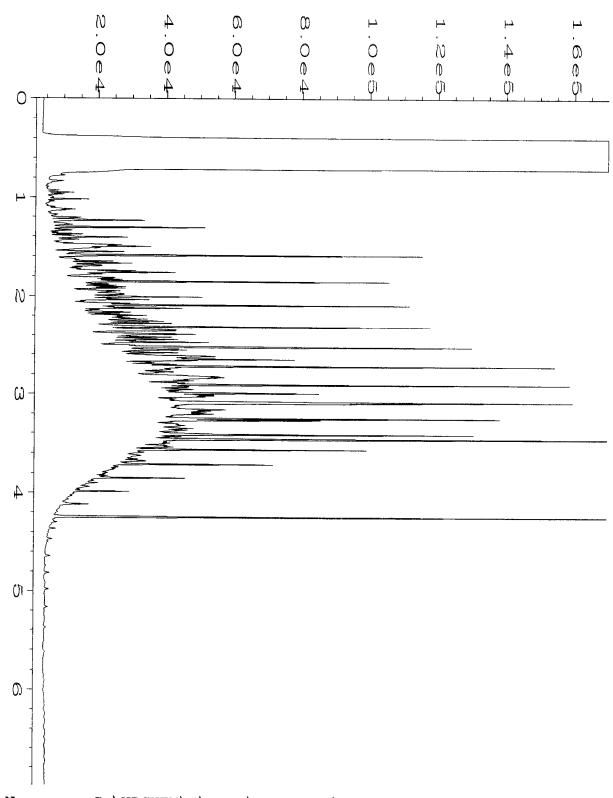
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



```
Data File Name
                 : C:\HPCHEM\6\DATA\04-14-15\007F0301.D
Operator
                 : mwdl
                                               Page Number
Instrument
                 : GC #6
                                               Vial Number
                                                                : 7
Sample Name
                 : 504219-01
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
Acquired on : 14 Apr 15 09:40 AM
                                               Instrument Method: DX.MTH
Report Created on: 15 Apr 15
                            04:05 PM
                                               Analysis Method : DX.MTH
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Data File Name
Operator
                 : mwdl
                                               Page Number
Instrument
                                               Vial Number
                 : GC #6
                                                                : 6
Sample Name
                 : 05-741 mb2
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
Acquired on
                : 14 Apr 15 09:32 AM
                                               Instrument Method: DX.MTH
Report Created on: 15 Apr 15 04:05 PM
                                               Analysis Method : DX.MTH
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Data File Name
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Operator
                : mwdl
                                              Page Number
Instrument
                : GC #6
                                              Vial Number
                : 500 Dx 44-94C
Sample Name
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line : 2
Acquired on
                : 14 Apr 15
                             09:07 AM
                                              Instrument Method: DX.MTH
Report Created on: 15 Apr 15 04:05 PM
                                              Analysis Method : DX.MTH
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Send Report to <u>R</u>	. Robert	s; S. S	<u>Stu</u>

SAMPLE CHAY OF CUSTODY ME 04-13-15 C

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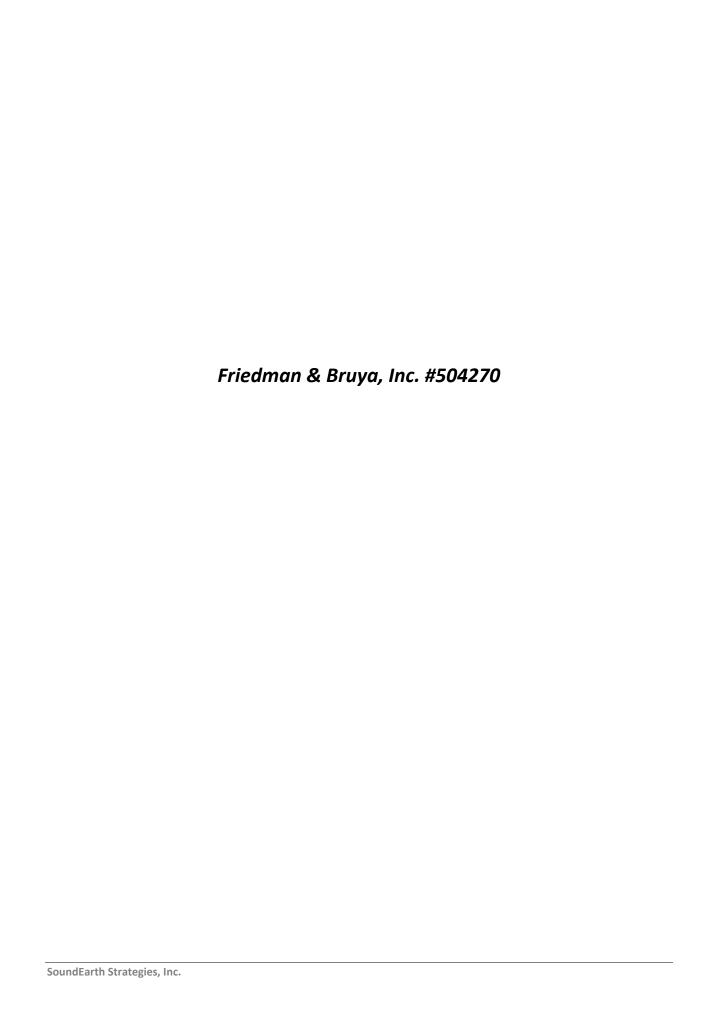
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)	Page # of
	PROJECT NAME/NO. PO#	TURNAROUND TIME Standard (2 Weeks)
Address 2811 Fairview Avenue E, Suite 2000	SKS Shell 0914	Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS	SUZY Stumpt SAMPLE DISPOSAL
Phone # 206-306-1900 Fax # 206-306-1907		Dispose after 30 days Return samples

			т											Will	call wi	th instructions
											A	NALYSI	ES REQ	UESTEL)	
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
6-BOI-A2-267	BO1-A2	261	OL A-S	4/13/15	1345	501L	5	X'	.,							
									×							
Ping Ju															·	
							10									
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								$\neg +$					+			
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

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

:.	Received by:	PRINT NAME JONATHAN LOEFFIEL	COMPANY SOUNDEARTH	DATE #/13/15	TIME
9	Relinquished by:	Dow	FOBZ	4	15:15
	Received by:				



ENVIRONMENTAL CHEMISTS

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

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

May 1, 2015

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 15, 2015 from the SOU 0914-001-12 20150415, F&BI 504270 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU0501R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 15, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150415, F&BI 504270 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
504270 -01	S-B02-A1-266
504270 -02	S-ESW01-A1-265
504270 -03	S-NSW01-A1-265
504270 -04	S-NSW01-B1-265
504270 -05	S-ESW01-A4-265
504270 -06	S-SSW01-A4-265

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/15/15

Project: SOU_0914-001-12_20150415, F&BI 504270

Date Extracted: 04/28/15 Date Analyzed: 04/28/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-ESW01-A1-265 504270-02	< 0.02	0.031	< 0.02	< 0.06	3.6	93
S-SSW01-A4-265 504270-06	< 0.02	< 0.02	< 0.02	< 0.06	<2	93
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	93

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/15/15

Project: SOU_0914-001-12_20150415, F&BI 504270

Date Extracted: 04/28/15 Date Analyzed: 04/28/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 53-144)
S-ESW01-A1-265 504270-02	< 50	<250	96
S-SSW01-A4-265 504270-06	<50	<250	96
Method Blank 05-860 MB	<50	<250	94

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/15/15

Project: SOU_0914-001-12_20150415, F&BI 504270

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: 504270-06 (Duplicate)

-	Reporting	Sample Result	Duplicate Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

		Percent					
	Reporting	Spike	Recovery	Acceptance			
Analyte	Units	Level	LCS	Criteria			
Benzene	mg/kg (ppm)	0.5	90	69-120			
Toluene	mg/kg (ppm)	0.5	94	70-117			
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123			
Xylenes	mg/kg (ppm)	1.5	95	66-120			
Gasoline	mg/kg (ppm)	20	95	71-131			

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/15/15

Project: SOU_0914-001-12_20150415, F&BI 504270

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504495-01 (Matrix Spike)

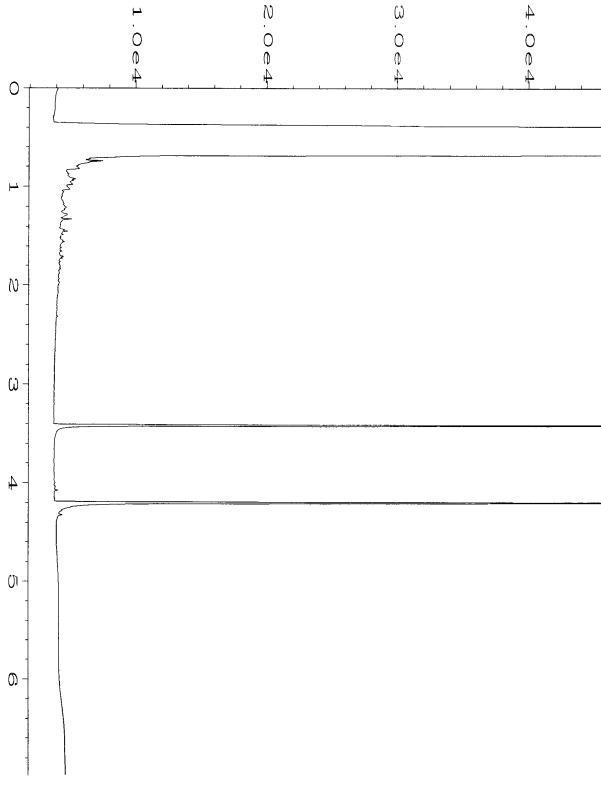
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	93	90	64-133	3

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	91	58-147

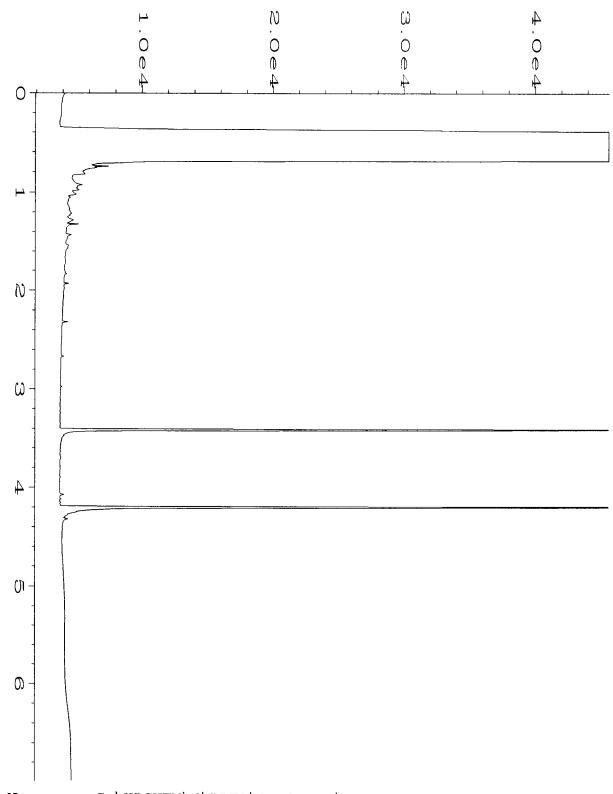
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

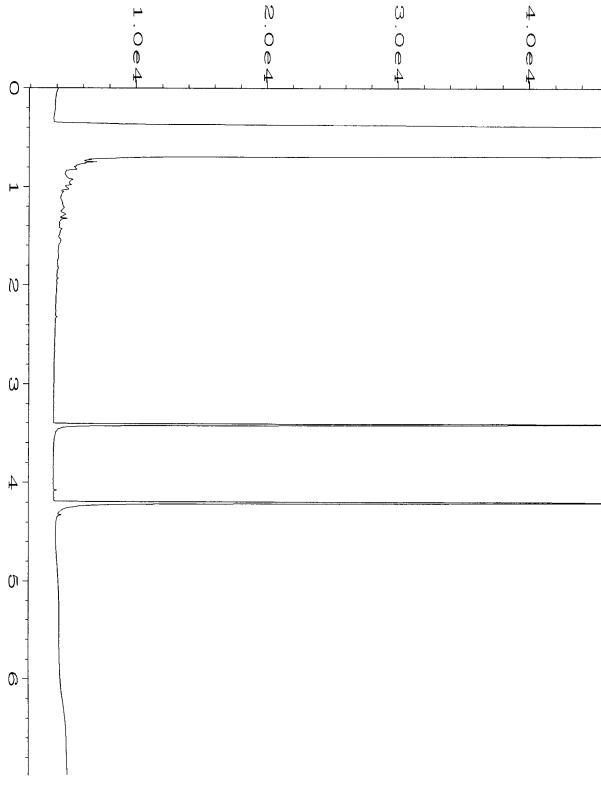
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



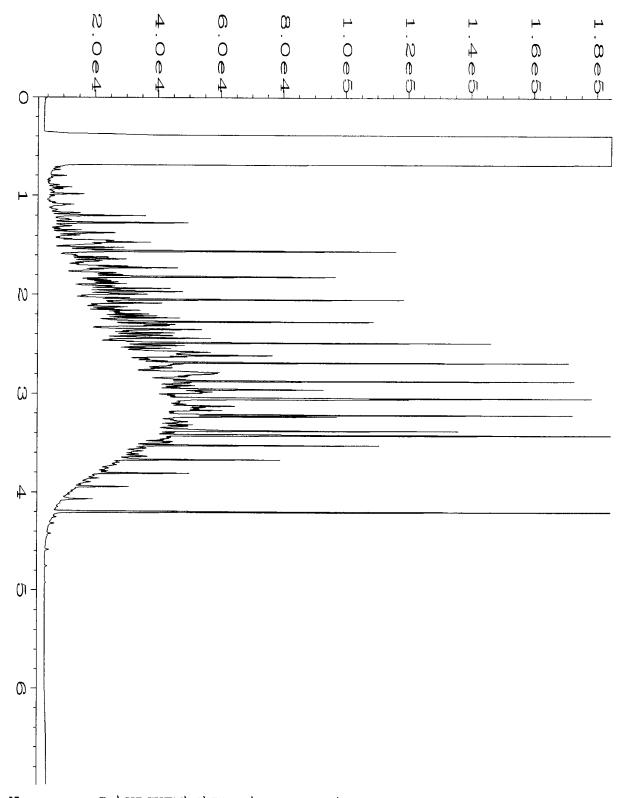
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                 : mwdl
                                               Page Number
                                                                : 1
Instrument
                 : GC #6
                                               Vial Number
                                                                : 27
Sample Name
                : 504270-02
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 6
Acquired on
                                               Instrument Method: DX.MTH
                : 28 Apr 15 03:58 PM
Report Created on: 29 Apr 15
                            09:51 AM
                                               Analysis Method : DX.MTH
```



```
Data File Name
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                                                 Page Number
Vial Number
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                 : mwdl
                                                                  : 1
Instrument
                 : GC #6
                                                                  : 28
Sample Name
                 : 504270-06
                                                 Injection Number: 1
Run Time Bar Code:
                                                 Sequence Line : 6
Acquired on
                 : 28 Apr 15 04:09 PM
                                                 Instrument Method: DX.MTH
Report Created on: 29 Apr 15
                              09:52 AM
                                                 Analysis Method : DX.MTH
```



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Data File Name
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Operator
                                               Page Number
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Instrument
                                               Vial Number
                 : GC #6
                                                                : 11
Sample Name
                 : 05-860 mb
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
Acquired on
                : 28 Apr 15
                                               Instrument Method: DX.MTH
                             10:52 AM
Report Created on: 29 Apr 15
                            09:51 AM
                                               Analysis Method : DX.MTH
```



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Data File Name
                : C:\HPCHEM\6\DATA\04-28-15\003F0201.D
Operator
                : mwdl
                                               Page Number
                : GC #6
Instrument
                                               Vial Number
                                                                : 3
Sample Name
                : 500 Dx 44-94C
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 2
Acquired on : 28 Apr 15 09:03 AM
                                               Instrument Method: DX.MTH
Report Created on: 29 Apr 15 09:50 AM
                                               Analysis Method : DX.MTH
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•	Send Report to R. R.		umpf: E.	Forbe	s: J. Cvr	SAMP	LERS (ignatu	re) S	2 1	1]	age#_	ofof
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; ;	Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8280C	Metals by 200.8	PCBs by Method 8062	11010	Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

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

Received by:		Samples received	9 pd	
Relinquished by:				
1999	HONG NEWEN	FBA	V	V
Received by:	JUNATHAN COEFFERE	SCUNDEARTH	4/15/15	1702
SIGNATURE Relinquished by:	PRINT NAME	COMPANY	DATE	TIME

4/15/13

*STO TAT RELIASE HOLD



ENVIRONMENTAL CHEMISTS

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

May 1, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 17, 2015 from the SOU_0914-001-12_20150417, F&BI 504311 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0501R.DOC

FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150417, F&BI 504311 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

504311 -01 S-B01-A3-265

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504311

Date Extracted: 04/28/15 Date Analyzed: 04/28/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-A3-265 504311-01	< 0.02	0.37	0.44	1.1	83	106
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	93

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504311

Date Extracted: 04/28/15 Date Analyzed: 04/28/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 53-144)
S-B01-A3-265 504311-01	<50	<250	95
Method Blank 05-860 MB	< 50	<250	94

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504311

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: 504270-06 (Duplicate)

, and the second	Demontina	Sample	Duplicate	DDD
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	90	69-120
Toluene	mg/kg (ppm)	0.5	94	70-117
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123
Xylenes	mg/kg (ppm)	1.5	95	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504311

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504495-01 (Matrix Spike)

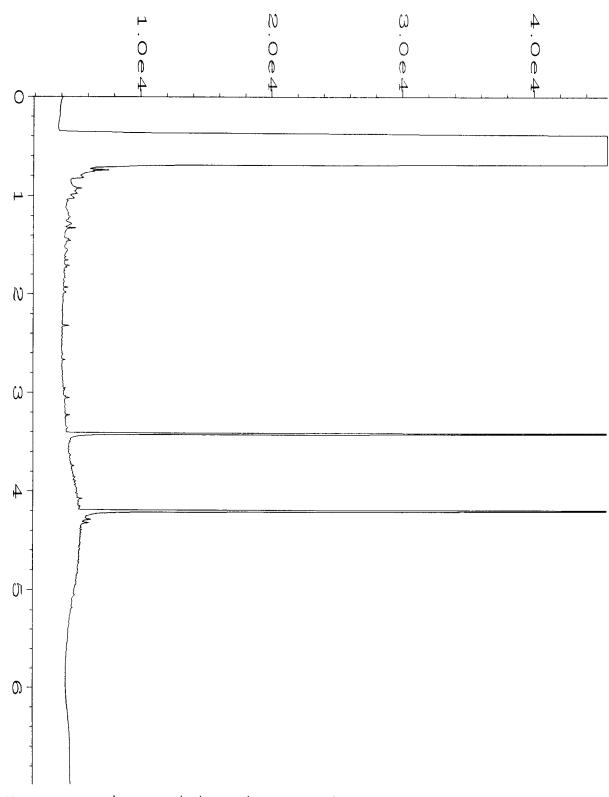
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	93	90	64-133	3

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	91	58-147

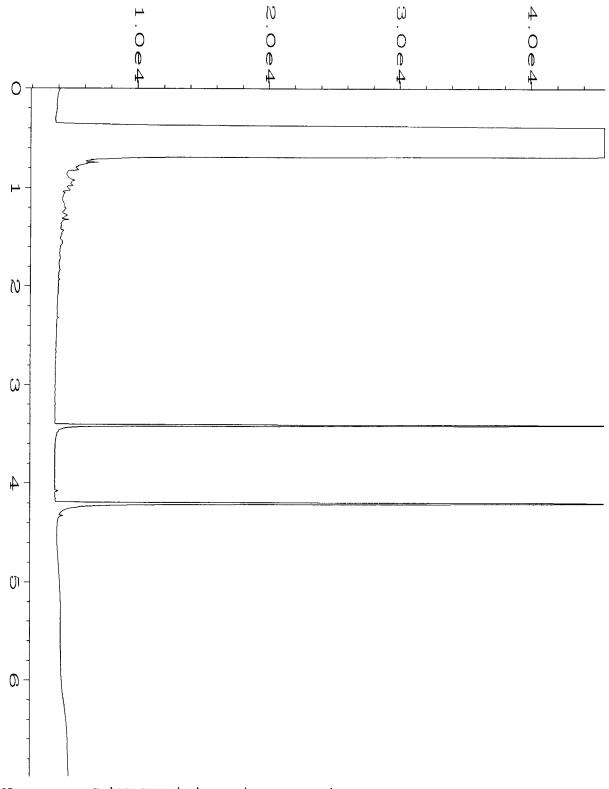
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

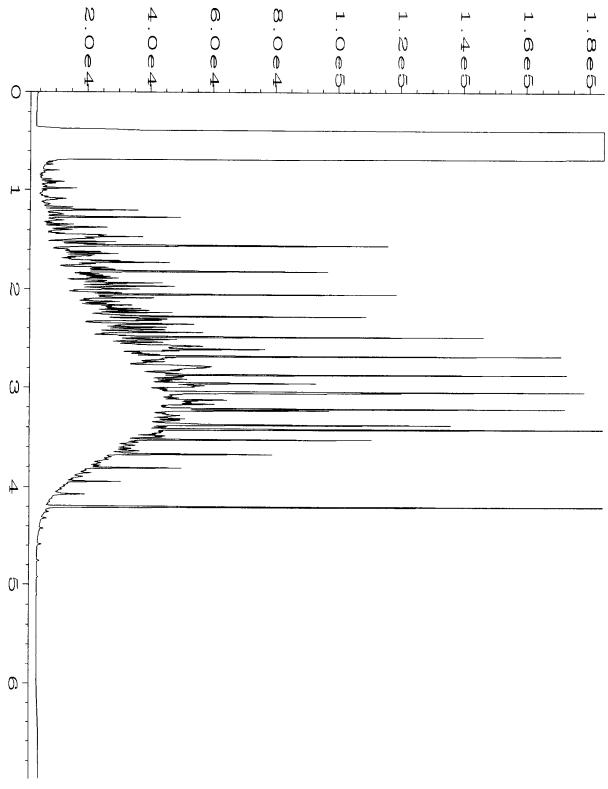
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



```
Data File Name
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Instrument
                 : GC #6
                                               Vial Number
                                                                : 29
Sample Name
                : 504311-01
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 6
Acquired on
                : 28 Apr 15
                             04:20 PM
                                               Instrument Method: DX.MTH
Report Created on: 29 Apr 15
                                               Analysis Method : DX.MTH
                            09:52 AM
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Data File Name
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Operator
                 : mwdl
                                               Page Number
                                                                : 1
Instrument
                 : GC #6
                                               Vial Number
                                                                : 11
Sample Name
                 : 05-860 mb
                                               Injection Number: 1
                                               Sequence Line : 3
Run Time Bar Code:
Acquired on
                : 28 Apr 15 10:52 AM
                                               Instrument Method: DX.MTH
Report Created on: 29 Apr 15
                                               Analysis Method : DX.MTH
                             09:51 AM
```



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Data File Name
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Operator
                : mwdl
                                               Page Number
Instrument
                : GC #6
                                              Vial Number
                                                               : 3
Sample Name
                : 500 Dx 44-94C
                                               Injection Number: 1
Run Time Bar Code:
                                              Sequence Line : 2
Acquired on : 28 Apr 15
                                              Instrument Method: DX.MTH
                             09:03 AM
Report Created on: 29 Apr 15 09:50 AM
                                              Analysis Method : DX.MTH
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27\ 12\	Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	#of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082	HOCD	Notes SID TAT
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

FORMS\COC\COCDOC

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by	JONATHAN LOEFFLER	SOUNDEARTH	4/17/15	
Received by: Pat Militia	PGT Mahony	Sound Earth	4/12/15	11:55
Relinquished by:				1
Received by: ACULU	HONG NGUYEN	FBI	4/17/15	- /
	, ,	J		



ENVIRONMENTAL CHEMISTS

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

May 1, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 17, 2015 from the SOU_0914-007_20150417, F&BI 504332 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0501R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-007_20150417, F&BI 504332 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
504332 -01	S-B01-A1-261
504332 -02	S-B01-A2-261
504332 -03	S-B01-B1-261

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-007_20150417, F&BI 504332

Date Extracted: 04/28/15 Date Analyzed: 04/28/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-A1-261 504332-01	<0.02	0.064	<0.02	0.073	27	92
S-B01-A2-261 504332-02	< 0.02	< 0.02	< 0.02	< 0.06	15	91
S-B01-B1-261 504332-03 1/5	<0.02 j	<0.1	14	15	1,700	134
Method Blank 05-0861 MB	<0.02	< 0.02	<0.02	< 0.06	<2	93

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-007_20150417, F&BI 504332

Date Extracted: 04/28/15 Date Analyzed: 04/28/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅)	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 53-144)
S-B01-A1-261 504332-01	< 50	<250	101
S-B01-A2-261 504332-02	< 50	<250	96
S-B01-B1-261 504332-03	85 x	<250	95
Method Blank 05-860 MB	<50	<250	94

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-007_20150417, F&BI 504332

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: 504270-06 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	90	69-120
Toluene	mg/kg (ppm)	0.5	94	70-117
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123
Xylenes	mg/kg (ppm)	1.5	95	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

ENVIRONMENTAL CHEMISTS

Date of Report: 05/01/15 Date Received: 04/17/15

Project: SOU_0914-007_20150417, F&BI 504332

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504495-01 (Matrix Spike)

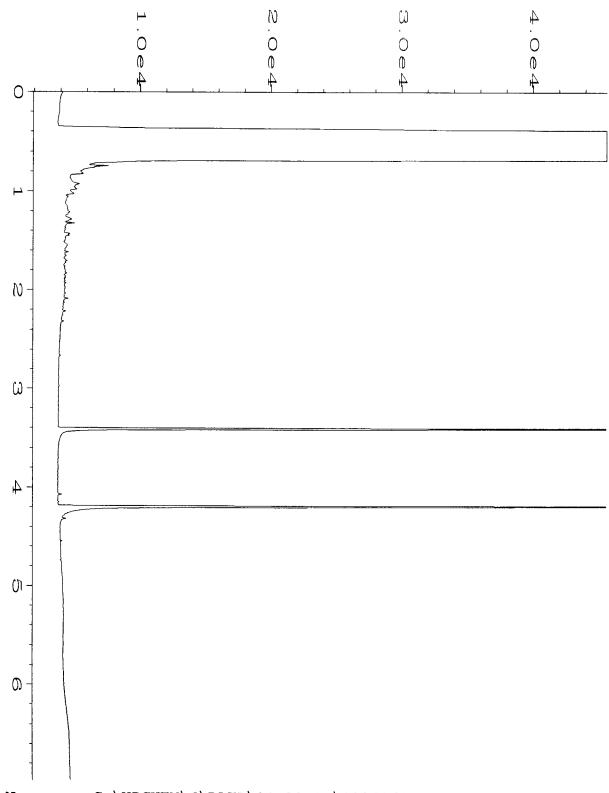
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	93	90	64-133	3

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	91	58-147

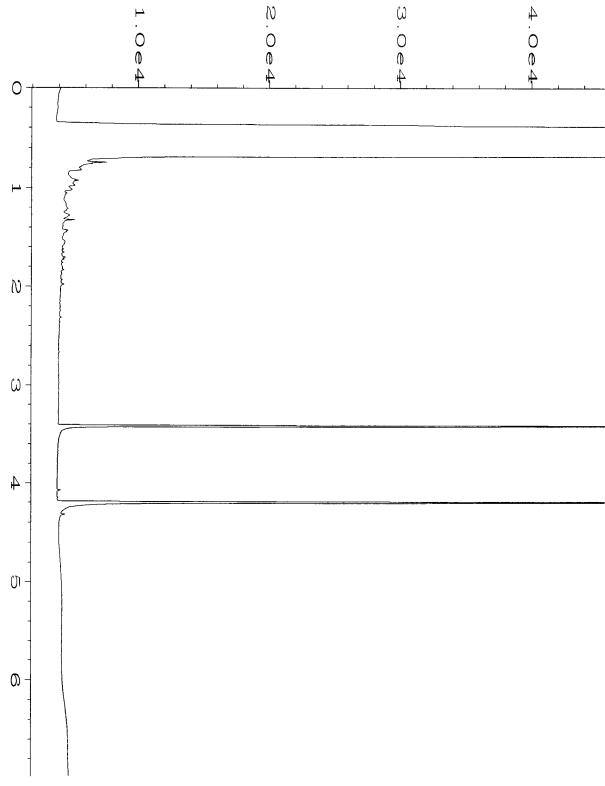
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

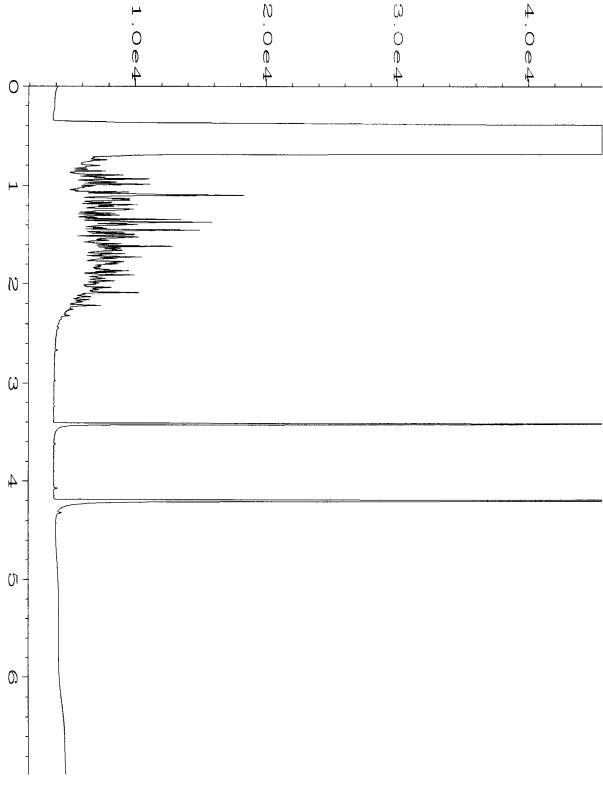
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



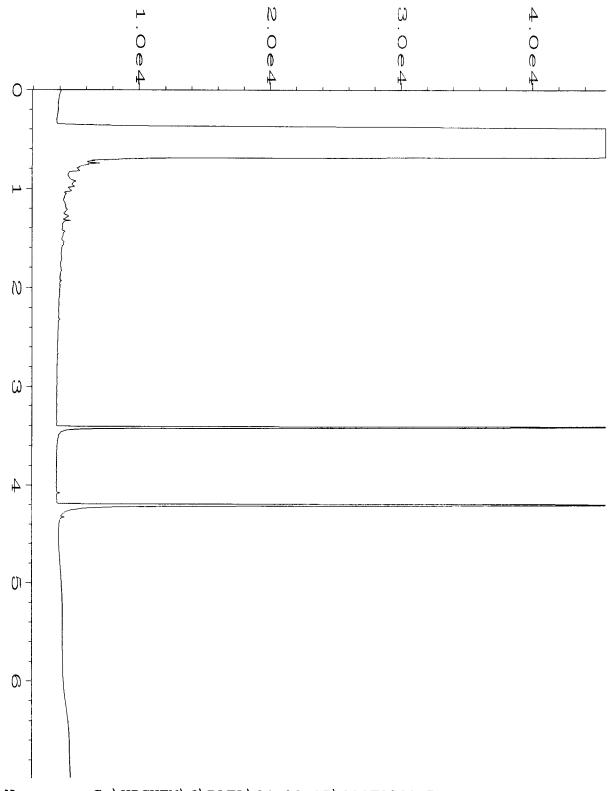
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Data File Name
Operator
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                                               Page Number
                                              Vial Number
Instrument
                 : GC #6
                                                               : 23
Sample Name
                 : 504332-01
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 6
Acquired on
                : 28 Apr 15 03:15 PM
                                              Instrument Method: DX.MTH
Report Created on: 29 Apr 15 09:51 AM
                                              Analysis Method : DX.MTH
```



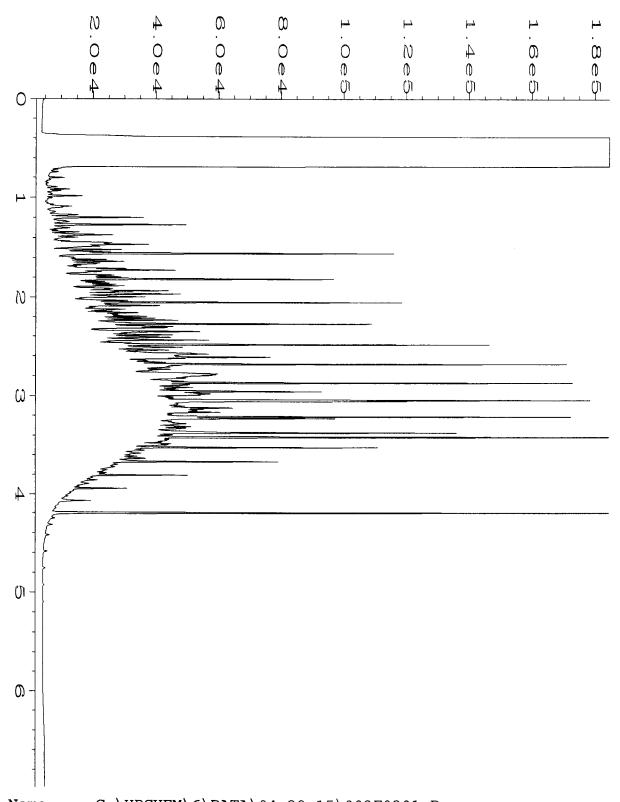
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: C:\HPCHEM\6\DATA\04-28-15\024F0601.D
Data File Name
Operator
                 : mwdl
                                               Page Number
                                                                : 1
Instrument
                 : GC #6
                                               Vial Number
                                                                : 24
Sample Name
                 : 504332-02
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 6
Acquired on
                 : 28 Apr 15 03:26 PM
                                               Instrument Method: DX.MTH
Report Created on: 29 Apr 15
                            09:51 AM
                                               Analysis Method : DX.MTH
```



```
Data File Name
                : C:\HPCHEM\6\DATA\04-28-15\025F0601.D
Operator
                : mwdl
                                               Page Number
Instrument
                 : GC #6
                                               Vial Number
                                                                : 25
Sample Name
                : 504332-03
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 6
Acquired on : 28 Apr 15
                                               Instrument Method: DX.MTH
                             03:36 PM
Report Created on: 29 Apr 15
                             09:51 AM
                                               Analysis Method : DX.MTH
```



```
Data File Name
                 : C:\HPCHEM\6\DATA\04-28-15\011F0301.D
Operator
                 : mwdl
                                               Page Number
                                                                : 1
Instrument
                 : GC #6
                                               Vial Number
                                                                : 11
Sample Name
                : 05-860 mb
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
Acquired on : 28 Apr 15
                                               Instrument Method: DX.MTH
                             10:52 AM
Report Created on: 29 Apr 15
                             09:51 AM
                                               Analysis Method : DX.MTH
```



```
Data File Name
                : C:\HPCHEM\6\DATA\04-28-15\003F0201.D
Operator
                : mwdl
                                               Page Number
Instrument
                : GC #6
                                               Vial Number
Sample Name
                : 500 Dx 44-94C
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 2
Acquired on : 28 Apr 15
                             09:03 AM
                                               Instrument Method: DX.MTH
Report Created on: 29 Apr 15
                             09:50 AM
                                               Analysis Method : DX.MTH
```

(504332 SA	MPLE CHAY OF CUSTODY	, HE OUL	17/15 (15
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)		Page#of/
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	TURNARQUIND TIME Standard (2 Weeks) RUSH
Address 2811 Fairview Avenue E. Suite 2000	<u> </u>		Rush charges authorized by:
City, State, ZIP Seattle. Washington 98102	REMARKS HOLD	C C	SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907	4/27/15 - Con't to hold 1 402 jo - Release S-BOLAI, SBOI	-A215-BOI-BI	Return samples Will call with instructions
		ANALYSES REQ	UESTED

			İ								A	NALYSI	S REQU	JESTED)	
Sample ID Sam Loca	Sample Location	Sample Depth		Date Sampled	Time Sampled	Matrix	#of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8280C	Metale by 200.8	PCBs by Method 8082	ल जा	Notes
5-801-11: Zun	Ai	761	かだ	4/17/18	1300	Seri	6	X	X	Х						STAT
3-801- AZ- 261	A.Z	231	22)	1310	i	6	X	X	V					-	PERSENCED
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	L			<u> </u>								_				

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

Fax (206) 283-5044

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SIGNATURE Relinquished by:	PRINT NAME	COMPANY	DATE	TIME
Paris	Liz Tubes	575	4/17/1	1450
Relinquished by:	Mhan Phan	FLBT	4/17/15	1450
Received by:				



ENVIRONMENTAL CHEMISTS

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

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

April 28, 2015

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 23, 2015 from the SOU 0914-001-12 20150423, F&BI 504429 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl **Project Manager**

Enclosures

c: Liz Forbes, Suzy Stump, Jennifer Cyr

SOU0428R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 23, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150423, F&BI 504429 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

504429 -01 S-B01-04-270

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

Date Extracted: 04/23/15 Date Analyzed: 04/23/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-04-270 504429-01	< 0.02	0.12	0.12	0.74	36	90
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	97

ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

Date Extracted: 04/23/15 Date Analyzed: 04/23/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 48-168)
S-B01-04-270 504429-01	200 x	320	97
Method Blank 05-842 MB	< 50	<250	94

ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

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: 504357-14 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

		Percent						
	Reporting	Spike	Recovery	Acceptance				
Analyte	Units	Level	LCS	Criteria				
Benzene	mg/kg (ppm)	0.5	89	69-120				
Toluene	mg/kg (ppm)	0.5	93	70-117				
Ethylbenzene	mg/kg (ppm)	0.5	93	65-123				
Xylenes	mg/kg (ppm)	1.5	92	66-120				
Gasoline	mg/kg (ppm)	20	105	71-131				

ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504418-06 (Matrix Spike)

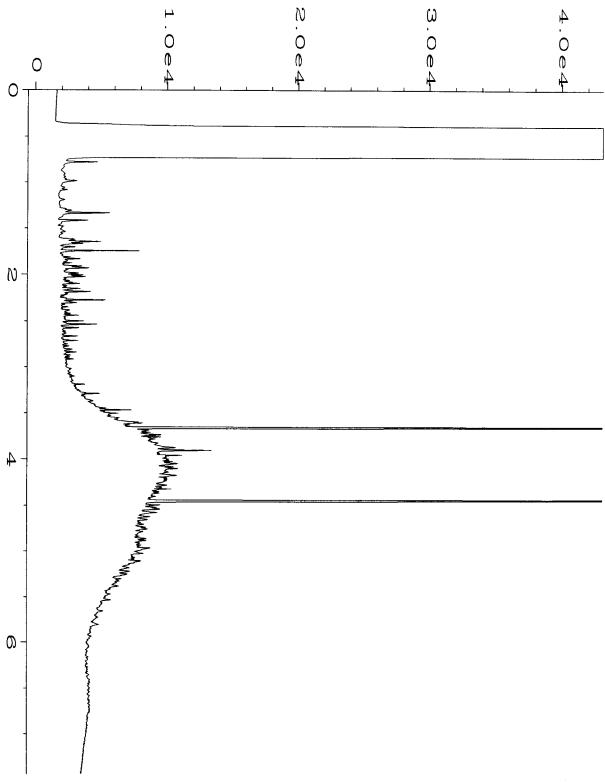
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	180	84	87	73-135	4

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Diesel Extended	mg/kg (ppm)	5,000	86	74-139	-	

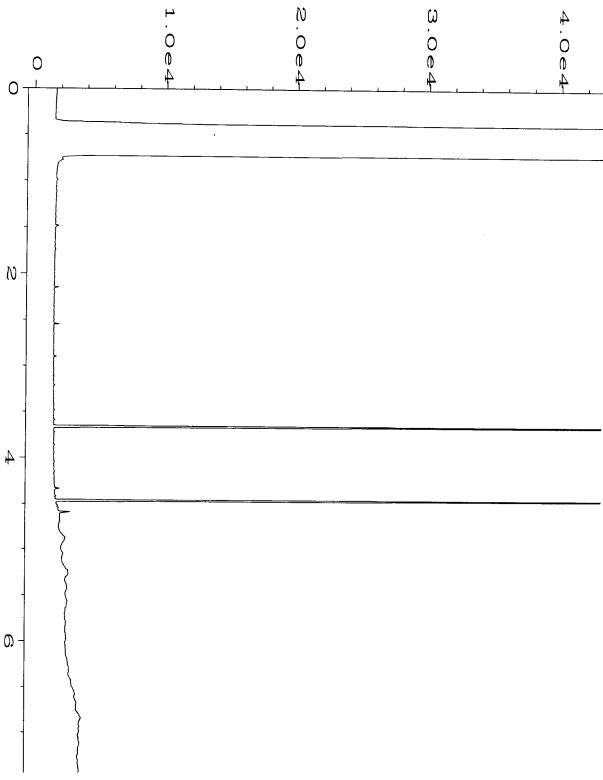
ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

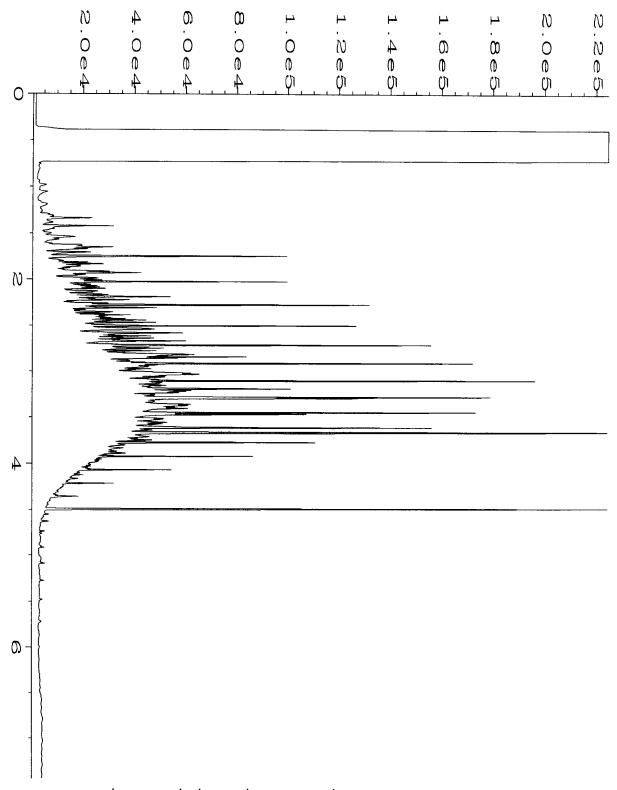
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



```
Data File Name
                 : C:\HPCHEM\4\DATA\04-23-15\049F0701.D
Operator
                 : mwdl
                                                Page Number
                                               Vial Number
Instrument
                 : GC#4
                                                                 : 49
Sample Name
                 : 504429-01
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line : 7
Acquired on
                : 23 Apr 15 07:09 PM
                                                Instrument Method: DX.MTH
Report Created on: 24 Apr 15 09:41 AM
                                               Analysis Method : END.MTH
```



```
Data File Name
                : C:\HPCHEM\4\DATA\04-23-15\025F0501.D
Operator
                : mwdl
                                              Page Number
Instrument
                : GC#4
                                              Vial Number
Sample Name
                : 05-842 mb
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line : 5
Acquired on
                                              Instrument Method: DX.MTH
             : 23 Apr 15
                            02:10 PM
Report Created on: 24 Apr 15 09:41 AM
                                              Analysis Method : END.MTH
```



```
Data File Name : C:\HPCHEM\4\DATA\04-23-15\003F0201.D

Operator : mwdl Page Number : 1

Instrument : GC#4 Vial Number : 3

Sample Name : 500 Dx 44-94C Injection Number : 1

Run Time Bar Code: Sequence Line : 2

Acquired on : 23 Apr 15 10:00 AM Instrument Method: DX.MTH

Report Created on: 24 Apr 15 09:41 AM Analysis Method : END.MTH
```

5744/29 SA	MPLE CHA OF CUSTODY	ME 04/0	23/15) VSI
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)		Page# of TURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	Standard (2 Weeks) RUSH Rush charges authorized by:
Address 2811 Fairview Avenue E, Suite 2000			tush charges authorized by:
City, State, ZIP <u>Seattle, Washington 98102</u> Phone # <u>206-306-1900</u> Fax # <u>206-306-1907</u>	REMARKS		SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

											1A	VALYSE	S REQ	JESTED			
Sample IID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes	•
5-Bit- Ou 2 m	<i>(</i>)		O/A·F			Sur		,	N.	X.						1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
	~~~																
													Sa	mples	receiv	ed at $\mathcal{F}_{\underline{}}$	°C
							•										

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE PRINT NAME COMPANY DATE TIME
Relinquished by:

Received by:

Received by:

Received by:

Received by:

FORMS\COC\COC.DOC

#### **ENVIRONMENTAL CHEMISTS**

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

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

April 29, 2015

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 23, 2015 from the SOU_0914-001-12_20150423, F&BI 504429 project. The sample ID has been updated.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Liz Forbes, Suzy Stump, Jennifer Cyr

SOU0428R.DOC

#### ENVIRONMENTAL CHEMISTS

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

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

April 28, 2015

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 23, 2015 from the SOU 0914-001-12 20150423, F&BI 504429 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl **Project Manager** 

Enclosures

c: Liz Forbes, Suzy Stump, Jennifer Cyr

SOU0428R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 23, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150423, F&BI 504429 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

504429 -01 S-B01-C4-270

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

Date Extracted: 04/23/15 Date Analyzed: 04/23/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-C4-270 504429-01	< 0.02	0.12	0.12	0.74	36	90
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	97

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

Date Extracted: 04/23/15 Date Analyzed: 04/23/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 48-168)
S-B01-C4-270 504429-01	200 x	320	97
Method Blank 05-842 MB	< 50	<250	94

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

# 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: 504357-14 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	mg/kg (ppm)	0.5	89	69-120		
Toluene	mg/kg (ppm)	0.5	93	70-117		
Ethylbenzene	mg/kg (ppm)	0.5	93	65-123		
Xylenes	mg/kg (ppm)	1.5	92	66-120		
Gasoline	mg/kg (ppm)	20	105	71-131		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/23/15

Project: SOU_0914-001-12_20150423, F&BI 504429

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504418-06 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	180	84	87	73-135	4

		Percent			
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Diesel Extended	mg/kg (ppm)	5,000	86	74-139	_

#### **ENVIRONMENTAL CHEMISTS**

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

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



#### **ENVIRONMENTAL CHEMISTS**

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

April 28, 2015

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, 2015 from the SOU_0914_20150424, F&BI 504459 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

**Enclosures** 

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0428R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 24, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914_20150424, F&BI 504459 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
504459 -01	S-B01-C1-263
504459 -02	S-ESW01-B4-265
504459 -03	S-SSW01-C5-265
504459 -04	S-WSW01-C4-265

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

Date Extracted: 04/24/15

Date Analyzed: 04/24/15 and 04/27/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-C1-263 504459-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	100
S-ESW01-B4-265 504459-02	< 0.02	< 0.02	2.1	1.7	410	ip
S-SSW01-C5-265 504459-03	<0.02	0.066	0.052	0.35	22	89
Method Blank 05-0819 MB	< 0.02	<0.02	<0.02	<0.06	<2	91

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

Date Extracted: 04/24/15

Date Analyzed: 04/24/15 and 04/27/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 56-165)
S-B01-C1-263 504459-01	<50	<250	118
S-ESW01-B4-265 504459-02 1/10	5,200 x	21,000	119
S-SSW01-C5-265 504459-03	<50	310	111
Method Blank 05-850 MB	<50	<250	120

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

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

Laboratory Code: 504385-01 (Duplicate)

, and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	Denouties	Sample	Duplicate	DDD
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	mg/kg (ppm)	0.5	77	69-120		
Toluene	mg/kg (ppm)	0.5	87	70-117		
Ethylbenzene	mg/kg (ppm)	0.5	87	65-123		
Xylenes	mg/kg (ppm)	1.5	88	66-120		
Gasoline	mg/kg (ppm)	20	100	71-131		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504447-04 (Matrix Spike)

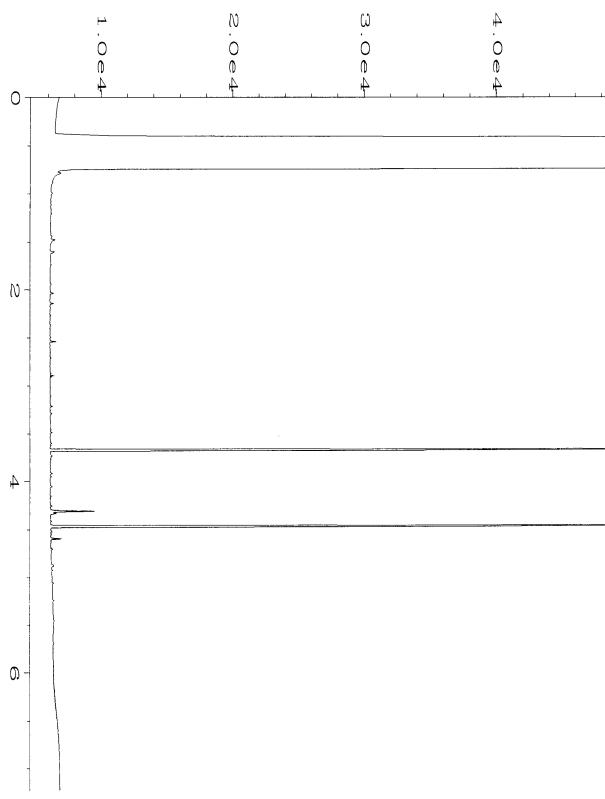
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	108	103	63-146	5

			Percent		
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Diesel Extended	mg/kg (ppm)	5,000	101	79-144	

#### **ENVIRONMENTAL CHEMISTS**

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

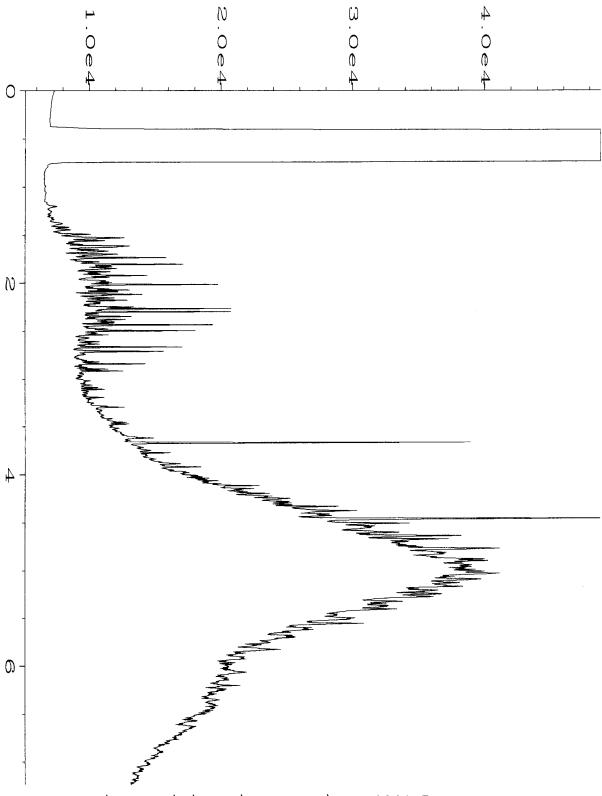
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



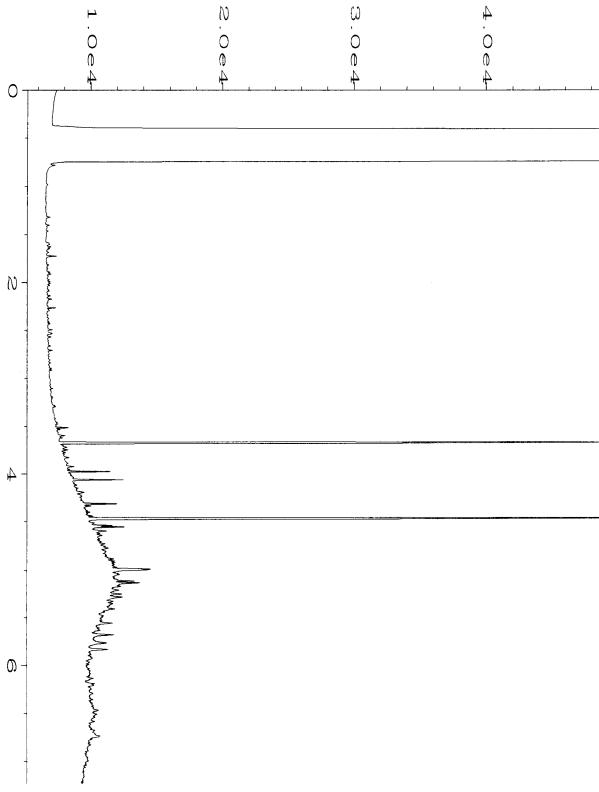
335 F

Acc Ber

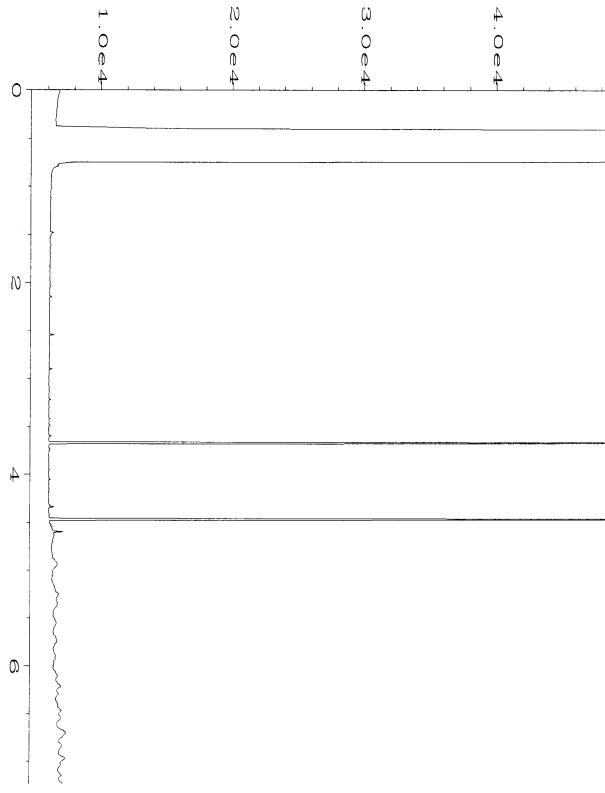
```
: C:\HPCHEM\1\DATA\04-24-15\052F0901.D
Data File Name
                                              Page Number
Operator
                : mwdl
                                              Vial Number
                                                              : 52
Instrument
                : GC1
                                              Injection Number: 1
                : 504459-01
Sample Name
Run Time Bar Code:
                                              Sequence Line : 9
                                              Instrument Method: DX.MTH
Acquired on : 24 Apr 15 07:23 PM
Report Created on: 27 Apr 15 08:31 AM
                                              Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\04-27-15\007F0301.D
Data File Name
                                               Page Number
Operator
                : mwdl
                : GC1
                                               Vial Number
                                                                : 7
Instrument
                                               Injection Number: 1
                : 504459-02 1/10
Sample Name
                                               Sequence Line : 3
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 27 Apr 15 09:16 AM
                                               Analysis Method : DX.MTH
Report Created on: 27 Apr 15 10:39 AM
```

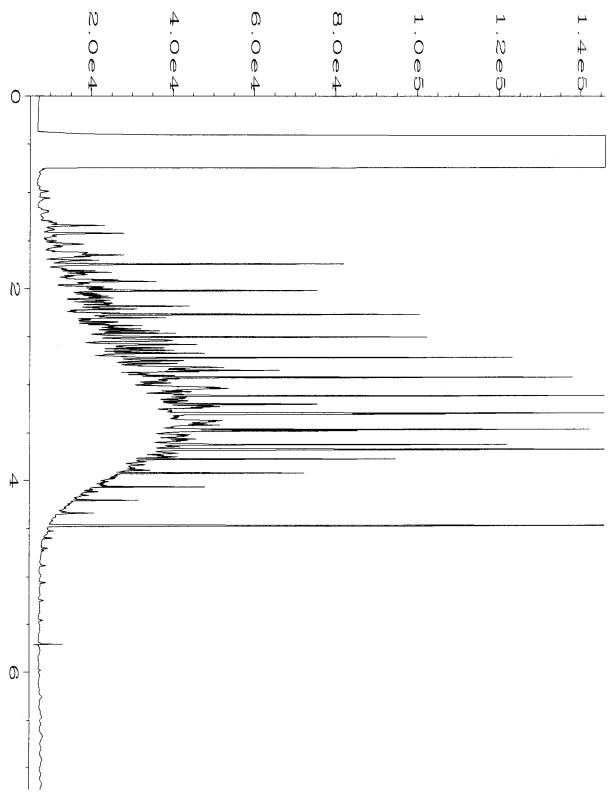


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: C:\HPCHEM\1\DATA\04-27-15\006F0301.D
Data File Name
                                               Page Number
Operator
                 : mwdl
                                                                : 1
                                               Vial Number
Instrument
                 : GC1
                                                                : 6
                                               Injection Number: 1
Sample Name
                 : 504459-03 rr
                                               Sequence Line : 3
Run Time Bar Code:
                                               Instrument Method: DX.MTH
                : 27 Apr 15 09:07 AM
Acquired on
Report Created on: 27 Apr 15
                                               Analysis Method : DX.MTH
                            10:39 AM
```



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Data File Name
              : C:\HPCHEM\1\DATA\04-24-15\026F0701.D
Operator
                : mwdl
                                              Page Number
                                                              : 1
                                             Vial Number
Instrument
                : GC1
Sample Name
                : 05-854 mb
                                              Injection Number: 1
                                             Sequence Line : 7
Run Time Bar Code:
                                              Instrument Method: DX.MTH
Acquired on : 24 Apr 15
                           02:14 PM
Report Created on: 27 Apr 15
                            08:31 AM
                                             Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\04-24-15\003F0201.D
Data File Name
                                                Page Number
Vial Number
Operator
                 : mwdl
                                                                  : 3
Instrument
                 : GC1
                                                 Injection Number: 1
                 : 500 Dx 44-94C
Sample Name
Run Time Bar Code:
                                                 Sequence Line : 2
                                                Instrument Method: DX.MTH
Acquired on : 24 Apr 15 09:03 AM
Report Created on: 27 Apr 15
                                                Analysis Method : DX.MTH
                             08:31 AM
```

SAMPLE CHA OF CUSTODY ME 04/20/10

504459 SA	MPLE CHA' OF CUSTODY $ME = 02/20$	4/15 VS1/
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)	Page #ofO/ TURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO. PO#	Standard (2 Weeks)
Address 2811 Fairview Avenue E, Suite 2000	0914	Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS	SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907	Rush ASAP	Return samples Will call with instructions

							1			<del></del>	Al	NALYSE	ES REQI	UESTED	)		_
Sample ID ;	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes	•
5-BOI-CI-263	4	263	01 H-	4/24/15	1110	GON	6	X	X	X		•					$\exists$
5-Eswo!-B4-265 5-55WO!-C5-265	BH	265	02/		1112		6	×	×	X							$\exists$
5-55WO!-65-265	65	265	03/		145		6	×	λ	X							$\dashv$
5-W5W01-C4-265	64	265	04 F	1	1120	L	6				-					HOLD	7
												•					
						/										,	
						EV.	7/2	a ·									
								(L)	)								7
	<u> </u>													Sample	es rece	oived at 5 °	c

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	CTIONERY FIA	SES	4/24/15	1420
Relinquished by:	Whan Phan	FEBI	4/24/15	1420
Received by:				
Isotorica by.				

#### **ENVIRONMENTAL CHEMISTS**

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

April 30, 2015

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 24, 2015 from the SOU_0914_20150424, F&BI 504459 project. Per your request, the sample ID S-B01-C1-263 has been amended to S-B01-C4-263.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0428R.DOC

#### **ENVIRONMENTAL CHEMISTS**

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

April 28, 2015

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, 2015 from the SOU_0914_20150424, F&BI 504459 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

**Enclosures** 

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0428R.DOC

#### ENVIRONMENTAL CHEMISTS

#### CASE NARRATIVE

This case narrative encompasses samples received on April 24, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914_20150424, F&BI 504459 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies					
504459 -01	S-B01-C4-263					
504459 -02	S-ESW01-B4-265					
504459 -03	S-SSW01-C5-265					
504459 -04	S-WSW01-C4-265					

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

Date Extracted: 04/24/15

Date Analyzed: 04/24/15 and 04/27/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-C4-263 504459-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	100
S-ESW01-B4-265 504459-02	< 0.02	< 0.02	2.1	1.7	410	ip
S-SSW01-C5-265 504459-03	<0.02	0.066	0.052	0.35	22	89
Method Blank 05-0819 MB	<0.02	<0.02	<0.02	<0.06	<2	91

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

Date Extracted: 04/24/15

Date Analyzed: 04/24/15 and 04/27/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 56-165)
S-B01-C4-263 504459-01	< 50	<250	118
S-ESW01-B4-265 504459-02 1/10	5,200 x	21,000	119
S-SSW01-C5-265 504459-03	<50	310	111
Method Blank 05-850 MB	<50	<250	120

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

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

Laboratory Code: 504385-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	77	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	87	65-123
Xylenes	mg/kg (ppm)	1.5	88	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/24/15

Project: SOU_0914_20150424, F&BI 504459

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504447-04 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5.000	< 50	108	103	63-146	5

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	101	79-144

#### **ENVIRONMENTAL CHEMISTS**

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

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

SAMPLE CHA OF CUSTODY ME 02/24/15 50445 SAMPLERS (signature) Page # Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr TURNAROUND TIME Standard (2 Weeks) PROJECT NAME/NO. PO# Company SoundEarth Strategies, Inc. 0914 Rush charges authorized by: Address 2811 Fairview Avenue E, Suite 2000 - Br REMARKS SAMPLE DISPOSAL City, State, ZIP Seattle, Washington 98102 Dispose after 30 days Rush ASAP Return samples 206-306-1900 Fax # 206-306-1907 Phone # Will call with instructions

		}							7	, —	Al	NALYSE	S REQ	UESTEI	)	
Sample ID  pertc	Sample Location (24/5 4.	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		, Notes
5-BOI-61-263 5-Eswoi-B4-265 5-55-61-65-265 5-WSWOI-64-265	E	263	01 A-	4/24/15	1/10	GON	6	X	X	X		·				
5-Eswo1-B4-265	BH	265	02/		1112		6	×	X	X						
5-55 WO!- C5-265	65		03/		145		6	×	λ	X				<u> </u>		
5-W5W01-24-265	64	265	04 F	· .L	1120	L	6									HOLD
				T		fr										,
		_				Er	7/2	7/10								
		ļ												1		
														Sampl	es rec	ived at _5 °C
							•									

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

SIGNATURE	PRINT NAME	COMPANY	DATE TIME
Relinquished by:	CTIMEN FIA	55S	4/29/15 1420
Received by:  Relinquished by:	Dhan Phan	FEBI	4/24/15 1420
Received by:			

FORMS\COC\COC.DOC



#### **ENVIRONMENTAL CHEMISTS**

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

May 4, 2015

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 28, 2015 from the SOU_0914_20150428, F&BI 504514 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

**Enclosures** 

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0504R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 28, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914_20150428, F&BI 504514 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
504514 -01	S-B01-C1-255
504514 -02	S-WSW01-C2-255
504514 -03	S-WSW01-C1-255
504514 -04	S-B01-B1-255
504514 -05	S-B01-A1-255
504514 -06	S-B01-A2-255
504514 -07	S-B01-B2-255

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/04/15 Date Received: 04/28/15

Project: SOU_0914_20150428, F&BI 504514

Date Extracted: 04/29/15

Date Analyzed: 04/29/15 and 04/30/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-C1-255 504514-01	< 0.02	< 0.02	< 0.02	< 0.06	3.3	81
S-WSW01-C2-255 504514-02	< 0.02	< 0.02	< 0.02	< 0.06	<2	93
S-WSW01-C1-255 504514-03	< 0.02	< 0.02	< 0.02	< 0.06	<2	93
S-B01-B1-255 504514-04 1/5	<0.02 j	<0.1	3.2	3.5	470	99
S-B01-A1-255 504514-05	0.036	0.030	< 0.02	< 0.06	2.7	88
S-B01-A2-255 504514-06 1/5	<0.02 j	7.0	4.9	60	1,400	113
S-B01-B2-255 504514-07 1/5	<0.02 j	6.8	3.4	7.6	840	104
Method Blank 05-0861 MB2	<0.02	<0.02	<0.02	<0.06	<2	92

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/04/15 Date Received: 04/28/15

Project: SOU_0914_20150428, F&BI 504514

Date Extracted: 04/29/15 Date Analyzed: 04/29/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

			Surrogate
Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅ )	$\frac{\text{Motor Oil Range}}{(C_{25}\text{-}C_{36})}$	(% Recovery) (Limit 56-165)
S-B01-C1-255 504514-01	< 50	<250	107
S-WSW01-C2-255 504514-02	< 50	<250	108
S-WSW01-C1-255 504514-03	< 50	<250	105
S-B01-B1-255 504514-04	72 x	<250	107
S-B01-A1-255 504514-05	< 50	<250	107
S-B01-A2-255 504514-06	390 x	<250	98
S-B01-B2-255 504514-07	170 x	<250	101
Method Blank 05-873 MB	<50	<250	108

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/15 Date Received: 04/28/15

Project: SOU_0914_20150428, F&BI 504514

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

Laboratory Code: 504270-06 (Duplicate)

		Sample	Duplicate	222
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

		Percent			
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Benzene	mg/kg (ppm)	0.5	90	69-120	
Toluene	mg/kg (ppm)	0.5	94	70-117	
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123	
Xylenes	mg/kg (ppm)	1.5	95	66-120	
Gasoline	mg/kg (ppm)	20	95	71-131	

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/15 Date Received: 04/28/15

Project: SOU_0914_20150428, F&BI 504514

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504514-01 (Matrix Spike)

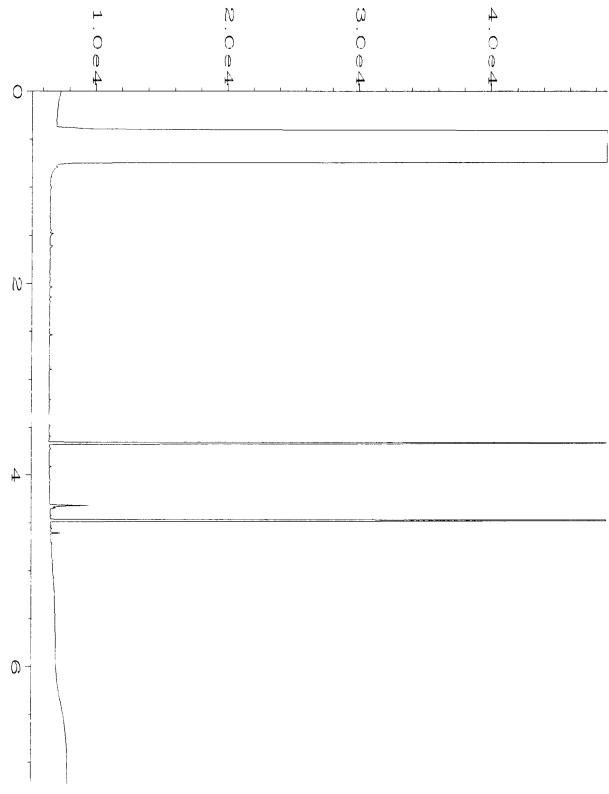
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5.000	< 50	106	110	63-146	4

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	105	79-144

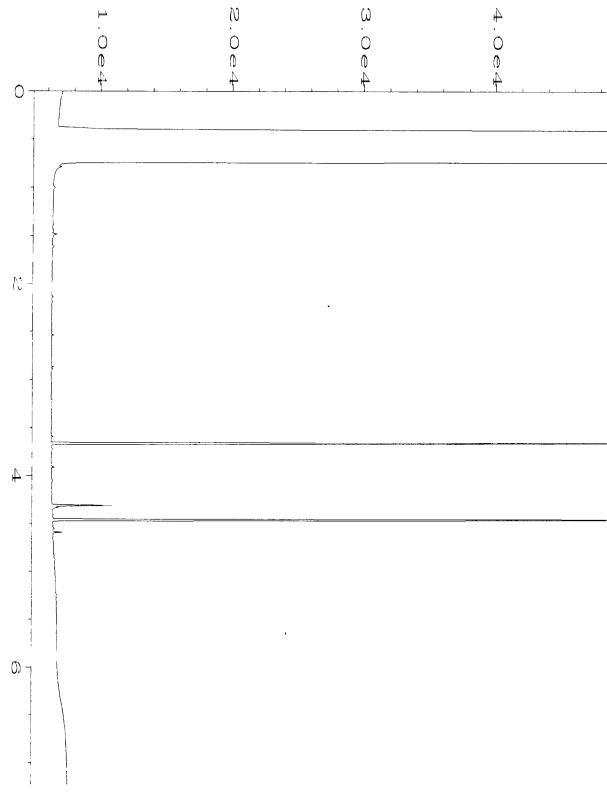
#### **ENVIRONMENTAL CHEMISTS**

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

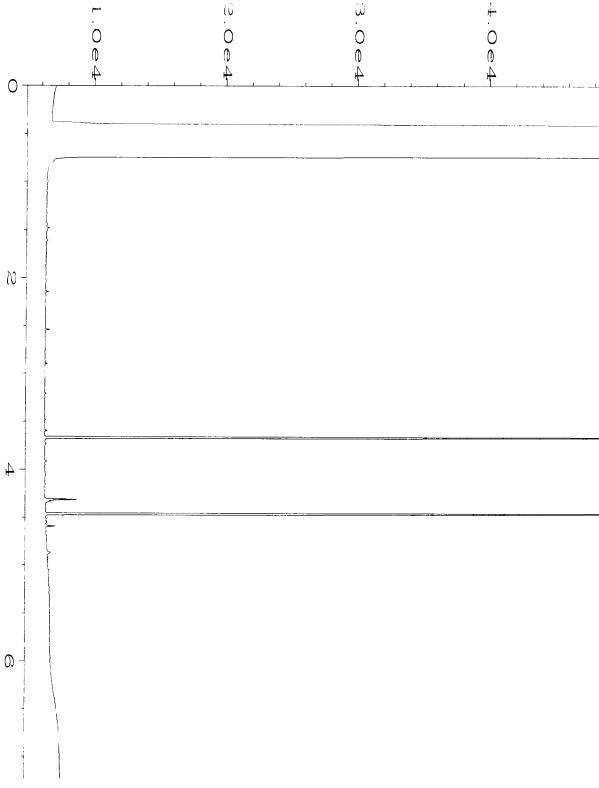
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



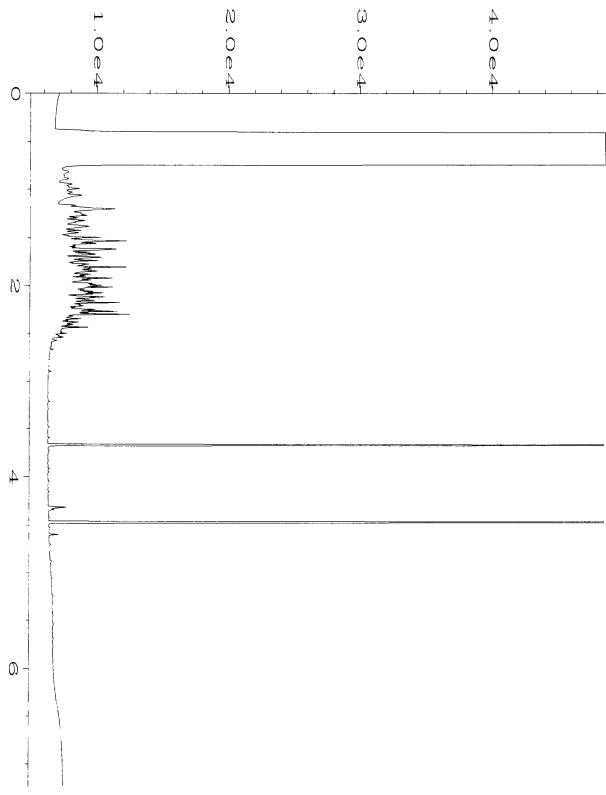
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Operator
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                                               Page Number
                                              Vial Number
Instrument
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                                                               : 10
                                              Injection Number: 1
Sample Name
                : 504514-01
Run Time Bar Code:
                                              Sequence Line : 3
Acquired on : 29 Apr 15 10:48 AM
                                              Instrument Method: DX.MTH
                                              Analysis Method : DX.MTH
Report Created on: 30 Apr 15 09:37 AM
```



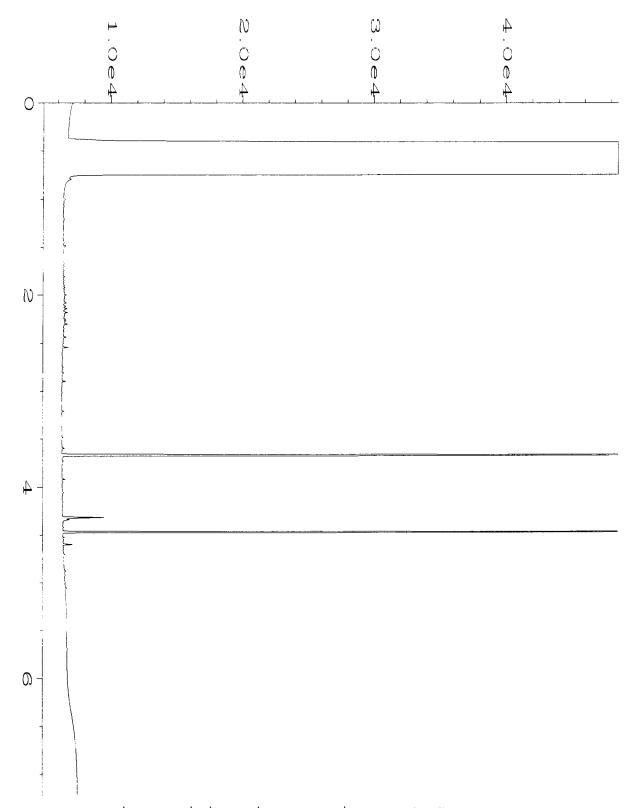
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                                                               : 20
Sample Name
                : 504514-02
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line
                                                            : 3
Acquired on : 29 Apr 15 12:38 PM
                                              Instrument Method: DX.MTH
Report Created on: 30 Apr 15
                            09:37 AM
                                              Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\04-29-15\021F0301.D
Data File Name
Operator
                                              Page Number
                : mwdl
                                              Vial Number
Instrument
                : GC1
                                                              : 21
Sample Name
                : 504514-03
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line : 3
Acquired on : 29 Apr 15 12:49 PM
                                              Instrument Method: DX.MTH
Report Created on: 30 Apr 15
                           09:37 AM
                                              Analysis Method : DX.MTH
```

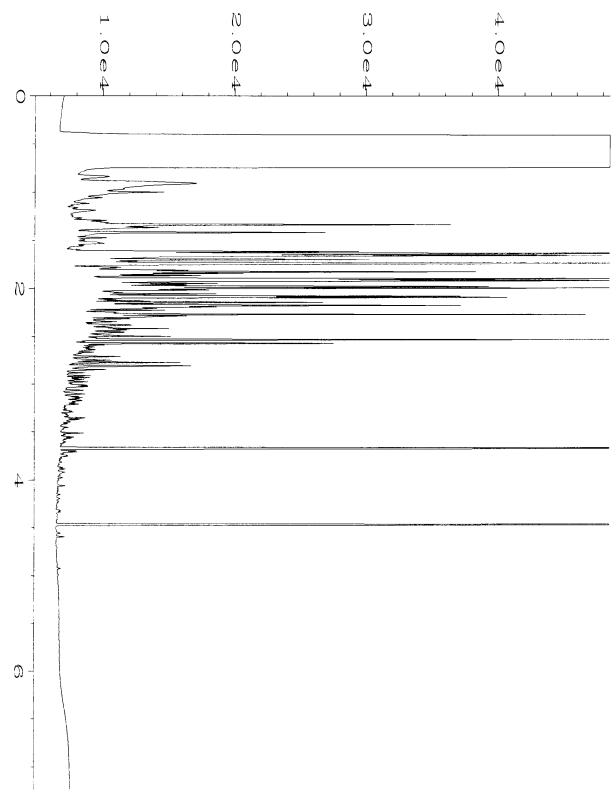


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Operator
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Instrument
                : GC1
                                              Vial Number
                                              Injection Number: 1
Sample Name
                : 504514-04
Run Time Bar Code:
                                              Sequence Line : 5
                                              Instrument Method: DX.MTH
Acquired on : 29 Apr 15 01:11 PM
Report Created on: 30 Apr 15 09:38 AM
                                              Analysis Method : DX.MTH
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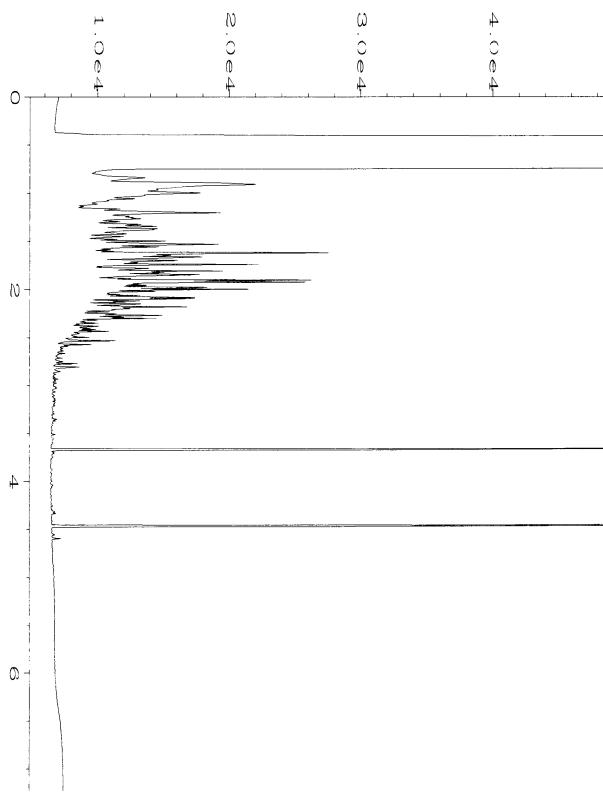
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Operator
                                               Page Number
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                                               Vial Number
                                                                : 23
Instrument
                 : GC1
                                               Injection Number: 1
Sample Name
                 : 504514-05
Run Time Bar Code:
                                               Sequence Line : 5.
                                               Instrument Method: DX.MTH
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Report Created on: 30 Apr 15 09:38 AM
                                               Analysis Method : DX.MTH
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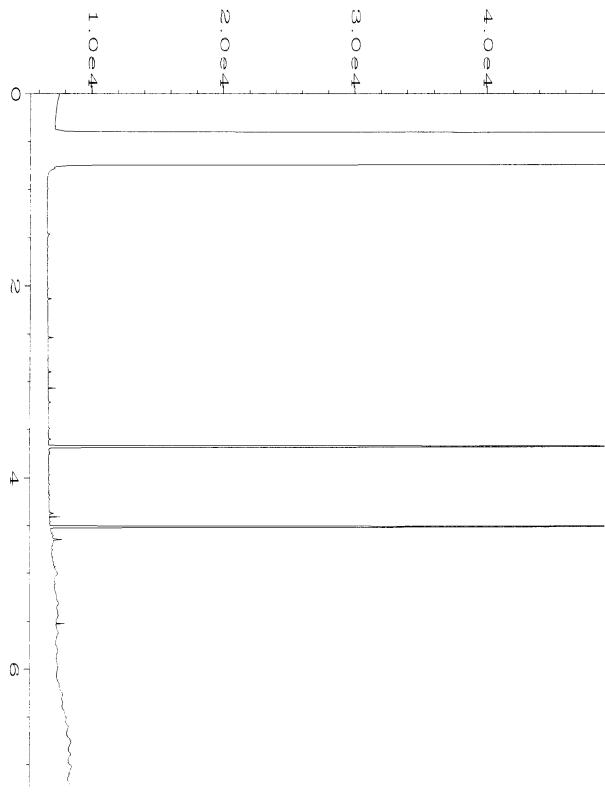


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Data File Name
Operator
                : mwdl
                                              Page Number
                                              Vial Number
Instrument
                : GC1
                                                              : 24
                : 504514-06
                                              Injection Number: 1
Sample Name
Run Time Bar Code:
                                              Sequence Line : 5
                                              Instrument Method: DX.MTH
Acquired on : 29 Apr 15 01:33 PM
Report Created on: 30 Apr 15 09:38 AM
                                              Analysis Method : DX.MTH
```

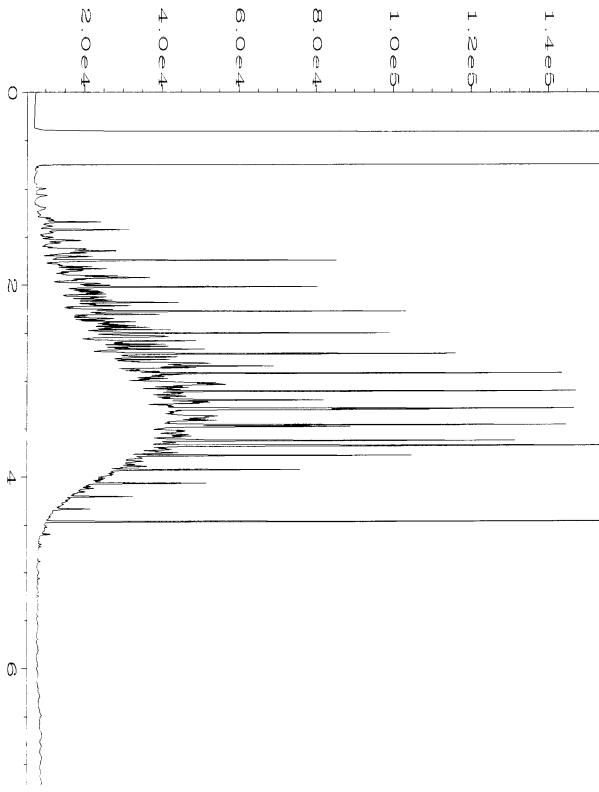
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Data File Name
                                              Page Number
Operator
                : mwdl
                                              Vial Number
                                                              : 25
Instrument
                : GC1
                                              Injection Number: 1
                : 504514-07
Sample Name
                                              Sequence Line : 5
Run Time Bar Code:
                                              Instrument Method: DX.MTH
Acquired on : 29 Apr 15 01:44 PM
Report Created on: 30 Apr 15 09:38 AM
                                              Analysis Method : DX.MTH
```



```
Data File Name
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                                               Page Number
Operator
                : mwdl
                                                               : 1
                                               Vial Number
Instrument
                : GC1
                                                               : 6
Sample Name
                : 05-873 mb
                                               Injection Number: 1
                                               Sequence Line : 3
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 29 Apr 15
                            10:06 AM
Report Created on: 30 Apr 15
                                               Analysis Method : DX.MTH
                            09:38 AM
```



0.51

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: C:\HPCHEM\1\DATA\04-29-15\003F0201.D
Data File Name
                                              Page Number
Operator
                : mwdl
                                              Vial Number
Instrument
                : GC1
                : 500 Dx 44-94C
                                              Injection Number: 1
Sample Name
                                              Sequence Line : 2
Run Time Bar Code:
                                              Instrument Method: DX.MTH
Acquired on : 29 Apr 15 08:48 AM
Report Created on: 30 Apr 15 09:38 AM
                                              Analysis Method : DX.MTH
```

ME 4/28/15 DO, /VS. SAMPLE CHAY OF CUSTODY SAMPLERS (signature) Send Report to R. Roberts, S. Stampf; E. Forbes; J. Cyr TURNAROUND TIME PROJECT NAME/NO. PO# Standard (2 Weeks) Company SoundEarth Strategies, Inc. RUSH 0414 Rush charges authorized by Address 2811 Fairview Avenue E. Suite 2000 REMARKS SAMPLE DISPOSAL City, State, ZIP Seattle, Washington 98102 RUSH 5-WSW01-C2-255 and 5-WSW01-21-255 · Dispose after 30 days Return samples Phone # 206-306-1900 Fax# 206-306-1907 Will call with instructions

<i></i> ∌											Al	NALYSE	S REQU	JESTED	l	7
, Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
5-801-01-255	4	255	0(	4/28	1050	90 N	É	X	X	X						Stantard
5-WSW01-82-253	C 2	255	07		1140		t	X	X	X						RUSH *
5-WSW01-01-255	Cl	255	03		1143		É	X	X	X	-					BUSH *
5-801-81-255	B1 ·	255	04		1150		É	X	X	X						Standard
5-801-A1-253	<b>A</b> !	255	05		1205		ć	X	X	X						1
5-601-A2-255	A2	253	06		1315		6	X	X	X	· · · · · ·					1
5-801-82-255	32	255	67	Ţ	1327	L	ť	X	X	X						
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Friedman & Bruya, Inc. 3012 16th Avenue West.

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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Received by:

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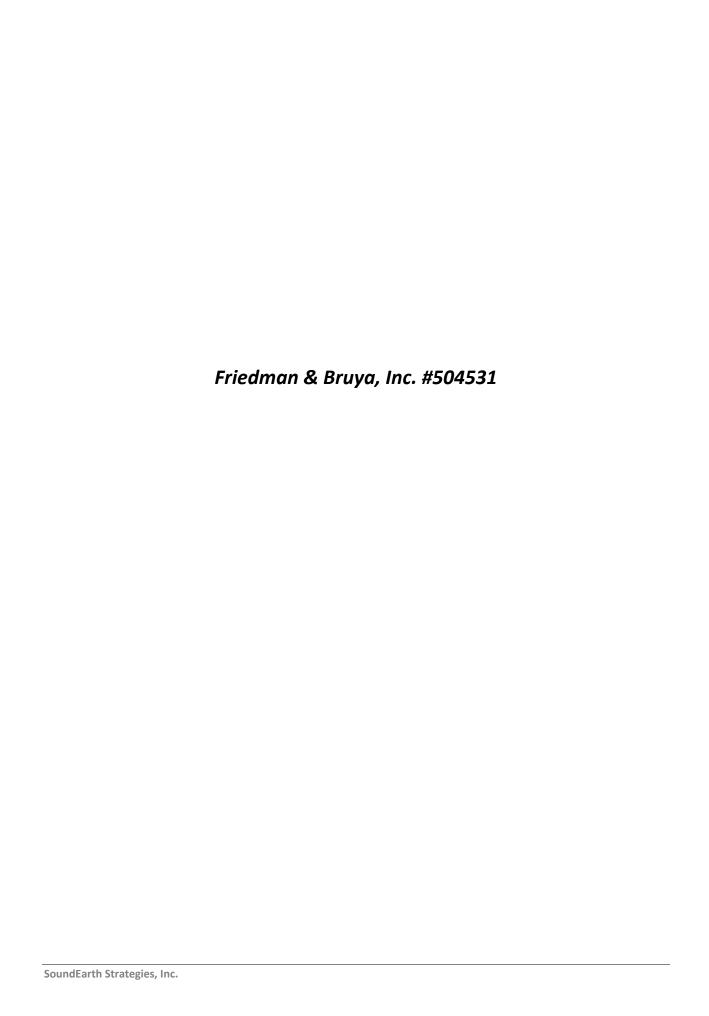
Received by:

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#### **ENVIRONMENTAL CHEMISTS**

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

May 4, 2015

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 29, 2015 from the SOU_0914-001-12_20150429, F&BI 504531 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0504R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 29, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150429, F&BI 504531 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
504531 -01	S-B01-A3-255
504531 -02	S-ESW01-A3-255
504531 -03	S-ESW01-A2-255
504531 -04	S-SSW01-A4-255
504531 -05	S-ESW01-A1-255

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/15 Date Received: 04/29/15

Project: SOU_0914-001-12_20150429, F&BI 504531

Date Extracted: 04/29/15

Date Analyzed: 04/29/15 and 04/30/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-A3-255 504531-01	< 0.02	0.40	0.29	2.7	230	98
S-ESW01-A3-255 504531-02	< 0.02	< 0.02	< 0.02	< 0.06	<2	89
S-ESW01-A2-255 504531-03	< 0.02	< 0.02	< 0.02	< 0.06	<2	90
S-SSW01-A4-255 504531-04	< 0.02	< 0.02	< 0.02	< 0.06	<2	91
S-ESW01-A1-255 504531-05	< 0.02	<0.02	< 0.02	< 0.06	<2	89
Method Blank 05-0864 MB	<0.02	<0.02	<0.02	<0.06	<2	92

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/04/15 Date Received: 04/29/15

Project: SOU_0914-001-12_20150429, F&BI 504531

Date Extracted: 04/29/15 Date Analyzed: 04/29/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 53-144)
S-B01-A3-255 504531-01	< 50	<250	102
S-ESW01-A3-255 504531-02	< 50	<250	113
S-ESW01-A2-255 504531-03	< 50	<250	100
S-SSW01-A4-255 504531-04	< 50	<250	114
S-ESW01-A1-255 504531-05	< 50	<250	100
Method Blank 05-878 MB	<50	<250	110

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/15 Date Received: 04/29/15

Project: SOU_0914-001-12_20150429, F&BI 504531

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

Laboratory Code: 504528-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

		Percent						
	Reporting	Spike	Recovery	Acceptance				
Analyte	Units	Level	LCS	Criteria				
Benzene	mg/kg (ppm)	0.5	84	69-120				
Toluene	mg/kg (ppm)	0.5	95	70-117				
Ethylbenzene	mg/kg (ppm)	0.5	96	65-123				
Xylenes	mg/kg (ppm)	1.5	93	66-120				
Gasoline	mg/kg (ppm)	20	95	71-131				

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/15 Date Received: 04/29/15

Project: SOU_0914-001-12_20150429, F&BI 504531

### QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504531-05 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	97	97	64-133	0

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	58-147

#### **ENVIRONMENTAL CHEMISTS**

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

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

×					T		Γ					Al	NALYSE	S REQU	JESTED		7
Sample ID	Sam Loca		Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
S1341-A3-255	A3		255	or A-	4/201/5	0945	5016	6	X	X	×	10.00					•
5- ENOTE A3-265	A3			OR		1025	,	6	×	×	X						
5-ESWLIAL 255	AZ			63		1125		G	>	X	X						
5-55Wat 14-255	Ay	•		p4		11.35	:	Ċ	Y	X	×						Rush Zilnr
SESWOLAL 155	/A			05	-1	1140	-	6	×	λ.	X		-				
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			/-														70
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														** ** **	2 cm (30 h )		

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

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Lit Rajed		4/20/5	125
Received by	Jon Brogg	FEB	4/29	1205
Relinquished by:	3	,		
Received by:	,			



#### ENVIRONMENTAL CHEMISTS

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

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

May 5, 2015

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 29, 2015 from the SOU 0914-001 20150429, F&BI 504542 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl **Project Manager** 

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU0505R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 29, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001_20150429, F&BI 504542 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
504542 -01	S-NSW01-A1-255
504542 -02	S-NSW01-B1-255

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/05/15 Date Received: 04/29/15

Project: SOU_0914-001_20150429, F&BI 504542

Date Extracted: 05/01/15 Date Analyzed: 05/01/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-NSW01-A1-255 504542-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	91
S-NSW01-B1-255 504542-02	< 0.02	<0.02	< 0.02	< 0.06	<2	91
Method Blank 05-0868 MB	<0.02	<0.02	< 0.02	< 0.06	<2	88

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/05/15 Date Received: 04/29/15

Project: SOU_0914-001_20150429, F&BI 504542

Date Extracted: 04/30/15 Date Analyzed: 04/30/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 53-144)
S-NSW01-A1-255 504542-01	<50	<250	115
S-NSW01-B1-255 504542-02	<50	<250	113
Method Blank	<50	<250	111

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/15 Date Received: 04/29/15

Project: SOU_0914-001_20150429, F&BI 504542

# 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: 505005-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

		Percent						
	Reporting	Spike	Recovery	Acceptance				
Analyte	Units	Level	LCS	Criteria				
Benzene	mg/kg (ppm)	0.5	73	69-120				
Toluene	mg/kg (ppm)	0.5	87	70-117				
Ethylbenzene	mg/kg (ppm)	0.5	88	65-123				
Xylenes	mg/kg (ppm)	1.5	90	66-120				
Gasoline	mg/kg (ppm)	20	105	71-131				

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/15 Date Received: 04/29/15

Project: SOU_0914-001_20150429, F&BI 504542

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504553-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5.000	13.000	23 b	73 b	64-133	104 b

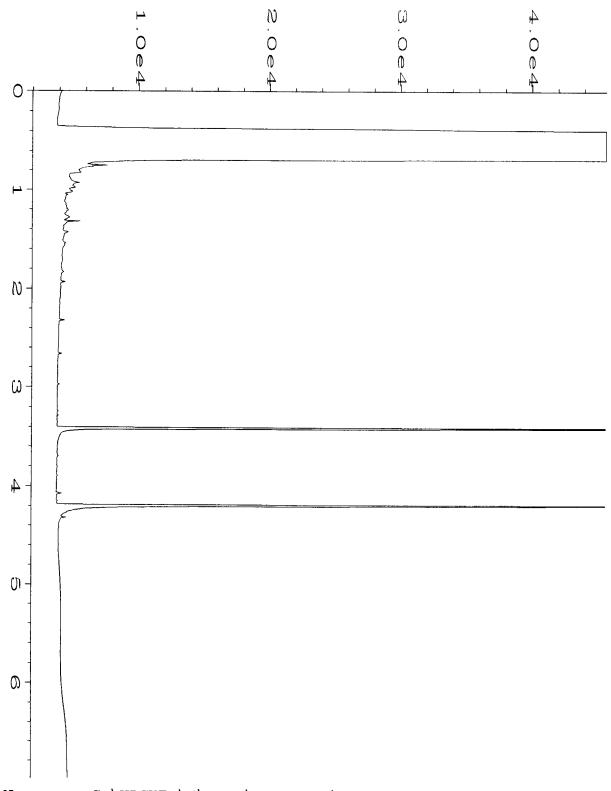
Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

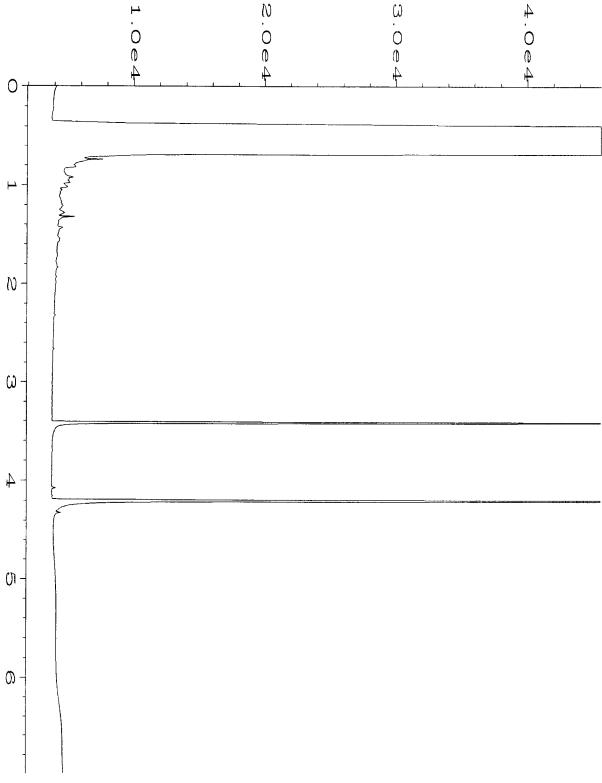
#### **ENVIRONMENTAL CHEMISTS**

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

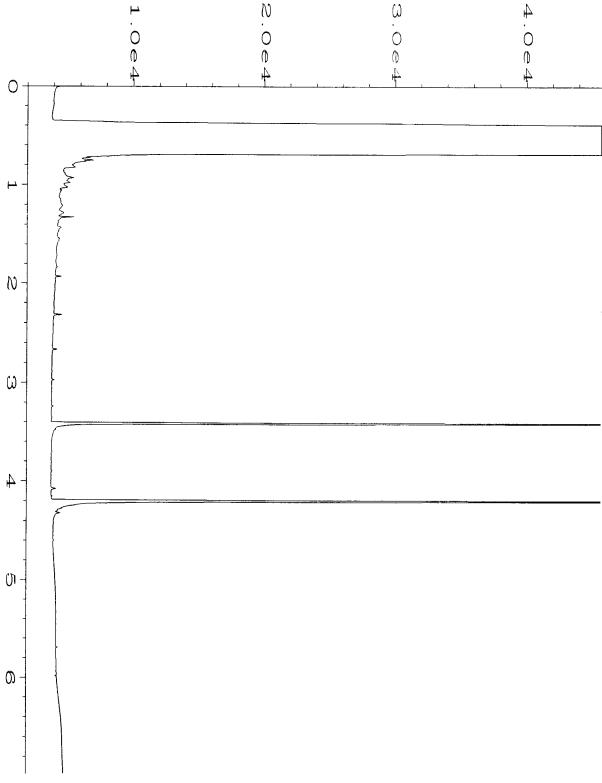
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



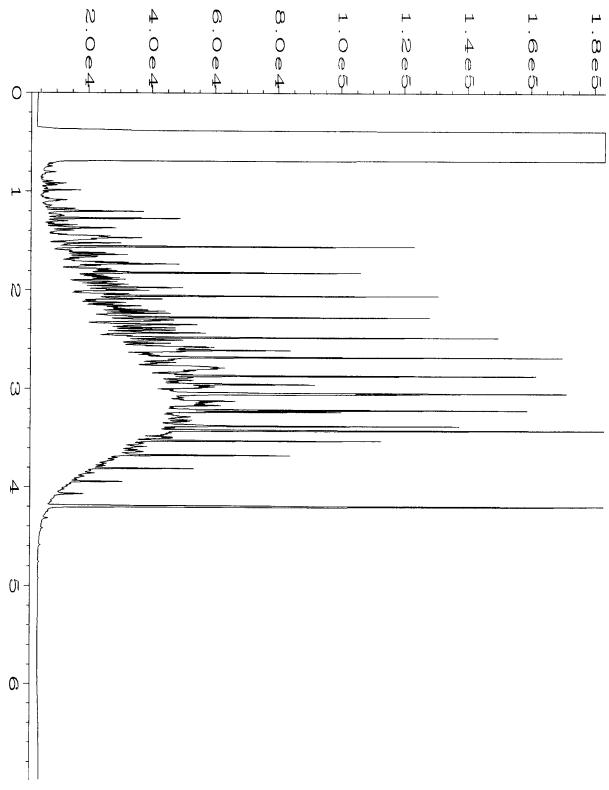
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                                               Page Number
                                                                : 1
Instrument
                 : GC #6
                                               Vial Number
                                                                : 29
Sample Name
                 : 504542-01
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
Acquired on
                : 30 Apr 15 02:13 PM
                                               Instrument Method: DX.MTH
Report Created on: 01 May 15
                            08:40 AM
                                               Analysis Method : DX.MTH
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Operator
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                                               Page Number
                                                                : 1
                                               Vial Number
Instrument
                 : GC #6
                                                                : 30
Sample Name
                 : 504542-02
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
Acquired on
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Report Created on: 01 May 15
                             08:40 AM
                                               Analysis Method : DX.MTH
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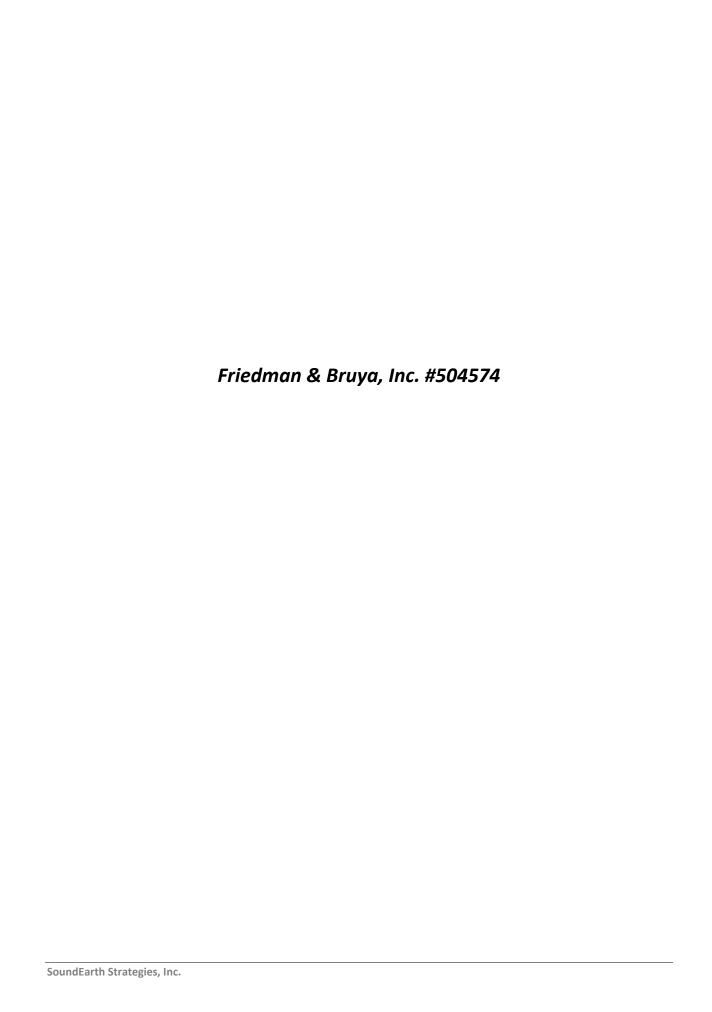


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                 : mwdl
                                               Page Number
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Instrument
                 : GC #6
                                               Vial Number
                                                                : 11
Sample Name
                 : 05-883 mb
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
                                               Instrument Method: DX.MTH
Acquired on
                : 30 Apr 15
                             10:59 AM
Report Created on: 01 May 15
                                               Analysis Method : DX.MTH
                             08:40 AM
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Data File Name
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Operator
                 : mwdl
                                               Page Number
Instrument
                 : GC #6
                                               Vial Number
                                                                : 3
Sample Name
                 : 500 Dx 44-94C
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 2
Acquired on
                : 30 Apr 15
                                               Instrument Method: DX.MTH
                             09:06 AM
Report Created on: 01 May 15
                            08:40 AM
                                               Analysis Method : DX.MTH
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City, State, ZIP Seattle, MA			REMARKS Standard										MPLE DISPOSAL after 30 days						
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			Γ							ANA	LYS	ES R	EQU	JEST	ED				
Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						1	Notes	
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#### **ENVIRONMENTAL CHEMISTS**

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

May 5, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 30, 2015 from the SOU_0914-001-12_20150430, F&BI 504574 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0505R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 30, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150430, F&BI 504574 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
504574 -01	S-SSW02-C5-265
504574 -02	S-ESW02-B4-264
504574 -03	S-WSW02-C4-265

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/05/15 Date Received: 04/30/15

Project: SOU_0914-001-12_20150430, F&BI 504574

Date Extracted: 05/01/15 Date Analyzed: 05/01/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-ESW02-B4-264 504574-02	<0.02	<0.02	<0.02	<0.06	<2	92
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	88

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/05/15 Date Received: 04/30/15

Project: SOU_0914-001-12_20150430, F&BI 504574

Date Extracted: 05/01/15 Date Analyzed: 05/01/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}-C_{25})}$	Motor Oil Range (C25-C36)	Surrogate (% Recovery) (Limit 56-165)
S-ESW02-B4-264 504574-02	130 x	600	93
Method Blank	<50	<250	104

# ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/15 Date Received: 04/30/15

Project: SOU_0914-001-12_20150430, F&BI 504574

# 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: 505005-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	73	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	88	65-123
Xylenes	mg/kg (ppm)	1.5	90	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

# ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/15 Date Received: 04/30/15

Project: SOU_0914-001-12_20150430, F&BI 504574

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505003-01 (Matrix Spike)

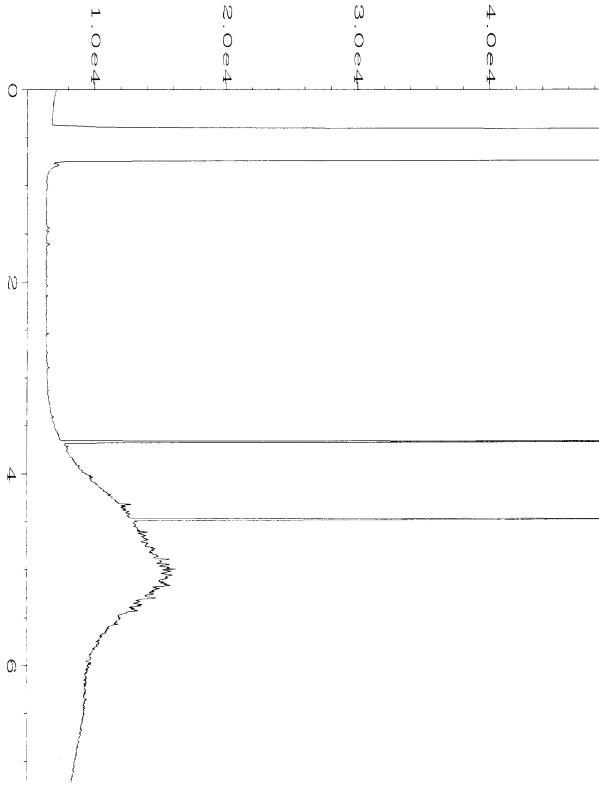
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	112	111	63-146	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5.000	103	79-144

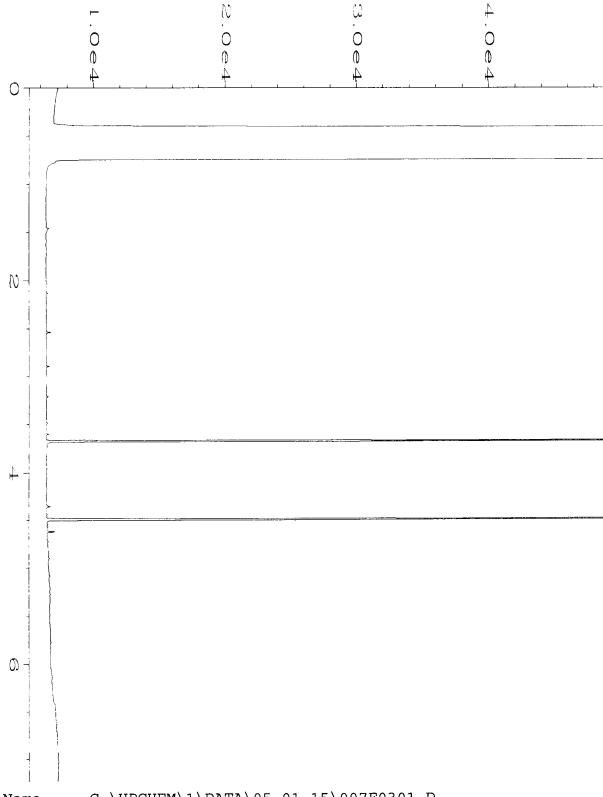
#### **ENVIRONMENTAL CHEMISTS**

# **Data Qualifiers & Definitions**

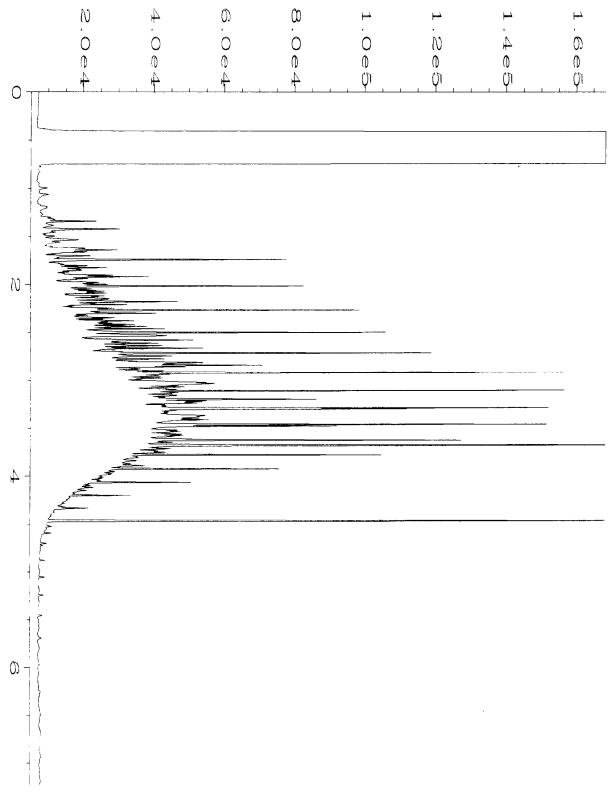
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



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Data File Name
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Acquired on : 01 May 15 11:48 AM
                                              Analysis Method : DX.MTH
Report Created on: 01 May 15
                            12:27 PM
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                                              Vial Number
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                                              Injection Number: 1
Sample Name
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Report Created on: 01 May 15 12:27 PM
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                : mwdl
Instrument
                : GC1
                                               Vial Number
                                                                : 3
Sample Name
                : 500 Dx 44-94C
                                               Injection Number: 1
Run Time Bar Code:
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Acquired on : 01 May 15 09:12 AM
Report Created on: 01 May 15
                            12:27 PM
                                               Analysis Method : DX.MTH
```

ME 04/30/15 SAMPLE CHA! OF CUSTODY SAMPLERS (signature) Page # Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr TURNAROUND TIME PROJECT NAME/NO. PO# Standard (2 Weeks) SoundEarth Strategies, Inc. Company 6444 601-12 ~RUSH_ Rush charges authorized by: 2811 Fairview Avenue E, Suite 2000 Address REMARKS 216 10 SAMPLE DISPOSAL City, State, ZIP Seattle, Washington 98102 Dispose after 30 days Return samples 206-306-1900 _Fax #_ Phone # 206-306-1907 Will call with instructions

										····		Al	NALYSE	S REQU	JESTED				]
	Sample ID ;	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Note	s	
	5-89v#2 CF 265	C.5	9205	01A F	4/3:18	C 145	ا جرد	6	<del>\</del>	X	<del>/-</del>					_	Hold per	LF	3
	5-But 14-204	64	234	02]		C145	)	Ç	×	×	×					-	110:17 P.	n pelf	1
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
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#### **ENVIRONMENTAL CHEMISTS**

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

May 5, 2015

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, 2015 from the SOU_0914-001_20150501, F&BI 505009 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

**Enclosures** 

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0505R.DOC

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

# **CASE NARRATIVE**

This case narrative encompasses samples received on May 1, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001_20150501, F&BI 505009 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

505009 -01 S-B01-B5-261

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/05/15 Date Received: 05/01/15

Project: SOU_0914-001_20150501, F&BI 505009

Date Extracted: 05/01/15 Date Analyzed: 05/01/15

# RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-B5-261 505009-01	< 0.02	< 0.02	1.0	1.7	1,100	113
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	88

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/05/15 Date Received: 05/01/15

Project: SOU_0914-001_20150501, F&BI 505009

Date Extracted: 05/01/15 Date Analyzed: 05/01/15

# RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C25-C36)	Surrogate (% Recovery) (Limit 56-165)
S-B01-B5-261 505009-01	3,600	<250	107
Method Blank	<50	<250	104

# **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/05/15 Date Received: 05/01/15

Project: SOU_0914-001_20150501, F&BI 505009

# 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: 505005-02 (Duplicate)

	_	Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	73	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	88	65-123
Xylenes	mg/kg (ppm)	1.5	90	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

# ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/15 Date Received: 05/01/15

Project: SOU_0914-001_20150501, F&BI 505009

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505003-01 (Matrix Spike)

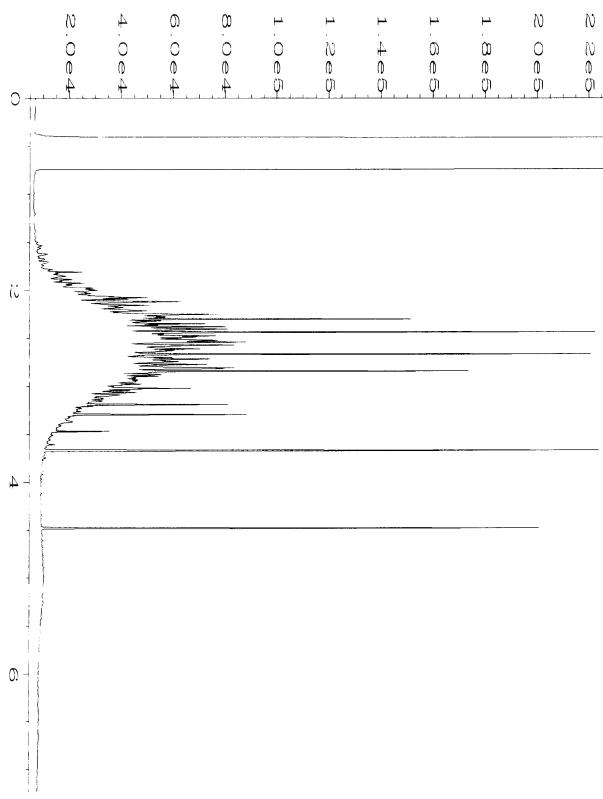
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	112	111	63-146	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	103	79-144

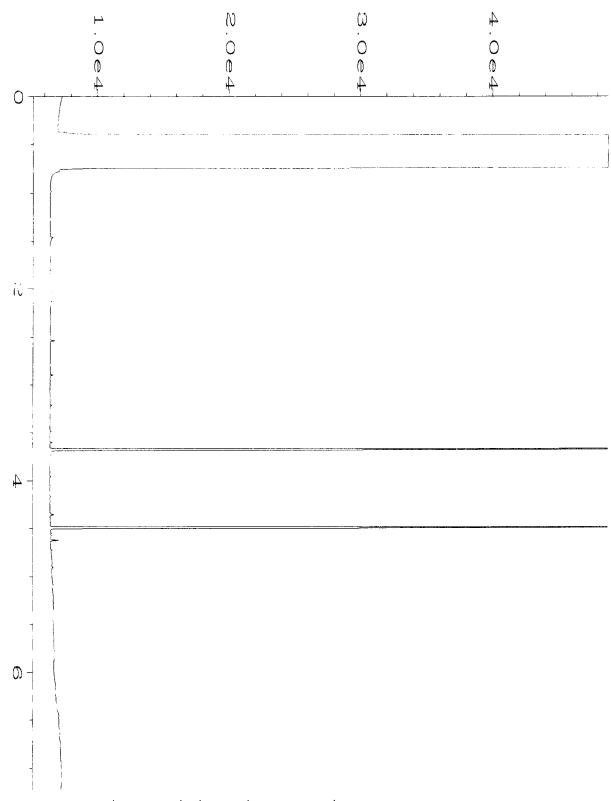
#### **ENVIRONMENTAL CHEMISTS**

# **Data Qualifiers & Definitions**

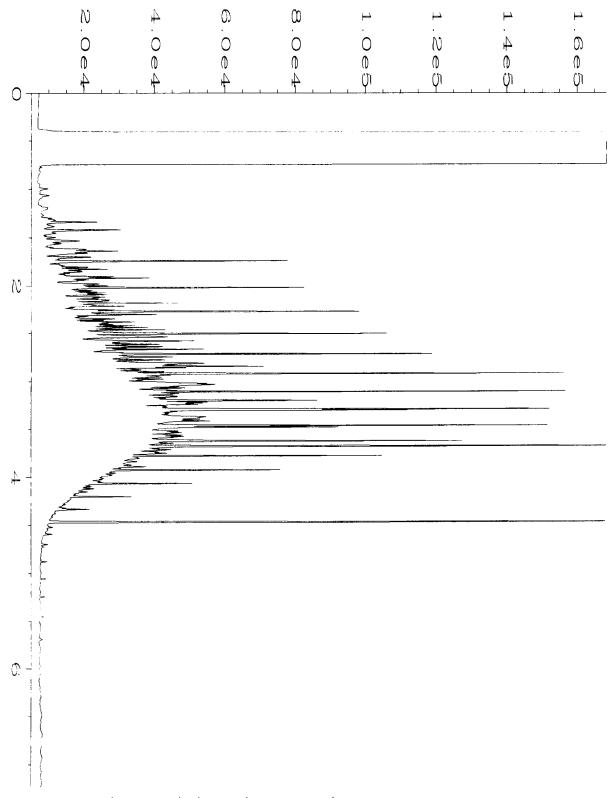
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



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                                              Vial Number
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                : 505009-01
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Run Time Bar Code:
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Report Created on: 01 May 15 01:21 PM
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Sample Name
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                                              Sequence Line : 3
Run Time Bar Code:
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Report Created on: 01 May 15
                            01:20 PM
                                              Analysis Method : DX.MTH
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                                               Injection Number: 1
Sample Name
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                                               Sequence Line : 2
Run Time Bar Code:
Acquired on : 01 May 15 09:12 AM
                                               Instrument Method: DX.MTH
Report Created on: 01 May 15 01:20 PM
                                              Analysis Method : DX.MTH
```

SAMPLE CHAY OF CUSTODY

Send Report to R. Roberts, S. Stumpf; E. Forbes; J. Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, Washington 98102

SAMPLERS (signature)

PROJECT NAME/NO:

PO#

REMARKS

206-306-1907

											Al	NALYSE	S REQU	JESTED		
, Sample ID	Sample Location	Sample <del>Depth</del> Ektúlin	ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
S. P.E. P.S. 161	PF)	Pol	of	9/1/15	04113	5511	-	X	,	A						Frence Jan Frence Jan En Frence St
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Friedman & Bruya, Inc. 3012 16th Avenue West. Seattle, WA 98119-2029 Ph. (206) 285-8282

Phone # 206-306-1900 Fax #

Fax (206) 283-5044
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Received by:				<u> </u>



#### ENVIRONMENTAL CHEMISTS

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

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

May 6, 2015

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 4, 2015 from the SOU 0914-001-12 20150504, F&BI 505034 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU0506R.DOC

# ENVIRONMENTAL CHEMISTS

# **CASE NARRATIVE**

This case narrative encompasses samples received on May 4, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150504, F&BI 505034 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
505034 -01	S-NSW01-C4-255
505034 -02	S-SSW01-C5-255
505034 -03	S-WSW01-C5-254
505034 -04	S-B01-C5-252

All quality control requirements were acceptable.

# ENVIRONMENTAL CHEMISTS

Date of Report: 05/06/15 Date Received: 05/04/15

Project: SOU_0914-001-12_20150504, F&BI 505034

Date Extracted: 05/04/15 Date Analyzed: 05/04/15

# RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
S-NSW01-C4-255 505034-01 1/5	<0.02 j	< 0.1	0.75	0.50	1,000	94
S-SSW01-C5-255 505034-02	< 0.02	< 0.02	< 0.02	<0.06	3.6	88
S-WSW01-C5-254 505034-03	< 0.02	< 0.02	0.13	0.12	220	95
S-B01-C5-252 505034-04	<0.02	< 0.02	< 0.02	< 0.06	<2	88
Method Blank 05-0871 MB	<0.02	< 0.02	< 0.02	< 0.06	<2	90

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/06/15 Date Received: 05/04/15

Project: SOU_0914-001-12_20150504, F&BI 505034

Date Extracted: 05/04/15 Date Analyzed: 05/04/15

# RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 56-165)
S-NSW01-C4-255 505034-01	3,400	780	108
S-SSW01-C5-255 505034-02	< 50	<250	107
S-WSW01-C5-254 505034-03	700	<250	109
S-B01-C5-252 505034-04	<50	<250	97
Method Blank 05-896 MB	< 50	<250	109

# ENVIRONMENTAL CHEMISTS

Date of Report: 05/06/15 Date Received: 05/04/15

Project: SOU_0914-001-12_20150504, F&BI 505034

# 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: 505035-02 (Duplicate)

-	_	Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

	Percent								
	Reporting	Spike	Recovery	Acceptance					
Analyte	Units	Level	LCS	Criteria					
Benzene	mg/kg (ppm)	0.5	79	69-120					
Toluene	mg/kg (ppm)	0.5	94	70-117					
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123					
Xylenes	mg/kg (ppm)	1.5	95	66-120					
Gasoline	mg/kg (ppm)	20	95	71-131					

# ENVIRONMENTAL CHEMISTS

Date of Report: 05/06/15 Date Received: 05/04/15

Project: SOU_0914-001-12_20150504, F&BI 505034

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505035-06 (Matrix Spike)

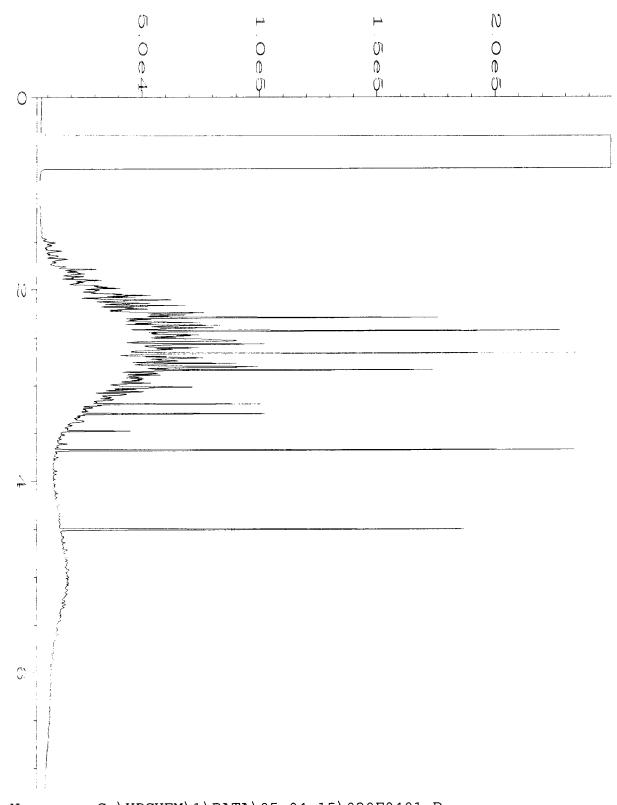
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	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	111	110	63-146	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	110	79-144

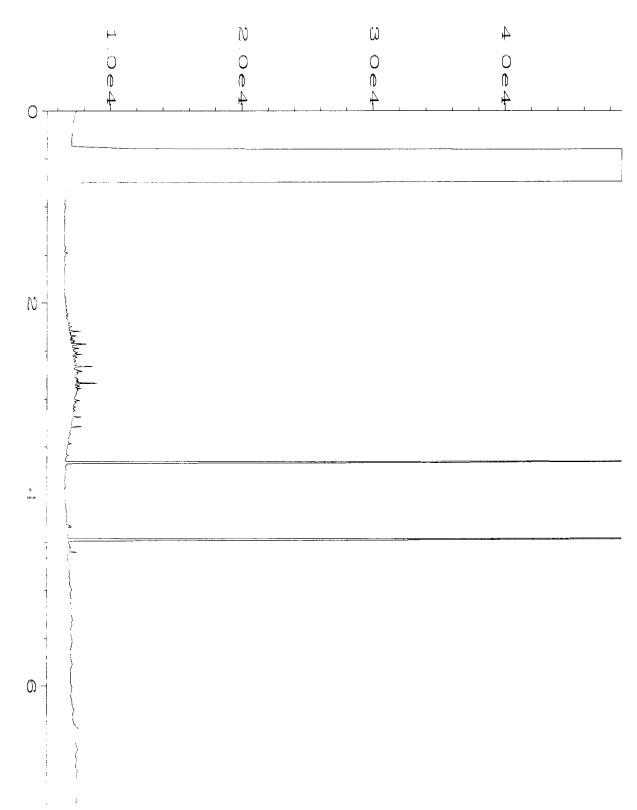
#### **ENVIRONMENTAL CHEMISTS**

# **Data Qualifiers & Definitions**

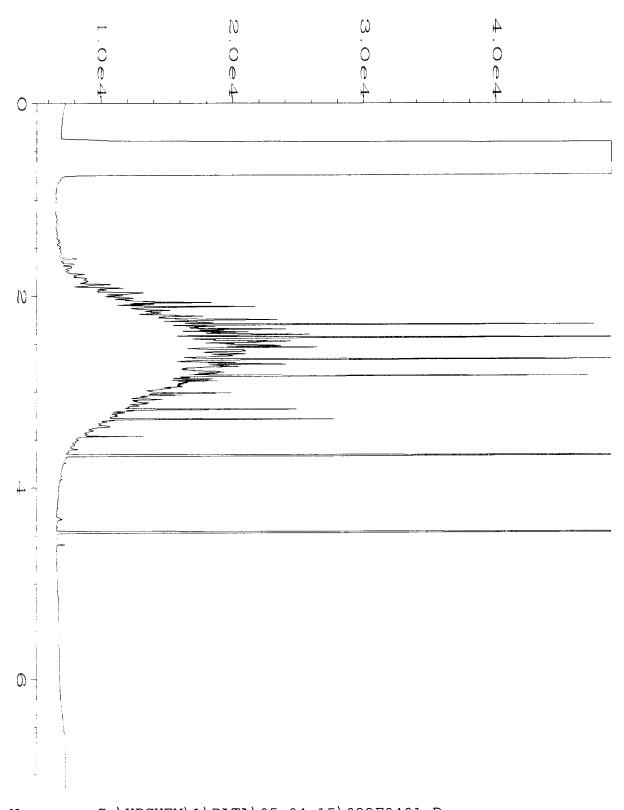
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



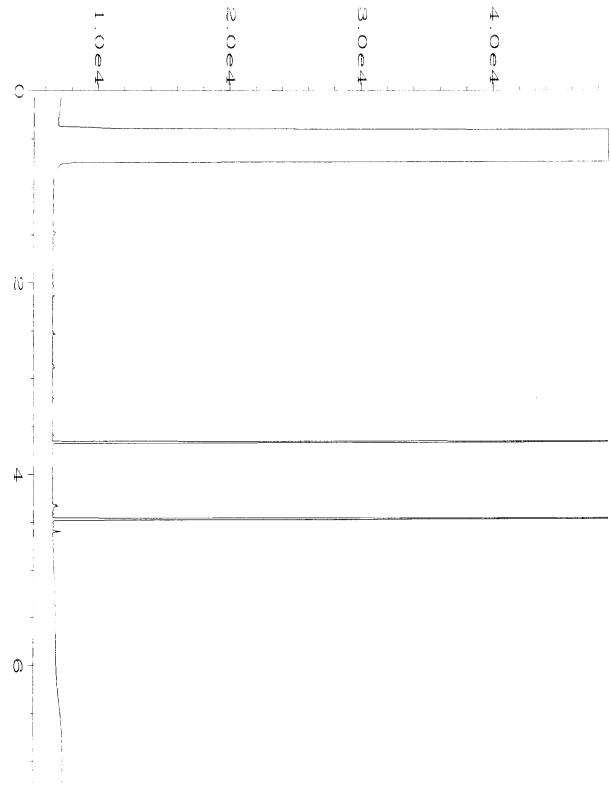
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Acquired on
                : 04 May 15 02:03 PM
                                               Analysis Method : DX.MTH
Report Created on: 04 May 15 03:04 PM
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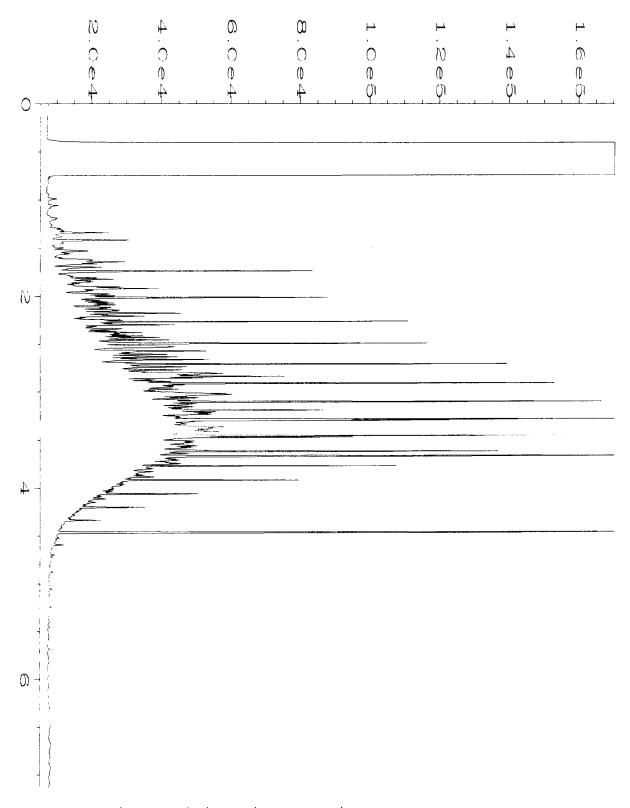
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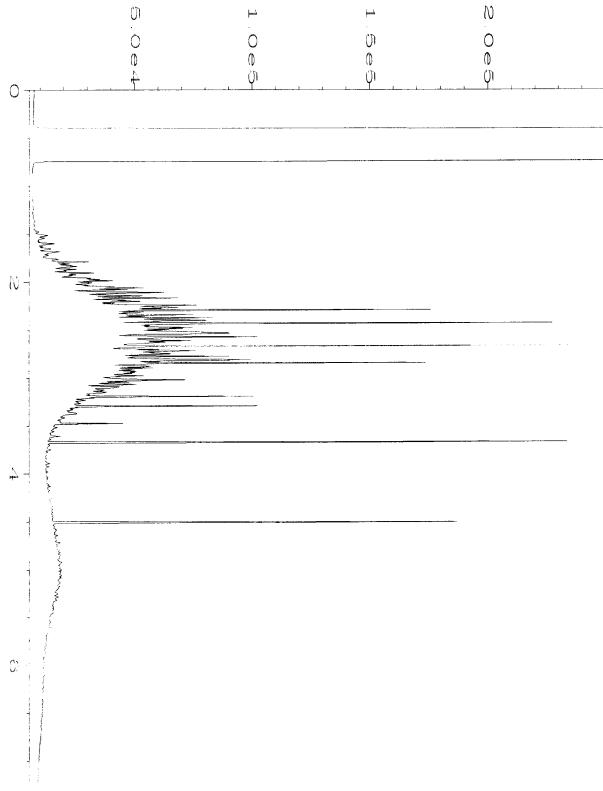
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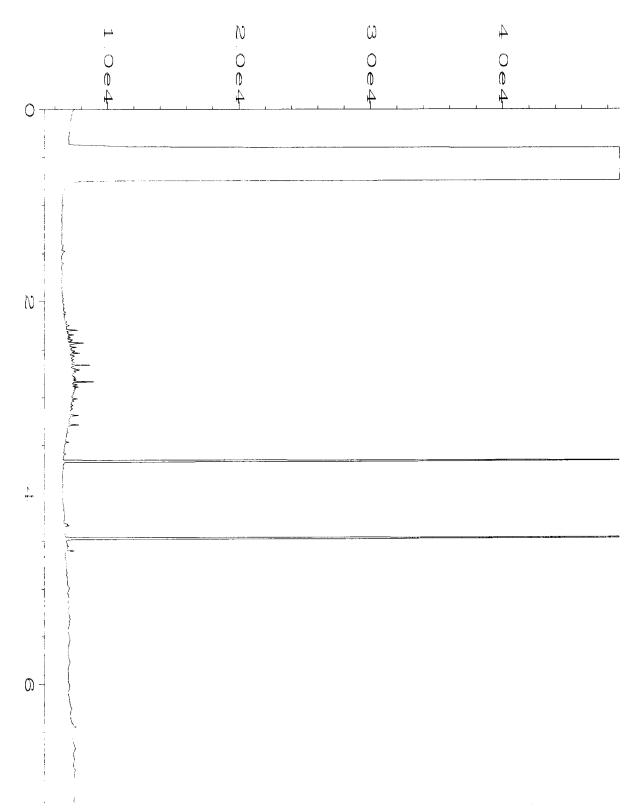
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Sample Name
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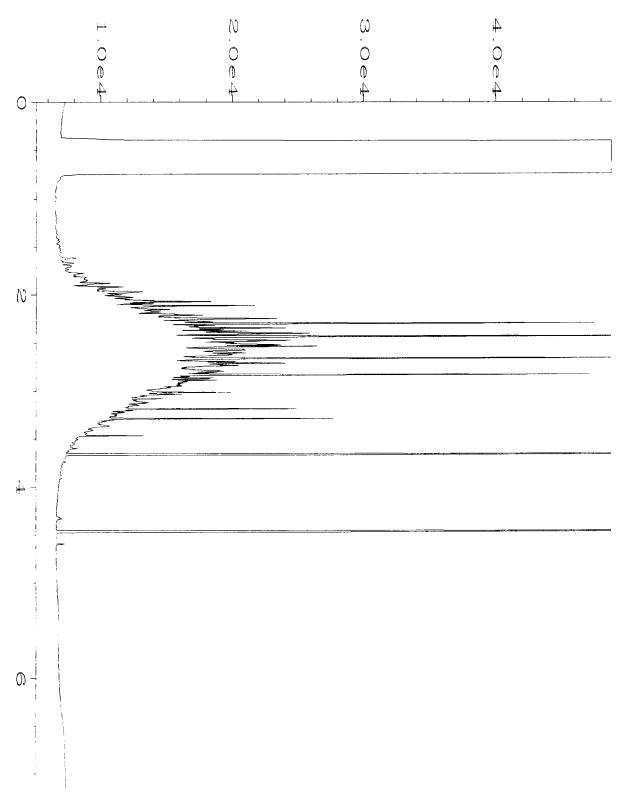
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Instrument
                : GC1
                : 500 Dx 44-94C
                                              Injection Number: 1
Sample Name
Run Time Bar Code:
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Report Created on: 04 May 15 03:04 PM
                                              Analysis Method : DX.MTH
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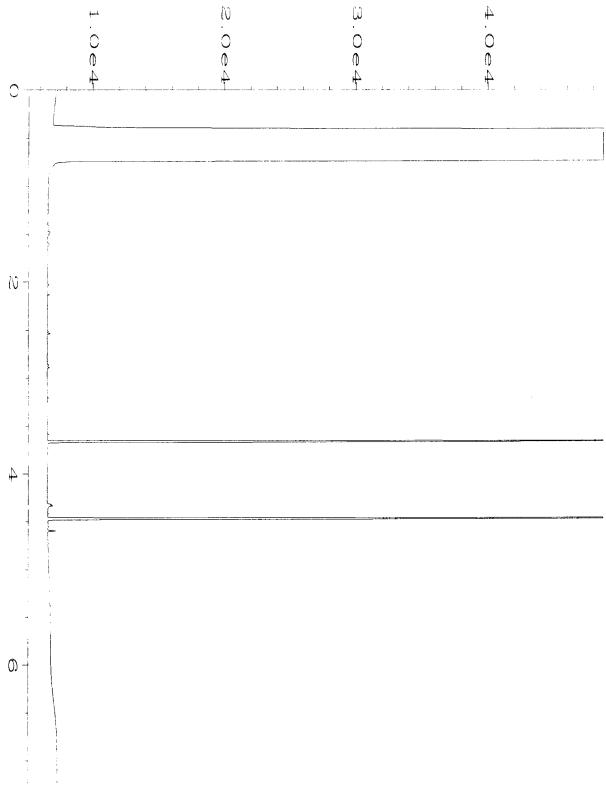
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                 : 505034-01
Sample Name
                                               Sequence Line
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 04 May 15 02:03 PM
                                               Analysis Method : DX.MTH
Report Created on: 04 May 15 03:04 PM
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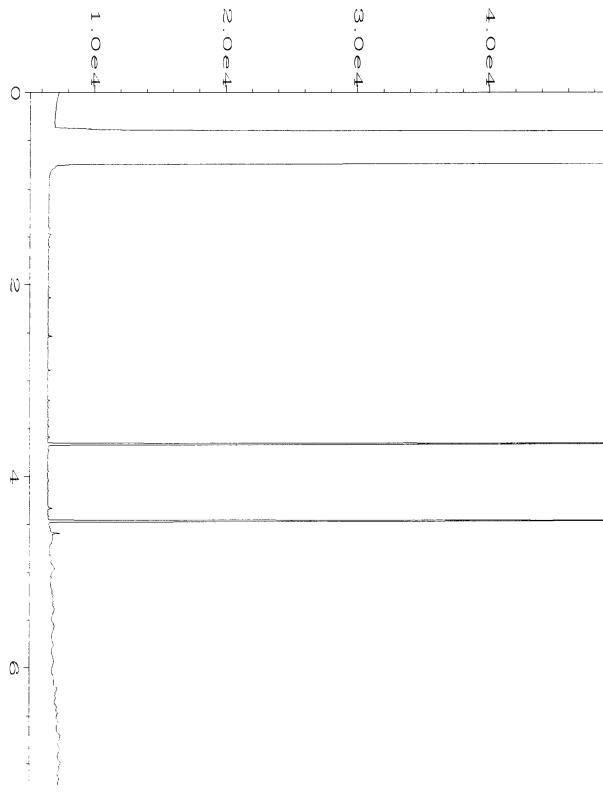
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                                               Injection Number: 1
Sample Name
                 : 505034-02
                                               Sequence Line : 4
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 04 May 15 02:12 PM
Report Created on: 04 May 15 03:04 PM
                                               Analysis Method : DX.MTH
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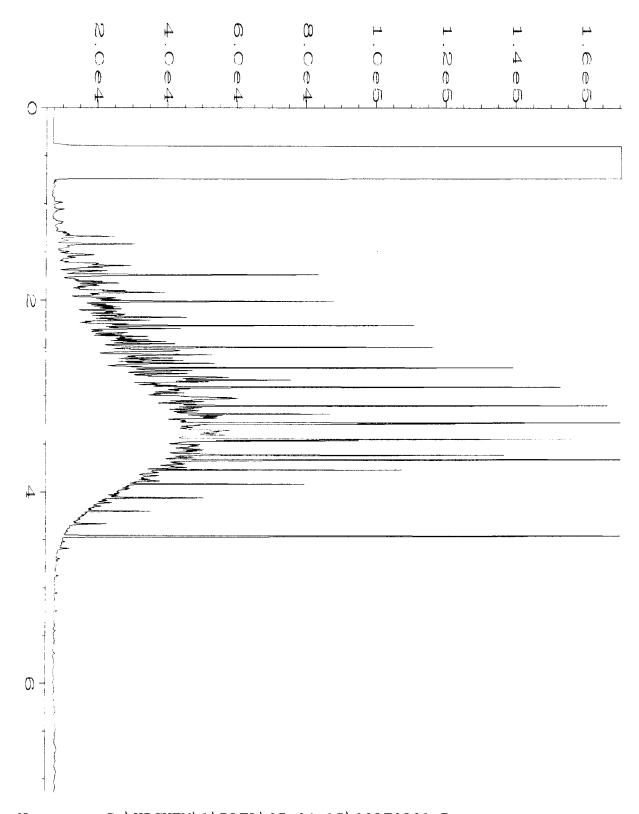
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                : mwdl
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Instrument
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Sample Name
                : 505034-03
Run Time Bar Code:
                                              Sequence Line : 4
                                              Instrument Method: DX.MTH
Acquired on : 04 May 15 02:23 PM
Report Created on: 04 May 15 03:04 PM
                                              Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\05-04-15\023F0401.D
Data File Name
                                                Page Number
Operator
                 : mwdl
                                                Vial Number
                                                                  : 23
Instrument
                 : GC1
                                                Injection Number: 1
                 : 505034-04
Sample Name
                                                Sequence Line
Run Time Bar Code:
                                                Instrument Method: DX.MTH
                             02:34 PM
Acquired on
                 : 04 May 15
                                                Analysis Method : DX.MTH
Report Created on: 04 May 15
                             03:04 PM
```



```
: C:\HPCHEM\1\DATA\05-04-15\024F0601.D
Data File Name
                : mwdl
                                              Page Number
                                                              : 1
Operator
                                              Vial Number
Instrument
                : GC1
                                                               : 24
                                              Injection Number: 1
Sample Name
                : 05-896 mb
Run Time Bar Code:
                                              Sequence Line : 6
                                              Instrument Method: DX.MTH
Acquired on : 04 May 15 03:07 PM
Report Created on: 05 May 15
                            08:35 AM
                                              Analysis Method : DX.MTH
```



```
Data File Name
                : C:\HPCHEM\1\DATA\05-04-15\003F0201.D
                                              Page Number
Operator
                : mwdl
                                              Vial Number
Instrument
                : GC1
                                                              : 3
                                              Injection Number: 1
Sample Name
                : 500 Dx 44-94C
Run Time Bar Code:
                                              Sequence Line : 2
                                              Instrument Method: DX.MTH
Acquired on : 04 May 15 08:48 AM
Report Created on: 04 May 15 03:04 PM
                                              Analysis Method : DX.MTH
```

505034

SAMPLE CHAY OF CUSTODY

ME 5/4/15

	EOS
<i>)</i>	VSZ

Send Report to	R. Roberts:	S. Stumpf;	E. Forbes; J. Cyr

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, Washington 98102

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

SAMPLERS (signature)	
PROJECT NAME/NO.	PO#
0914-001-17	s figur
REMARKS ASM RUSH &	

Page # _____ of ____
TURNAROUND TIME
Standard (2 Weeks)

RUSH____
Rush charges authorized by:

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

						:		ANALYSES REQUESTED								
Sample ID	Sample Location	Sample Depth Al varm	ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
5-NSWOF-(4-255 S-SOWOF-C5-255 S-NSWOF-C5-254	C4	255	OIAF	5/1/15	1106	5,10	i.p	X	×	X						
5. Sowor C5-255	CS	255	02		:177		9	*	X	X						
5-145WOLC5-254	(5	254	03	\	1155		6	×	X	7						
5-Pol-(5-252	CB	250	94	~	10.19		0	×	X	1						
				£.												
													San	npies r	<b>Jeeive</b>	5

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNAȚURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	113 Fin tell	ST	5/4/15	1310
Received by:	Mitt In ofe	#37h	5/4/15	1310
Relinquished by:				-
Received by:				

FORMS\COC\COC.DOC

#### **ENVIRONMENTAL CHEMISTS**

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

June 9, 2015

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

Dear Mr. Roberts:

Included are the additional results from the testing of material submitted on May 4, 2015 from the  $SOU_0914-001-12_20150504$ , F&BI 505034 project. There is 1 page included in this report.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0609R.DOC

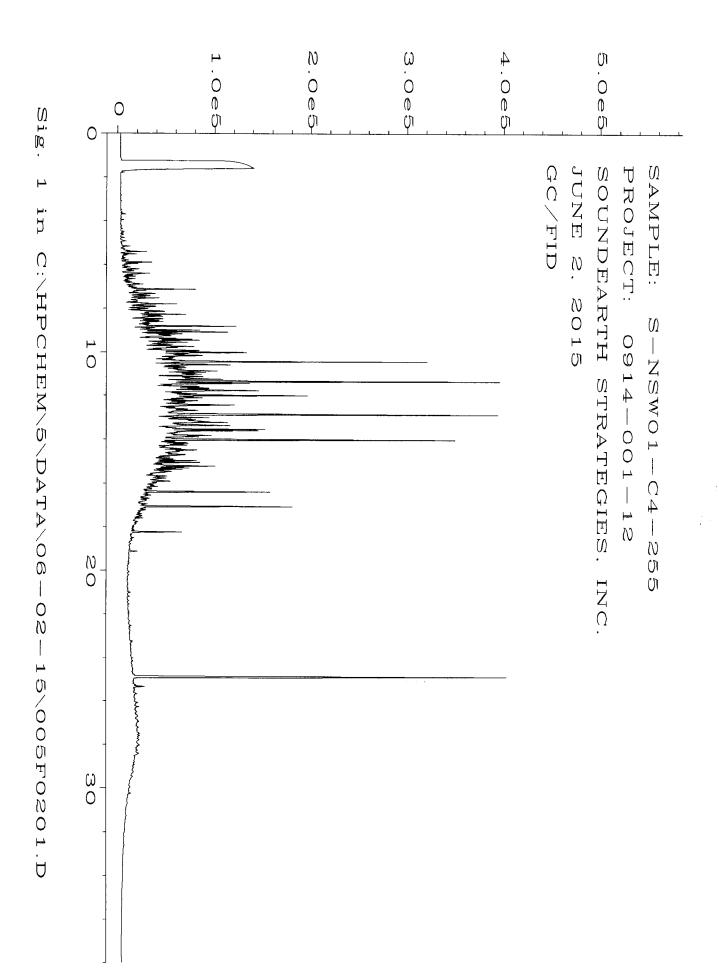
#### ENVIRONMENTAL CHEMISTS

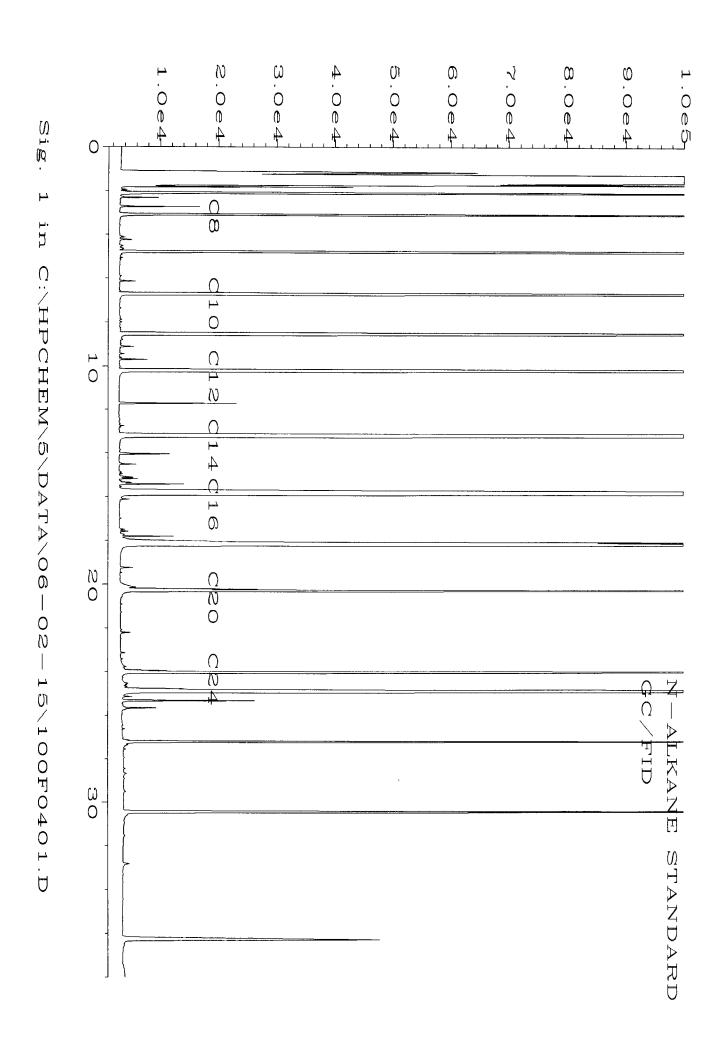
# **CASE NARRATIVE**

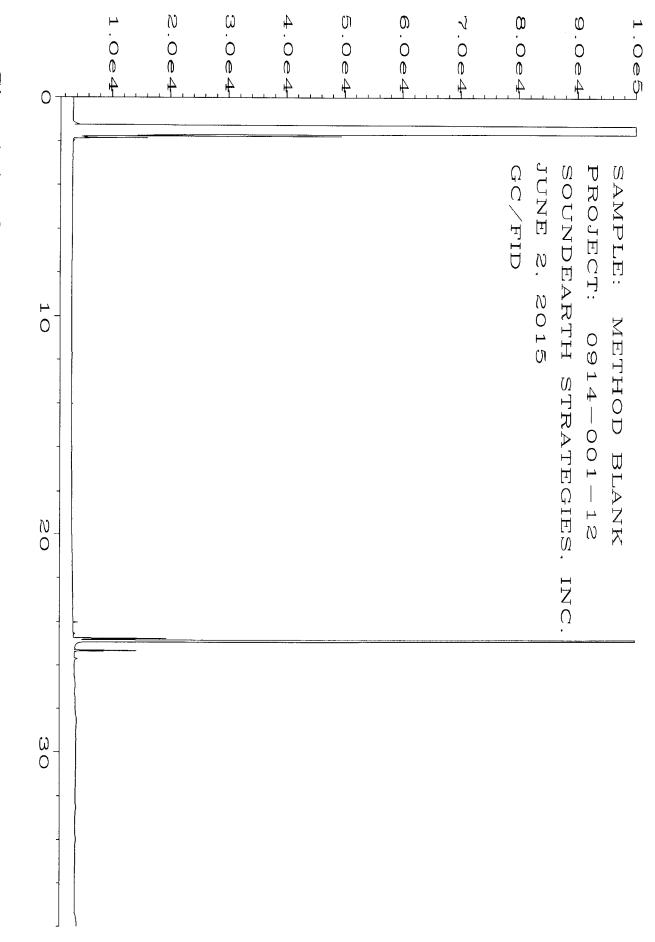
This case narrative encompasses samples received on May 4, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150504, F&BI 505034 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
505034 -01	S-NSW01-C4-255
505034 -02	S-SSW01-C5-255
505034 -03	S-WSW01-C5-254
505034 -04	S-B01-C5-252

All quality control requirements were acceptable.







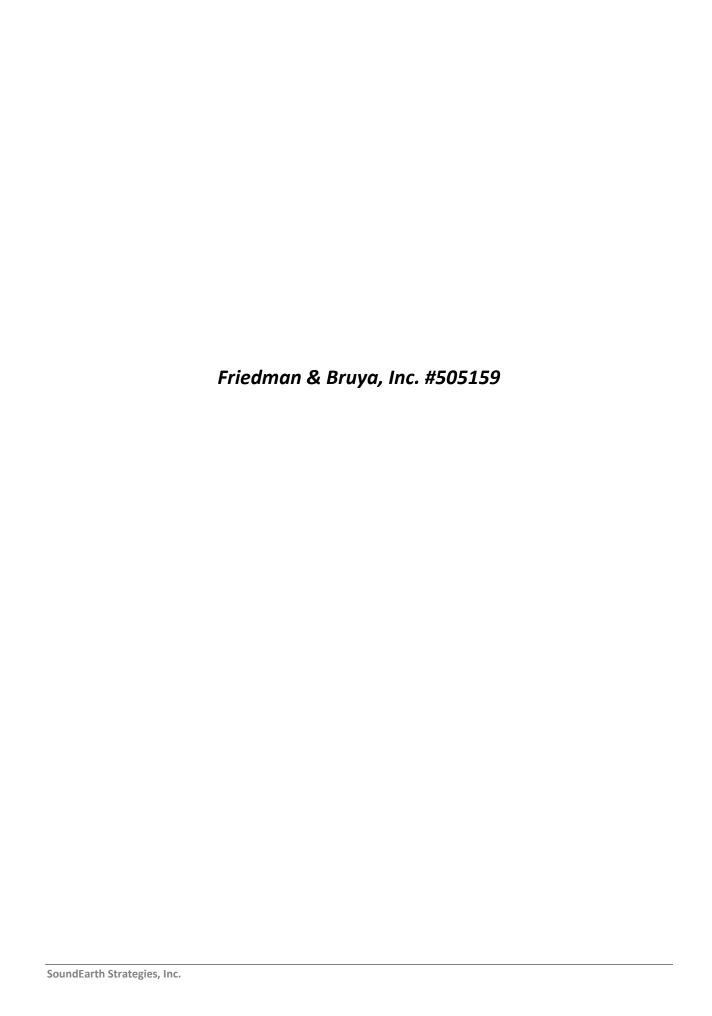
. (V) (V) in C:\HPCHEM\5\DATA\06-02-15\003F0201.D

505034 SAI	MPLE CHAY OF CUSTODY	ME 5/4/1	<u> </u>
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)		Page # of TURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	Standard (2 Weeks)  RUSH
Address 2811 Fairview Avenue E, Suite 2000			Rush charges authorized by:
City, State, ZIP <u>Seattle, Washington 98102</u> Phone # <u>206-306-1900</u> Fax # <u>206-306-1907</u>	REMARKS ASAR RUSH &		SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

											A	NALYSE	S REQU	JESTED		
Sample ID	Sample Location	Sample Depth Olivaria	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082	HFS	Notes
5 NSWEL (4-255	C4	235	OIAF	5/1/1-	1106	5,10	i _p	X	<b>)</b> :	X					*	*-per RR
5. Sowot CF- 165	(5	255	02		:."3		0	*	×	X						#-per RR 6/1/15
5-105WO+C5-154	(5	254	03		1.85		9	*	7:	×						M4 .
5 POL- (5-252	CS	250	94		17.14		0	>	X	1.						
				S.												
						-				<del></del>						····
													San	م ماده		5

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

SIGNAȚURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	112 Finial/	SIT.	5/4/15	1310
Received by:	Mitt In other	#3h	5/4/15	1310
Relinquished by:			7,,	
Received by:				



#### ENVIRONMENTAL CHEMISTS

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

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

May 21, 2015

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 11, 2015 from the SOU 0914-001-12 20150511, F&BI 505159 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU052ĬR.DOC

#### ENVIRONMENTAL CHEMISTS

# **CASE NARRATIVE**

This case narrative encompasses samples received on May 11, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150511, F&BI 505159 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
505159 -01	S-B01-B4-260
505159 -02	S-B01-B3-260
505159 -03	S-B01-C4-259

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/21/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505159

Date Extracted: 05/15/15 Date Analyzed: 05/15/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-B4-260 505159-01	< 0.02	< 0.02	< 0.02	< 0.06	75	88
S-B01-B3-260 505159-02	< 0.02	<0.02	<0.02	< 0.06	40	87
S-B01-C4-259 505159-03	<0.02	<0.02	0.047	0.099	240	79
Method Blank 05-0943 MB2	<0.02	<0.02	<0.02	< 0.06	<2	89

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/21/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505159

Date Extracted: 05/15/15 Date Analyzed: 05/15/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 53-144)
S-B01-B4-260 505159-01	<50	<250	101
S-B01-B3-260 505159-02	< 50	<250	103
S-B01-C4-259 505159-03	740	<250	102
Method Blank 05-972 MB	<50	<250	98

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/21/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505159

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

Laboratory Code: 505236-02 (Duplicate)

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	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	98	66-121
Toluene	mg/kg (ppm)	0.5	99	72-128
Ethylbenzene	mg/kg (ppm)	0.5	101	69-132
Xylenes	mg/kg (ppm)	1.5	101	69-131
Gasoline	mg/kg (ppm)	20	100	61-153

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/21/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505159

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505159-01 (Matrix Spike)

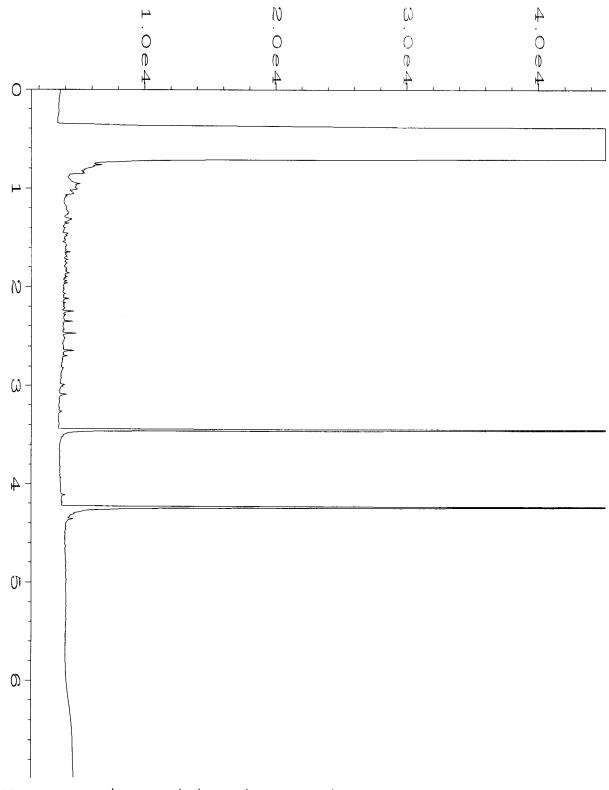
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	91	103	64-133	12

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	92	58-147

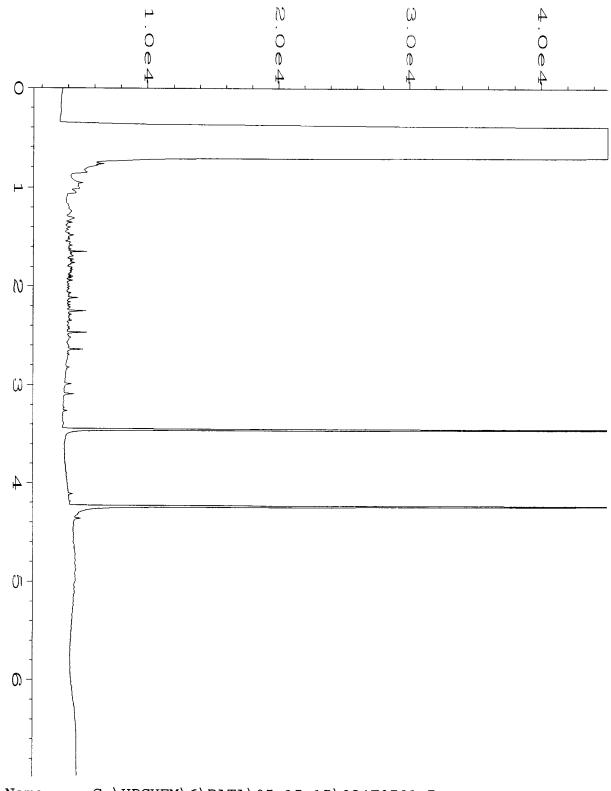
#### **ENVIRONMENTAL CHEMISTS**

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

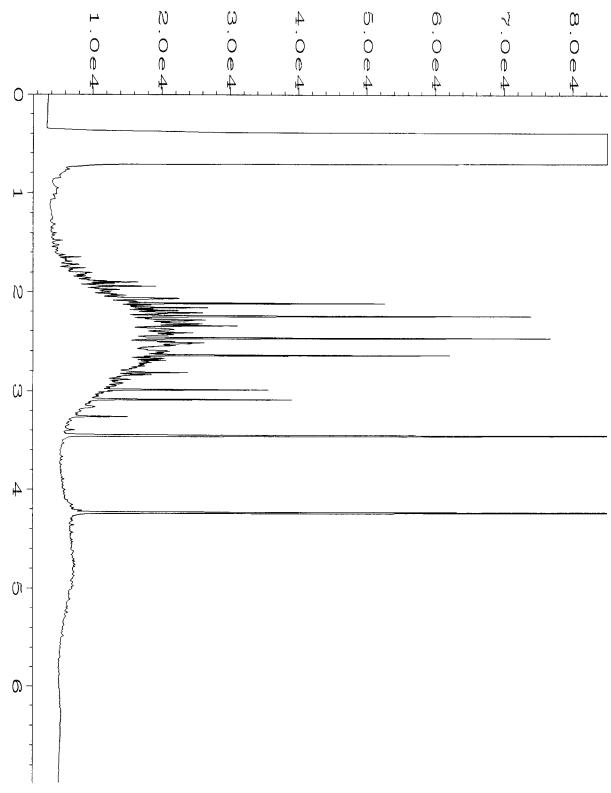
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



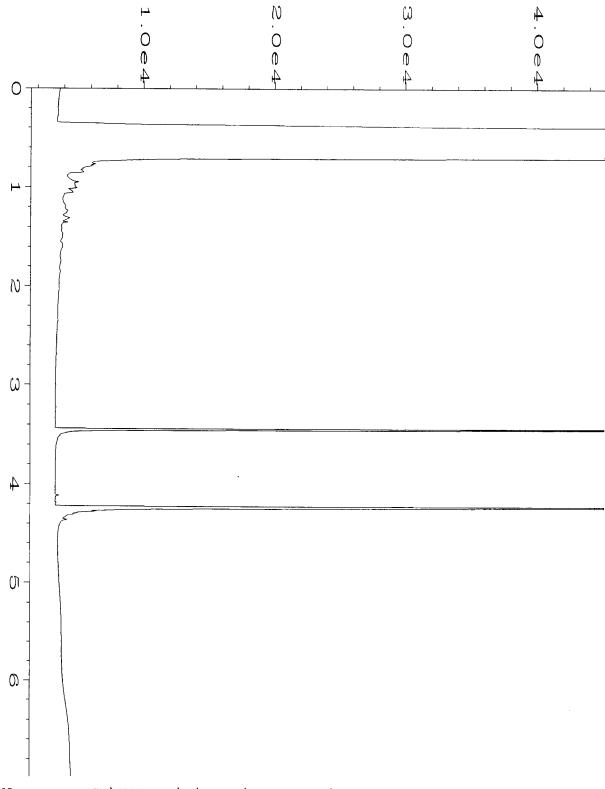
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Data File Name
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Operator
                 : mwdl
                                                Page Number
                                                                 : 1
Instrument
                 : GC #6
                                                Vial Number
                                                                 : 16
Sample Name
                 : 505159-01
                                                Injection Number : 1
Run Time Bar Code:
                                                Sequence Line : 3
Acquired on
                 : 15 May 15
                                                Instrument Method: DX.MTH
                              12:15 PM
Report Created on: 18 May 15
                             09:25 AM
                                                Analysis Method : DX.MTH
```



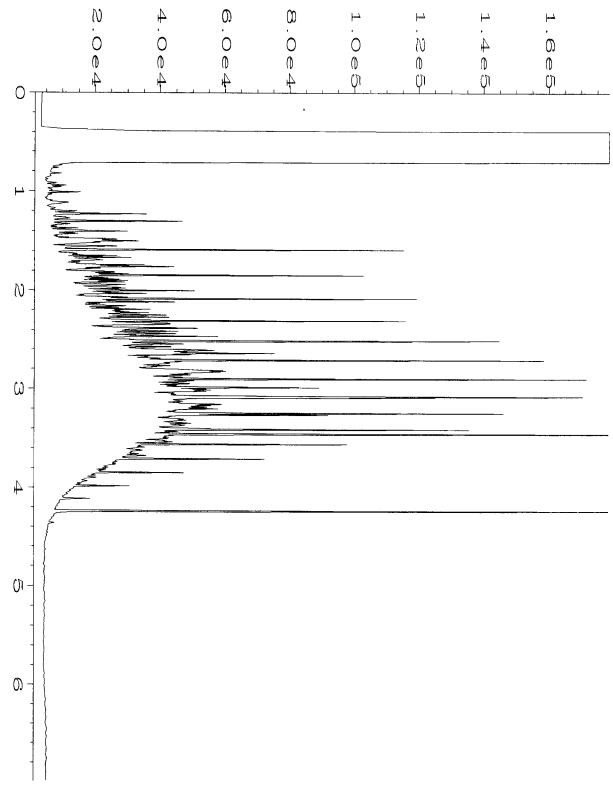
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Data File Name
                 : C:\HPCHEM\6\DATA\05-15-15\024F0501.D
Operator
                 : mwdl
                                                Page Number
                                                                 : 1
Instrument
                 : GC #6
                                                Vial Number
                                                                 : 24
Sample Name
                 : 505159-02
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line
                                                              : 5
                : 15 May 15
Acquired on
                                                Instrument Method: DX.MTH
                              01:53 PM
Report Created on: 18 May 15
                             09:25 AM
                                                Analysis Method : DX.MTH
```



```
Data File Name
                 : C:\HPCHEM\6\DATA\05-15-15\025F0501.D
Operator
                 : mwdl
                                                  Page Number
                                                                   : 1
Instrument
                 : GC #6
                                                  Vial Number
                                                                   : 25
Sample Name
                 : 505159-03
                                                  Injection Number: 1
                                                  Sequence Line : 5
Instrument Method: DX.MTH
Run Time Bar Code:
Acquired on : 15 May 15 02:04 PM
                                                 Analysis Method : DX.MTH
Report Created on: 18 May 15
                              09:26 AM
```



```
Data File Name
                : C:\HPCHEM\6\DATA\05-15-15\014F0301.D
Operator
                 : mwdl
                                               Page Number
                                                                : 1
Instrument
                 : GC #6
                                               Vial Number
                                                                : 14
Sample Name
                : 05-972 mb
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
Acquired on : 15 May 15
                             11:54 AM
                                               Instrument Method: DX.MTH
Report Created on: 18 May 15
                            09:26 AM
                                               Analysis Method : DX.MTH
```



```
: C:\HPCHEM\6\DATA\05-15-15\003F0201.D
Data File Name
Operator
                 : mwdl
                                               Page Number
Instrument
                 : GC #6
                                               Vial Number
                                                                : 3
Sample Name
                : 500 Dx 44-94C
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 2
Acquired on
            : 15 May 15 09:15 AM
                                               Instrument Method: DX.MTH
Report Created on: 18 May 15
                            09:26 AM
                                               Analysis Method : DX.MTH
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SAMPLE CHAY OF CUSTODY ME 05-11-15

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	T 4	1.	- C

D. D. Lander, C. Charmerf, F. Forbog, I. Cur.	SAMPLERS (signature)	
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	PROJECT NAME/NO. PO#	
Company SoundEarth Strategies, Inc.	8914 - 001-12	
Address 2811 Fairview Avenue E, Suite 2000		
City, State, ZIP Seattle, Washington 98102	REMARKS	
•		
Phone # 206-306-1900 Fax # 206-306-1907		

Page #_ TURNAROUND TIME Standard (2 Weeks)  $RUSH_{-}$ Rush charges authorized by:

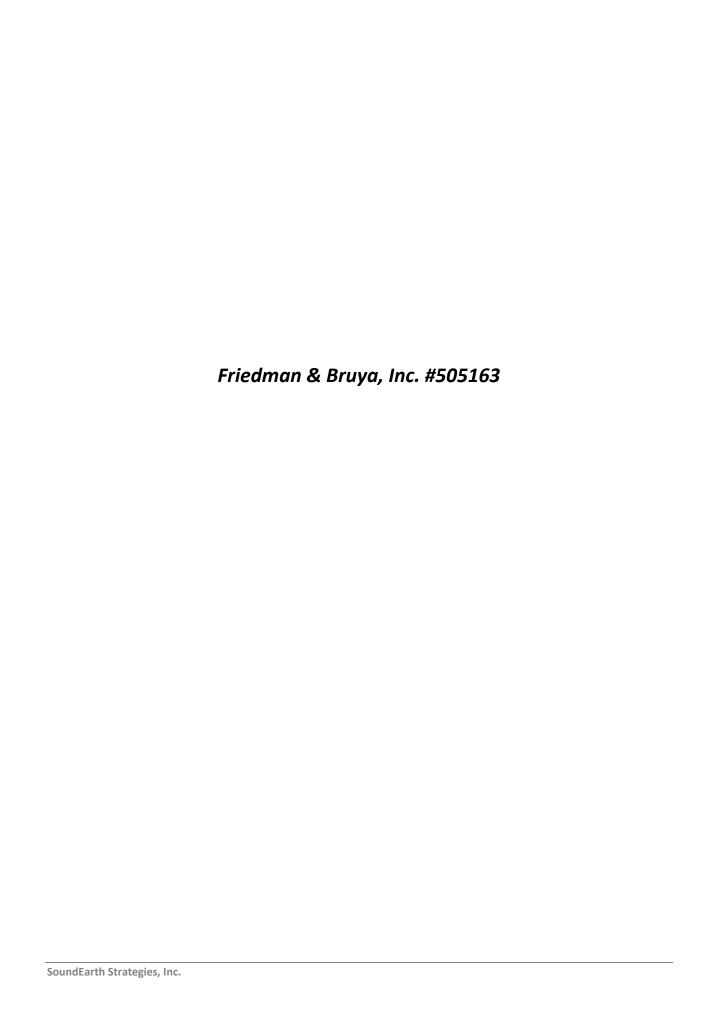
> SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

				T	***						Al	VALYSE	S REQU	ESTED		
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082	Hers	Notes
5-1301-134-260	ВЧ	200	01 A-F	slula	C 2.70	Son	k								/	
5-1301-134-260 5-1301-183-260	B3	260	02]		0 825		12					_			*	
5-601-64-259	CU	迈9	93	7	1,30	7	6						l 		X	
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

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

SIC	GNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	6.1 11	1,2 Files	Siti	5/11/18	1320
Received by:	MA	Mattlangs ton	FRTure	5 5/11/19	1320
Relinquished by:		1 211 2 3			
Received by:					



#### **ENVIRONMENTAL CHEMISTS**

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

May 14, 2015

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 11, 2015 from the SOU_0914-001-12_20150511, F&BI 505163 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0514R.DOC

#### ENVIRONMENTAL CHEMISTS

# **CASE NARRATIVE**

This case narrative encompasses samples received on May 11, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150511, F&BI 505163 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID SoundEarth Strategies	Laboratory ID	SoundEarth Strategies
-------------------------------------	---------------	-----------------------

505163 -01 S-B01-B3-255 505163 -02 S-B01-C3-255

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/14/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505163

Date Extracted: 05/12/15 Date Analyzed: 05/12/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
S-B01-B3-255 505163-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	94
S-B01-C3-255 505163-02	< 0.02	< 0.02	<0.02	<0.06	<2	93
Method Blank 05-0937 MB	<0.02	< 0.02	<0.02	< 0.06	<2	89

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/14/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505163

Date Extracted: 05/12/15 Date Analyzed: 05/12/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 48-168)
S-B01-B3-255 505163-01	< 50	<250	111
S-B01-C3-255 505163-02	<50	<250	112
Method Blank	<50	<250	109

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/14/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505163

# 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: 505176-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	91	69-120
Toluene	mg/kg (ppm)	0.5	95	70-117
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123
Xylenes	mg/kg (ppm)	1.5	93	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/14/15 Date Received: 05/11/15

Project: SOU_0914-001-12_20150511, F&BI 505163

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505150-17 (Matrix Spike)

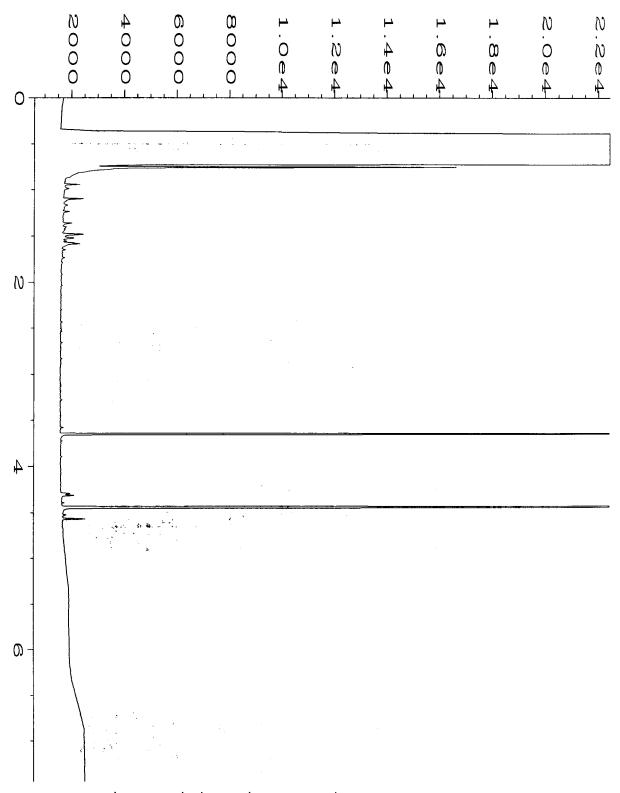
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recov ery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	97	95	64-133	2

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	101	58-147

#### **ENVIRONMENTAL CHEMISTS**

# **Data Qualifiers & Definitions**

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



```
Data File Name : C:\HPCHEM\4\DATA\05-12-15\008F0301.D

Operator : mwdl Page Number : 1

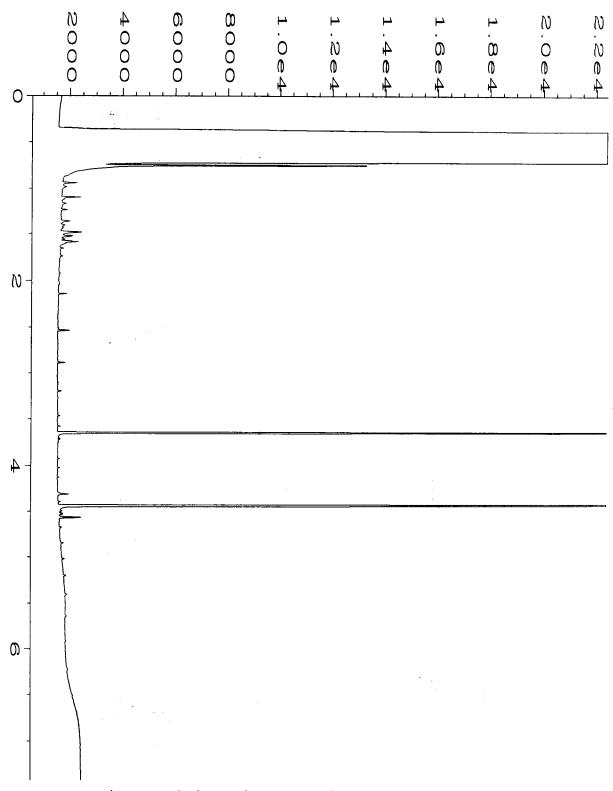
Instrument : GC#4 Vial Number : 8

Sample Name : 505163-01 Injection Number : 1

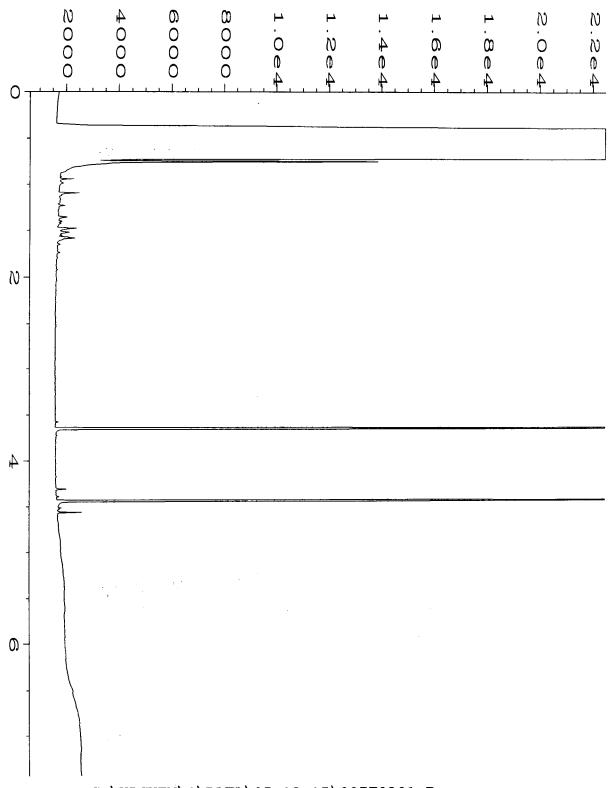
Run Time Bar Code: Sequence Line : 3

Acquired on : 12 May 15 09:26 AM Instrument Method: DX.MTH

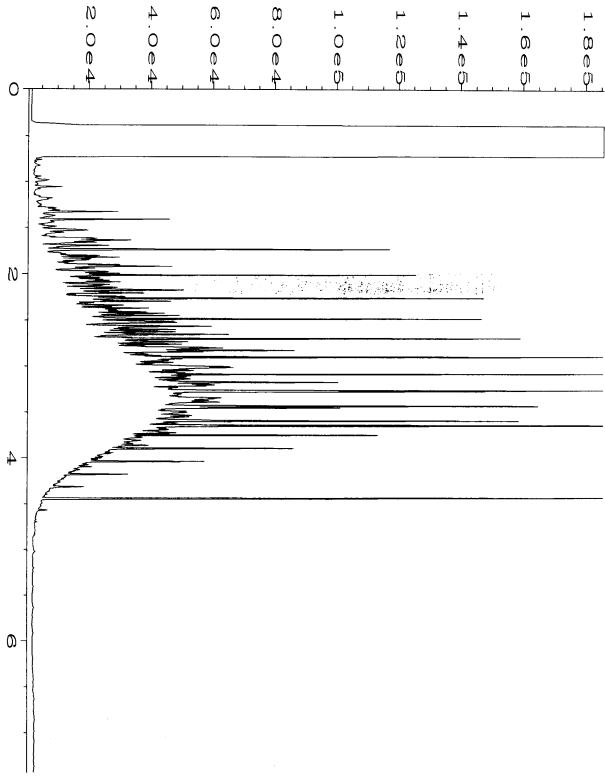
Report Created on: 12 May 15 11:14 AM Analysis Method : DX.MTH
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Data File Name
Operator
                   : mwdl
                                                     Page Number
                                                     Vial Number
Instrument
                   : GC#4
Sample Name
                                                     Injection Number: 1
Sequence Line: 3
                   : 505163-02
Run Time Bar Code:
                                                     Instrument Method: DX.MTH Analysis Method: DX.MTH
Acquired on
              : 12 May 15 09:38 AM
Report Created on: 12 May 15 11:14 AM
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Data File Name
                                              Page Number
                : mwdl
Operator
                                              Vial Number
                : GC#4
Instrument
Sample Name
                                              Injection Number: 1
                : 05-954 mb2
Run Time Bar Code:
                                              Sequence Line : 3
Acquired on
            : 12 May 15
                             09:14 AM
                                              Instrument Method: DX.MTH
                                              Analysis Method : DX.MTH
Report Created on: 12 May 15
                             11:14 AM
```



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Data File Name
Operator
                 : mwdl
                                                Page Number
                                                Vial Number : 3
Injection Number : 1
Instrument
                 : GC#4
Sample Name
                : 500 Dx 44-94C
Run Time Bar Code:
                                                Sequence Line : 2
Acquired on
             : 12 May 15 08:51 AM
                                                Instrument Method: DX.MTH
Report Created on: 12 May 15 11:14 AM
                                                Analysis Method : DX.MTH
```

SAMPLE CHA OF CUSTODY ME 05/11/ 505163 SAMPLERS (signature) Page # Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr TURNAROUND TIME PROJECT NAME/NO. PO# Standard (2 Weeks) Company SoundEarth Strategies, Inc. 0914-001-12 GRUSH ZY hr Rush charges authorized by: Address 2811 Fairview Avenue E, Suite 2000 **REMARKS** SAMPLE DISPOSAL City, State, ZIP Seattle, Washington 98102 Zy hr Dispose after 30 days Return samples Phone # 206-306-1900 Fax# 206-306-1907 AIB Will call with instructions

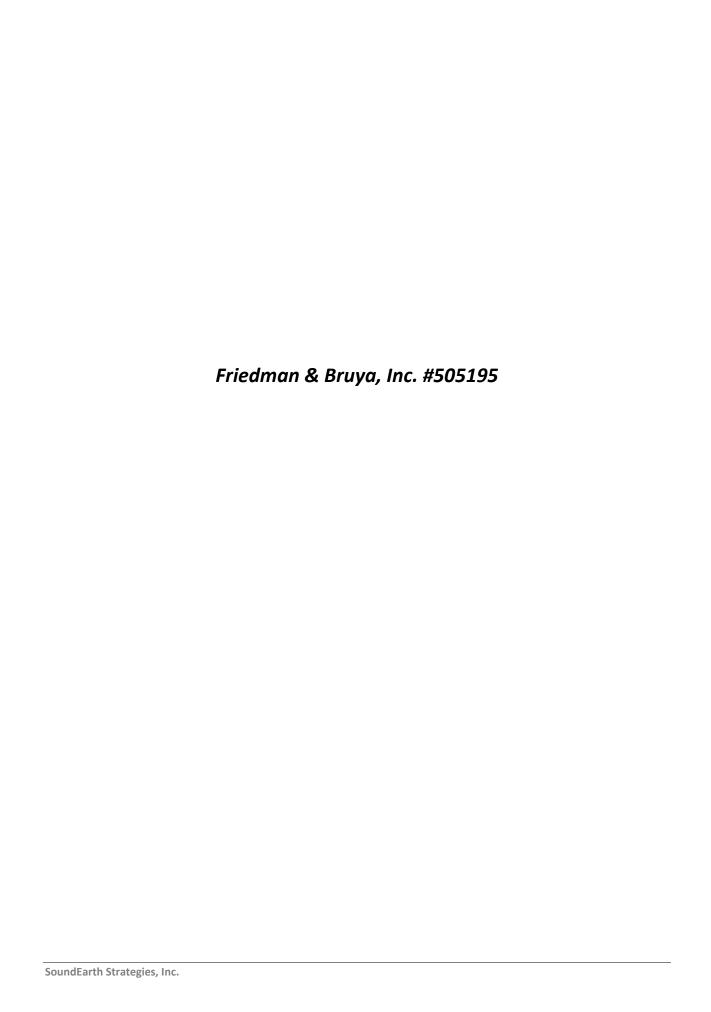
										1	A	NALYSI	ES REQ	JESTEI	)			
Sample ID ;	Sample Location	Sample Depth		Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		No	otes	
5-BOI-13-255 5-BOI-13-255	P53	2.53	DI-F	5/11/15	1515	StIL	5	X	X	X						<u> </u>		$\dashv$
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Liz Forkes	Sits	5/11/15	1645
Received by:	D0 00	Fori	(1	16:58
Received by:				

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#### **ENVIRONMENTAL CHEMISTS**

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

May 20, 2015

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 12, 2015 from the SOU_0914-001_20150512, F&BI 505195 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

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0520R.DOC

## ENVIRONMENTAL CHEMISTS

## **CASE NARRATIVE**

This case narrative encompasses samples received on May 12, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001_20150512, F&BI 505195 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID 505195 -01 505195 -02 505195 -03 505195 -04 505195 -05 505195 -06 505195 -07 505195 -08 505195 -09	SoundEarth Strategies S-B01-C4-255 S-B01-B4-255 S-B01-A1-250 S-B01-A2-250 S-B01-A3-250 S-B01-B1-250 S-B01-B2-250 S-B01-C1-250 S-B01-C2-250
505195 -10	S-B01-B3-250
505195 -11 505195 -12 505195 -13	S-B01-A4-250 S-B01-B4-250 S-ESW01-B5-255
505195 -14 505195 -15	S-SSW02-A4-255 S-SSW01-B5-255

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/15 Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195 Date Extracted: 05/12/15, 05/13/15, and 05/15/15

Date Analyzed: 05/12/15, 05/13/15, 05/14/15, and 05/15/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
S-B01-C4-255 505195-01	< 0.02	< 0.02	0.90	1.7	660	100
S-B01-B4-255 505195-02 1/5	<0.02 j	< 0.1	1.3	3.6	1,500	105
S-B01-A1-250 505195-03 1/10	<0.2	<0.2	25	58	3,300	ip
S-B01-A2-250 505195-04 1/100	< 0.4	65	53	460	7,200	91
S-B01-A3-250 505195-05 1/1000	<0.2	24	91	860	8,000	88
S-B01-B1-250 505195-06 1/10	< 0.4	< 0.2	29	74	4,000	ip
S-B01-B2-250 505195-07 1/100	< 0.4	26	48	250	4,900	90
S-B01-C1-250 505195-08 1/5	< 0.02 j	<0.1	14	15	2,000	131
S-B01-C2-250 505195-09 1/5	< 0.02 j	<0.1	11	11	1,500	116
S-B01-B3-250 505195-10	< 0.02	< 0.02	0.57	4.2	400	88

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/20/15
Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195 Date Extracted: 05/12/15, 05/13/15, and 05/15/15

Date Analyzed: 05/12/15, 05/13/15, 05/14/15, and 05/15/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
S-B01-A4-250 505195-11	< 0.02	< 0.02	< 0.02	< 0.06	4.0	88
S-B01-B4-250 505195-12	< 0.02	< 0.02	< 0.02	< 0.06	<2	88
S-ESW01-B5-255 505195-13	< 0.02	< 0.02	< 0.02	< 0.06	<2	102
S-SSW02-A4-255 505195-14	<0.02	< 0.02	< 0.02	< 0.06	<2	95
S-SSW01-B5-255 505195-15	< 0.02	< 0.02	< 0.02	< 0.06	<2	98
Method Blank 05-938 MB	<0.02	<0.02	<0.02	<0.06	<2	93
Method Blank 05-0941 MB	< 0.02	< 0.02	< 0.02	< 0.06	<2	88
Method Blank 05-0943 MB2	< 0.02	< 0.02	< 0.02	< 0.06	<2	89

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/20/15 Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195

Date Extracted: 05/12/15 and 05/15/15 Date Analyzed: 05/12/15 and 05/15/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 48-168)
S-B01-C4-255 505195-01	2,800	<250	101
S-B01-B4-255 505195-02	3,000	1,400	105
S-B01-A1-250 505195-03	1,100 x	<250	87
S-B01-A2-250 505195-04	1,800 x	<250	97
S-B01-A3-250 505195-05	1,200 x	<250	97
S-B01-B1-250 505195-06	1,500 x	<250	97
S-B01-B2-250 505195-07	1,500 x	<250	100
S-B01-C1-250 505195-08	680 x	<250	101
S-B01-C2-250 505195-09	370 x	<250	91
S-B01-B3-250 505195-10	130 x	<250	90

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/20/15 Date Received: 05/12/15

Project:  $SOU_0914-001_20150512$ , F&BI 505195

Date Extracted: 05/12/15 and 05/15/15 Date Analyzed: 05/12/15 and 05/15/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 48-168)
S-B01-A4-250 505195-11	< 50	<250	103
S-B01-B4-250 505195-12	< 50	<250	100
S-ESW01-B5-255 505195-13	< 50	<250	89
S-SSW02-A4-255 505195-14	< 50	<250	98
S-SSW01-B5-255 505195-15	< 50	<250	90
Method Blank 05-962 MB	< 50	<250	94
Method Blank 05-972 MB	< 50	<250	98

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/15 Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195

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

Laboratory Code: 505195-14 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

	Percent					
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	mg/kg (ppm)	0.5	86	66-121		
Toluene	mg/kg (ppm)	0.5	86	72-128		
Ethylbenzene	mg/kg (ppm)	0.5	87	69-132		
Xylenes	mg/kg (ppm)	1.5	87	69-131		
Gasoline	mg/kg (ppm)	20	85	61-153		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/15 Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Benzene	mg/kg (ppm)	0.5	78	78	69-120	0
Toluene	mg/kg (ppm)	0.5	89	89	70-117	0
Ethylbenzene	mg/kg (ppm)	0.5	89	89	65-123	0
Xylenes	mg/kg (ppm)	1.5	88	89	66-120	1
Gasoline	mg/kg (ppm)	20	105	105	71-131	0

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/15 Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195

# 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: 505236-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

	Percent					
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	mg/kg (ppm)	0.5	98	66-121		
Toluene	mg/kg (ppm)	0.5	99	72-128		
Ethylbenzene	mg/kg (ppm)	0.5	101	69-132		
Xylenes	mg/kg (ppm)	1.5	101	69-131		
Gasoline	mg/kg (ppm)	20	100	61-153		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/15 Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505183-03 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	4,800	103	114	73-135	10

			Percent		
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Diesel Extended	mg/kg (ppm)	5,000	92	74-139	

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/20/15 Date Received: 05/12/15

Project: SOU_0914-001_20150512, F&BI 505195

#### QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505159-01 (Matrix Spike)

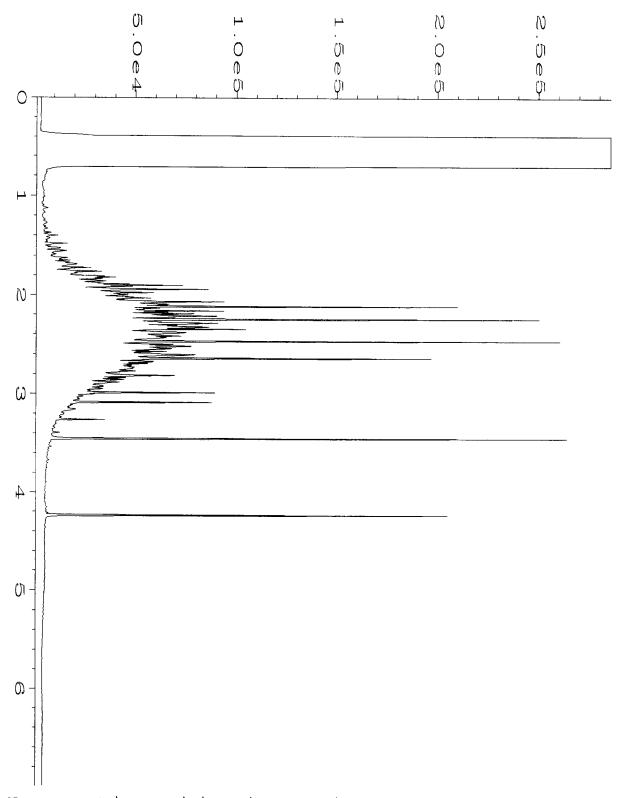
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	91	103	64-133	12

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	92	58-147

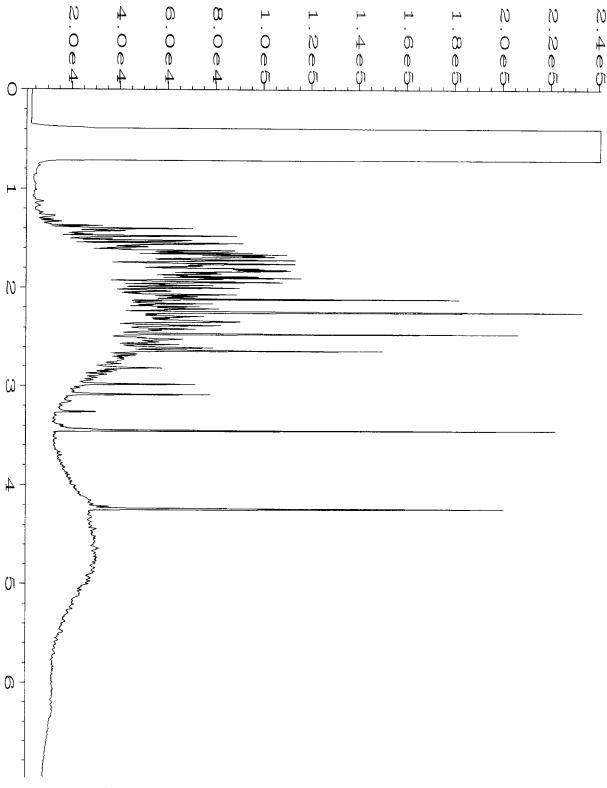
#### **ENVIRONMENTAL CHEMISTS**

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

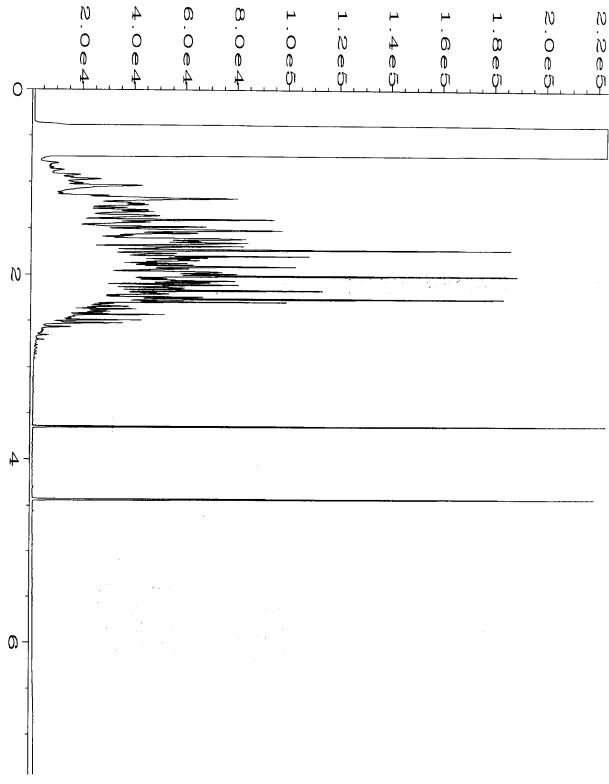
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



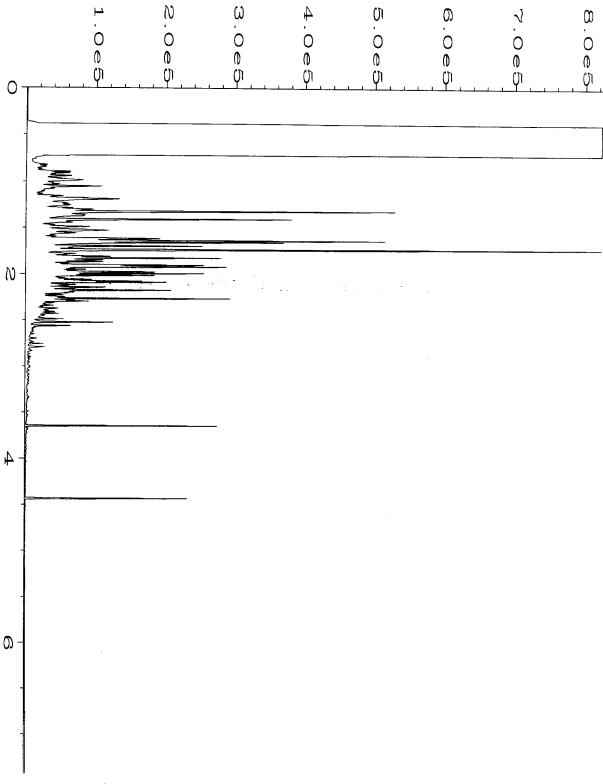
```
Data File Name
                 : C:\HPCHEM\6\DATA\05-15-15\027F0501.D
Operator
                 : mwdl
                                               Page Number
                                                                : 1
Instrument
                 : GC #6
                                               Vial Number
                                                                : 27
Sample Name
                 : 505195-01
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 5
Acquired on : 15 May 15
                              02:26 PM
                                               Instrument Method: DX.MTH
Report Created on: 18 May 15
                             09:26 AM
                                               Analysis Method : DX.MTH
```



```
Data File Name
                 : C:\HPCHEM\6\DATA\05-15-15\028F0501.D
Operator
                 : mwdl
                                                Page Number
                                                                 : 1
Instrument
                 : GC #6
                                                Vial Number
                                                                 : 28
Sample Name
                 : 505195-02
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line
Acquired on : 15 May 15
                                                Instrument Method: DX.MTH
                              02:36 PM
Report Created on: 18 May 15
                             09:26 AM
                                               Analysis Method : DX.MTH
```



```
: C:\HPCHEM\4\DATA\05-12-15\036F0801.D
Data File Name
Operator
                                               Page Number
Vial Number
                 : mwdl
Instrument
                 : GC#4
                                                                : 36
Sample Name
                : 505195-03
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 8
Acquired on : 12 May 15 06:57 PM
                                               Instrument Method: DX.MTH
Report Created on: 13 May 15 09:12 AM
                                               Analysis Method : DX.MTH
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```
Data File Name : C:\HPCHEM\4\DATA\05-12-15\037F0801.D

Operator : mwdl Page Number : 1

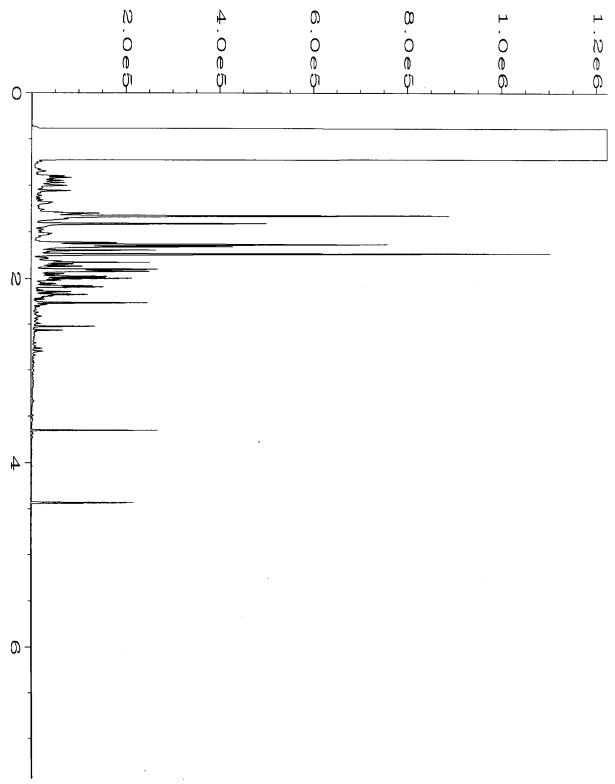
Instrument : GC#4 Vial Number : 37

Sample Name : 505195-04 Injection Number : 1

Run Time Bar Code: Sequence Line : 8

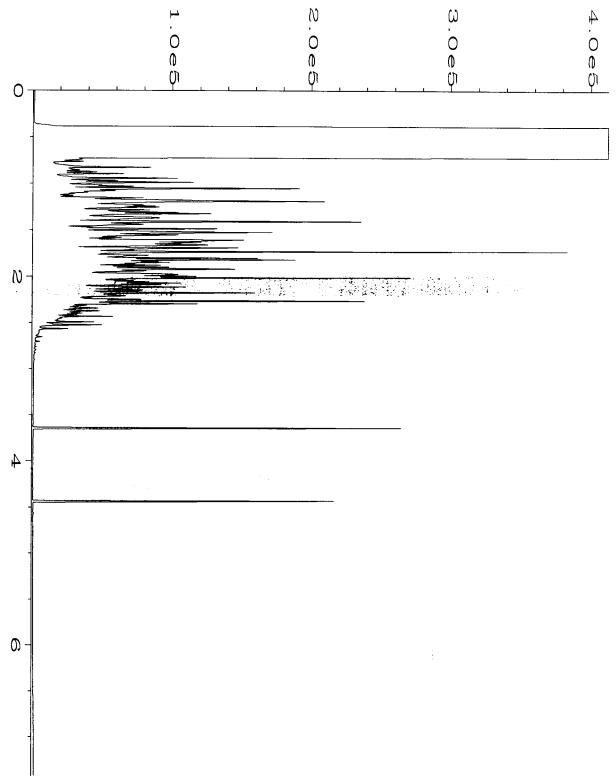
Acquired on : 12 May 15 07:09 PM Instrument Method: DX.MTH

Report Created on: 13 May 15 09:13 AM Analysis Method : DX.MTH
```

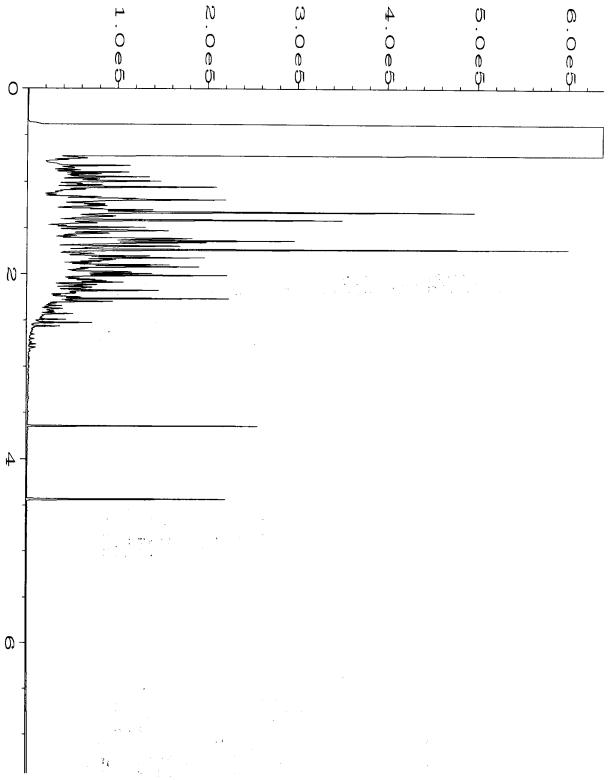


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: C:\HPCHEM\4\DATA\05-12-15\038F0801.D
Data File Name
                                                 Page Number
Vial Number
Operator
                 : mwdl
                                                                   : 1
Instrument
                 : GC#4
                                                                   : 38
                 : 505195-05
                                                 Injection Number: 1
Sample Name
Run Time Bar Code:
                                                 Sequence Line : 8
                                                 Instrument Method: DX.MTH
                              07:20 PM
Acquired on
                 : 12 May 15
                                                 Analysis Method : DX.MTH
Report Created on: 13 May 15
                              09:13 AM
```

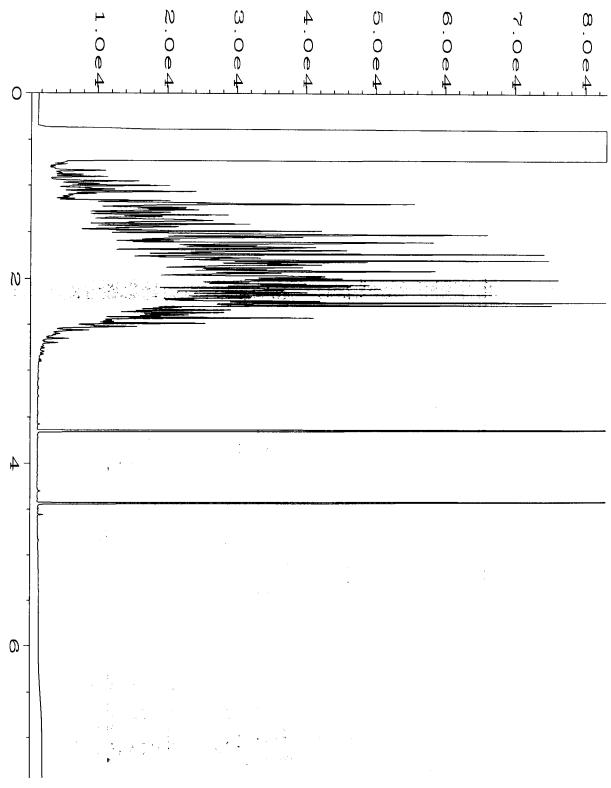
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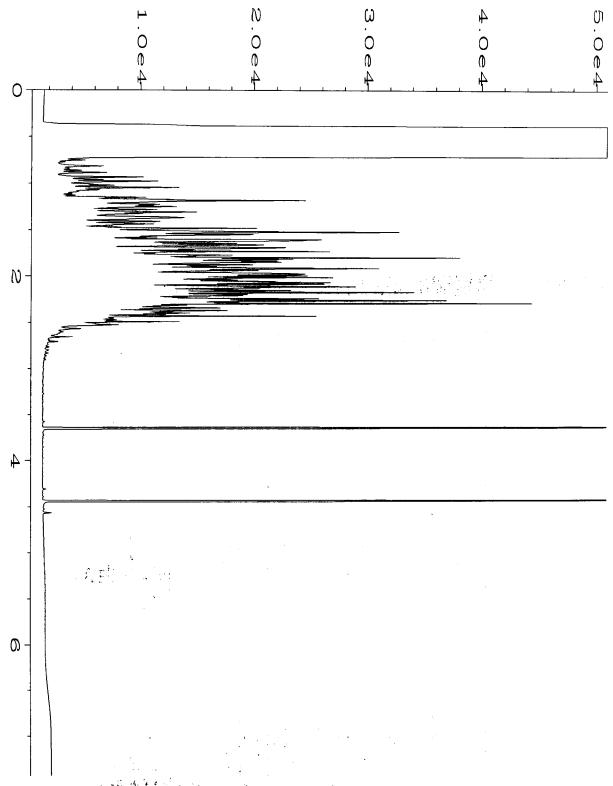
```
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Data File Name
Operator
                 : mwdl
                                                Page Number
                                                                 : 1
Instrument
                 : GC#4
                                                Vial Number
                                                                 : 39
Sample Name
                 : 505195-06
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line : 8
Acquired on
                : 12 May 15
                                                Instrument Method: DX.MTH
                              07:32 PM
                                               Analysis Method : DX.MTH
Report Created on: 13 May 15
                              09:13 AM
```



```
Data File Name
                   : C:\HPCHEM\4\DATA\05-12-15\040F0801.D
                                                    Page Number
Vial Number
Operator
                   : mwdl
Instrument
                  : GC#4
Sample Name
                  : 505195-07
                                                     Injection Number: 1
Run Time Bar Code:
                                                     Sequence Line : 8
Acquired on : 12 May 15 Report Created on: 13 May 15
                                                    Instrument Method: DX.MTH
                                 07:44 PM
                                 09:14 AM
                                                    Analysis Method : DX.MTH
```



```
Data File Name
                  : C:\HPCHEM\4\DATA\05-12-15\041F0801.D
                                                   Page Number : 1
Vial Number : 4:
Operator
                  : mwdl
Instrument
                  : GC#4
Sample Name
                 : 505195-08
                                                   Injection Number: 1
Run Time Bar Code:
                                                   Sequence Line : 8
Instrument Method: DX.MTH
Acquired on : 12 May 15
                               07:56 PM
Report Created on: 13 May 15
                               09:14 AM
                                                   Analysis Method : DX.MTH
```



```
Data File Name : C:\HPCHEM\4\DATA\05-12-15\042F0801.D

Operator : mwdl Page Number : 1

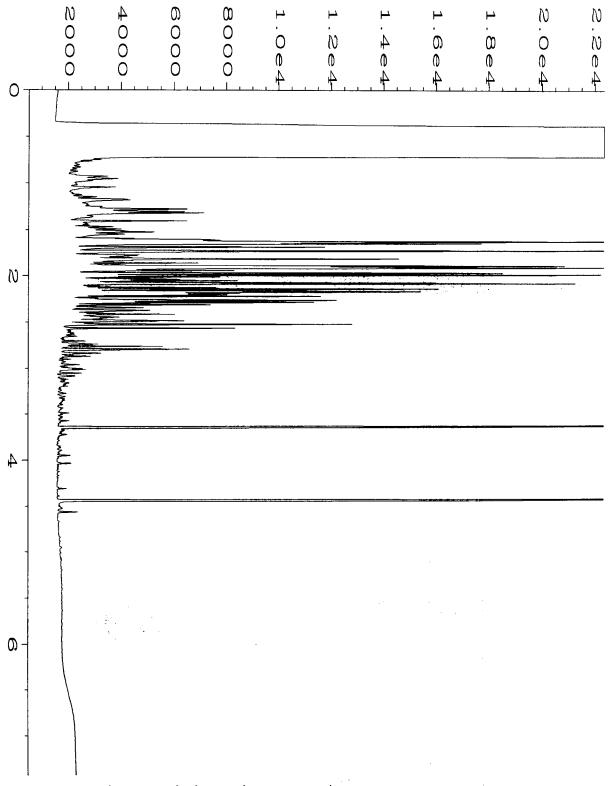
Instrument : GC#4 Vial Number : 42

Sample Name : 505195-09 Injection Number : 1

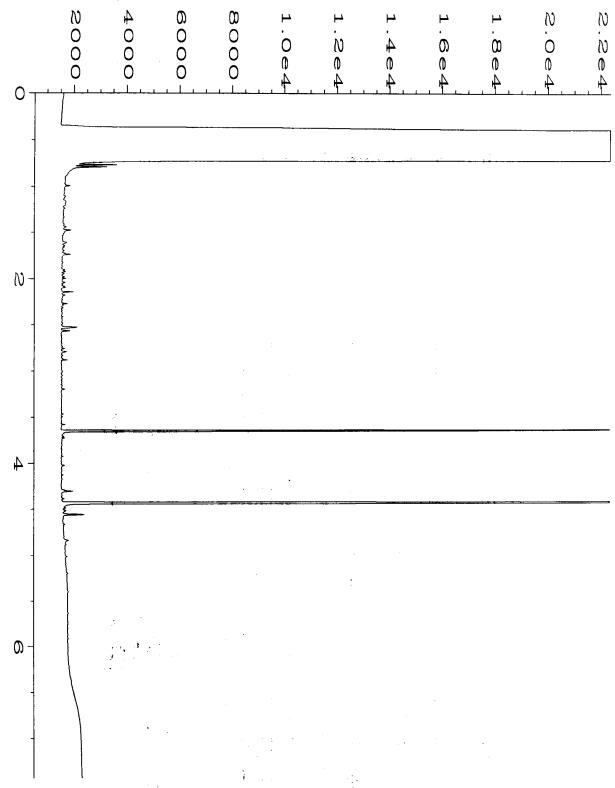
Run Time Bar Code: Sequence Line : 8

Acquired on : 12 May 15 08:07 PM Instrument Method: DX.MTH

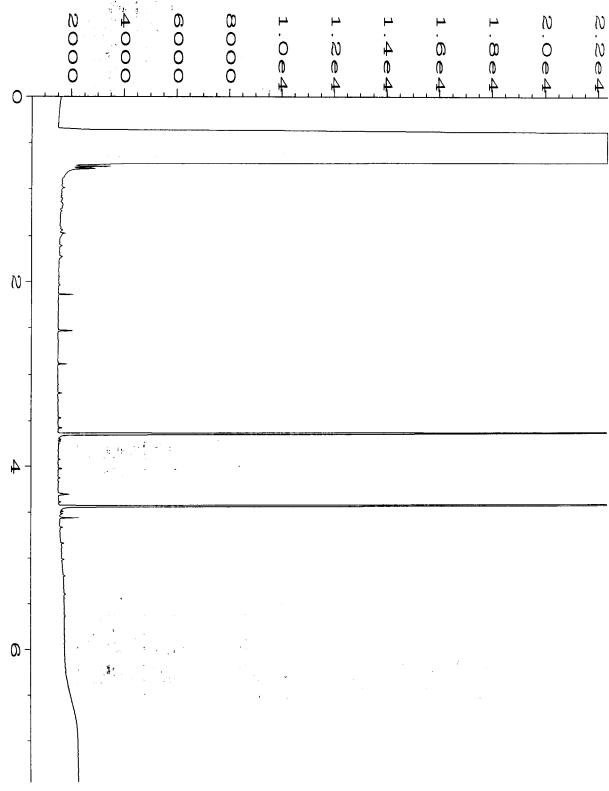
Report Created on: 13 May 15 09:14 AM Analysis Method : DX.MTH
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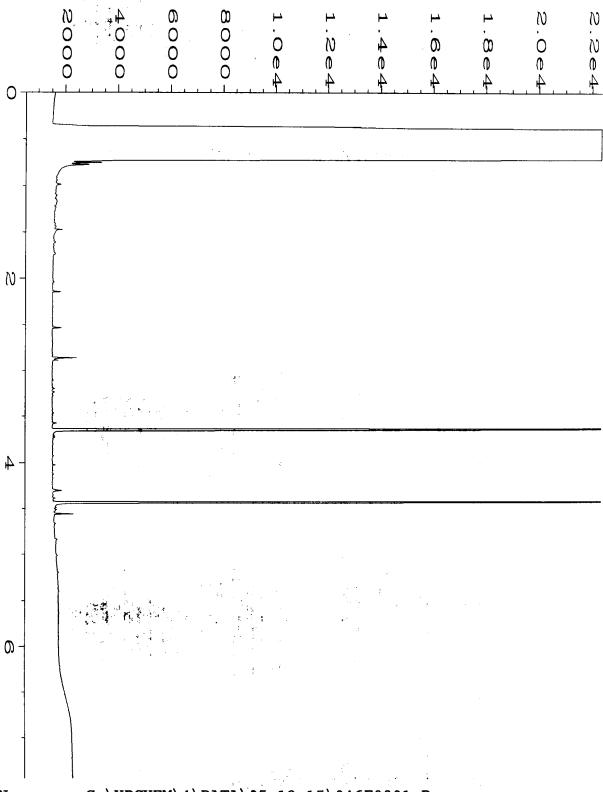
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: C:\HPCHEM\4\DATA\05-12-15\043F0801.D
Data File Name
                                              Page Number
Vial Number
Operator
                : mwdl
                                                                : 1
Instrument
                                                               : 43
                : GC#4
Sample Name
                                               Injection Number: 1
               : 505195-10
                                               Sequence Line : 8
Run Time Bar Code:
Acquired on : 12 May 15 08:19 PM
                                               Instrument Method: DX.MTH
                                              Analysis Method : DX.MTH
Report Created on: 13 May 15 09:14 AM
```

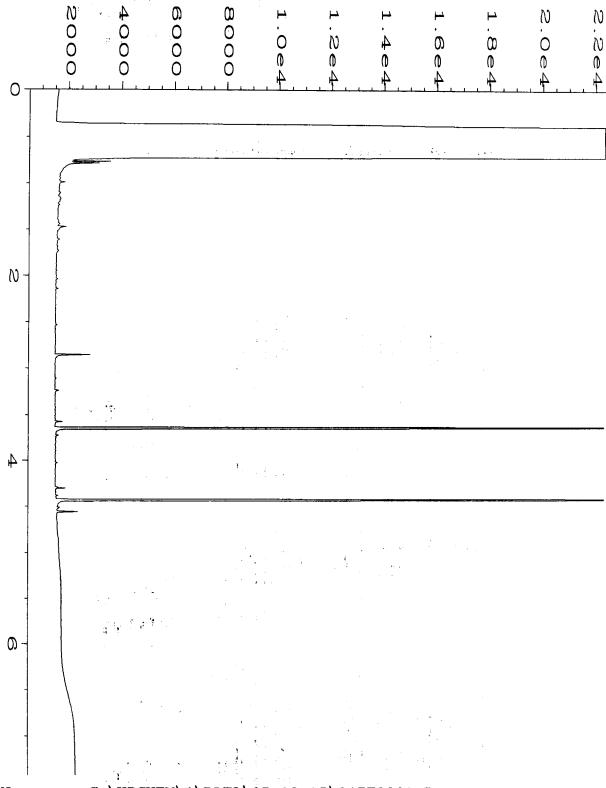


```
: C:\HPCHEM\4\DATA\05-12-15\044F0801.D
Data File Name
                                              Page Number
Operator
                : mwdl
                                              Vial Number
Instrument
                : GC#4
                : 505195-11
                                              Injection Number: 1
Sample Name
Run Time Bar Code:
                                                              : 8
                                              Sequence Line
                  . .
Acquired on : 12 May 15 08:31 PM
                                              Instrument Method: DX.MTH
                                              Analysis Method : DX.MTH
Report Created on: 13 May 15
                             09:14 AM
```

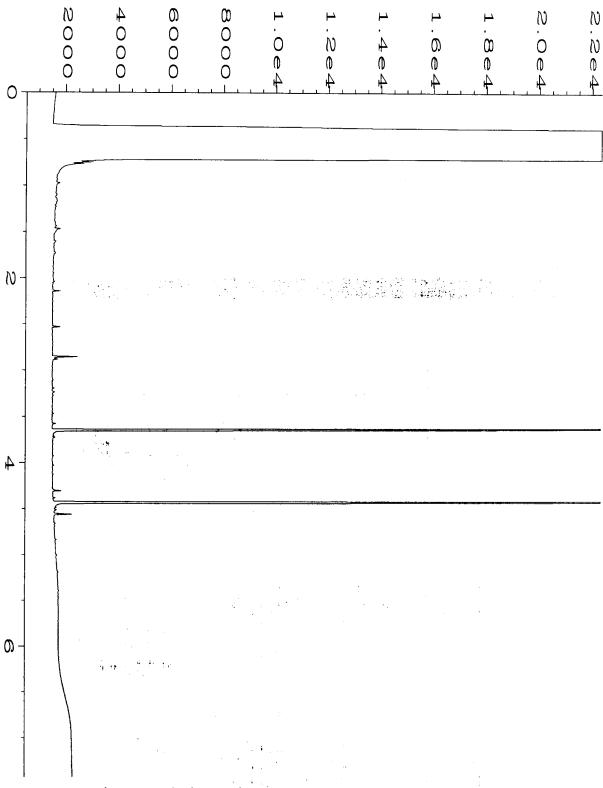


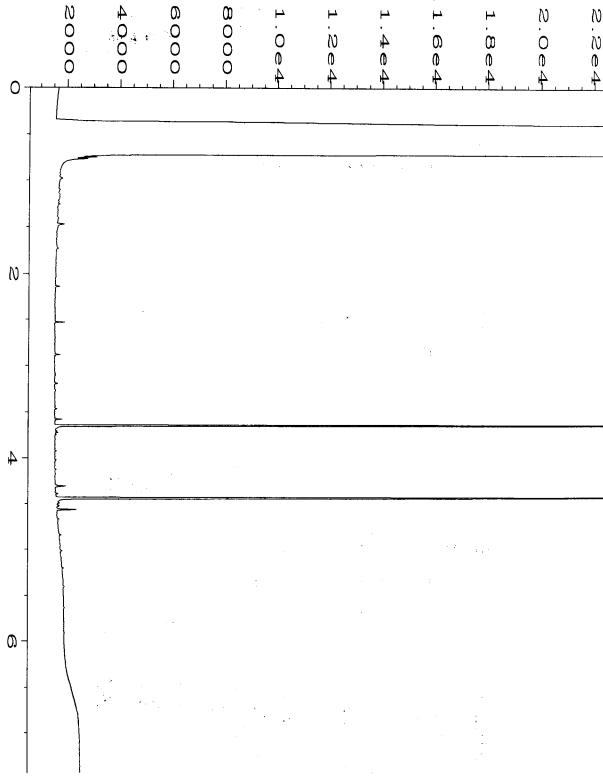
```
: C:\HPCHEM\4\DATA\05-12-15\045F0801.D
Data File Name
Operator
                 : mwdl
                                               Page Number
                                               Vial Number
Instrument
                 : GC#4
                                                                : 45
Sample Name
                : 505195-12
                                               Injection Number : 1
Sequence Line : 8
Run Time Bar Code:
Acquired on : 12 May 15 08:42 PM
                                               Instrument Method: DX.MTH
Report Created on: 13 May 15 09:15 AM
                                               Analysis Method : DX.MTH
```



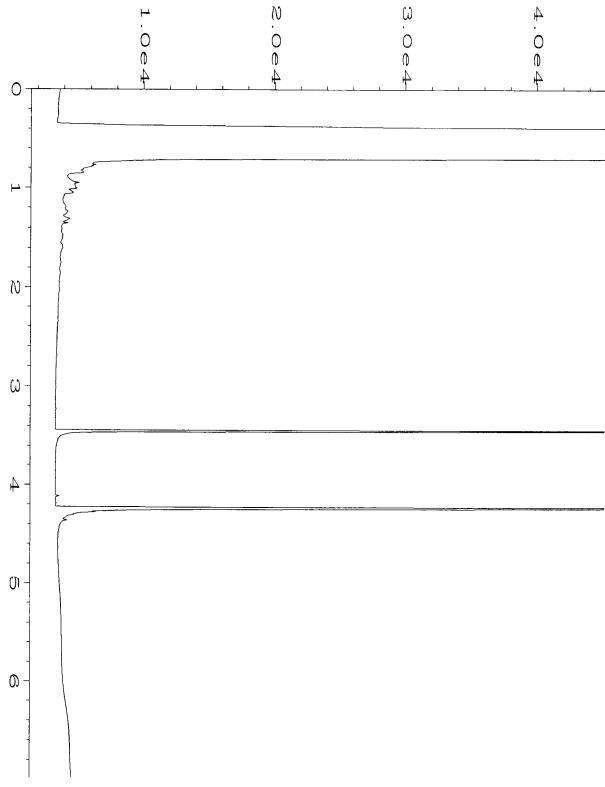


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Data File Name
                 : C:\HPCHEM\4\DATA\05-12-15\047F0801.D
                                               Page Number
Vial Number
Operator
                 : mwdl
Instrument
                 : GC#4
                                                                : 47
Sample Name
                 : 505195-14
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 8
            : 12 May 15 09:06 PM
                                               Instrument Method: DX.MTH
Acquired on
Report Created on: 13 May 15 09:15 AM
                                               Analysis Method : DX.MTH
```

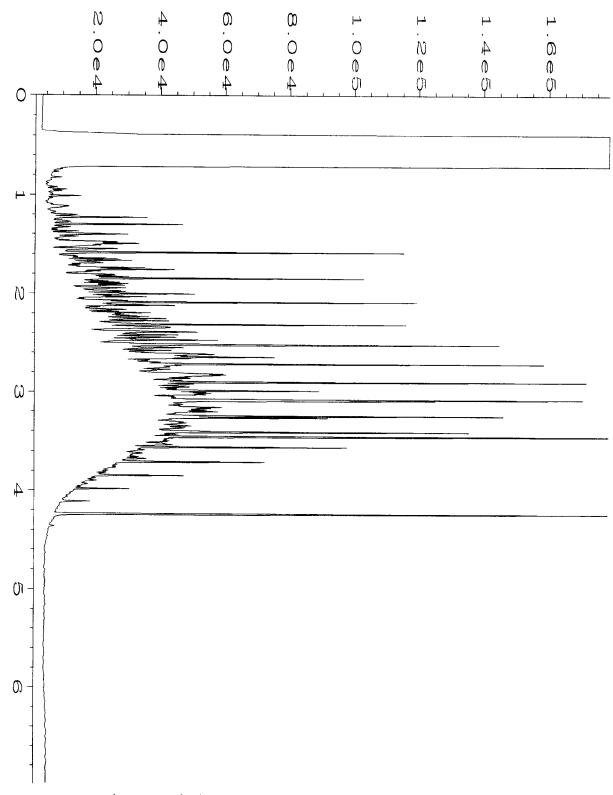




```
Data File Name
                  : C:\HPCHEM\4\DATA\05-12-15\025F0601.D
                                                    Page Number
Vial Number
Operator
                  : mwdl
Instrument
                  : GC#4
Sample Name
                  : 05-962 mb
                                                    Injection Number: 1
Run Time Bar Code:
                                                    Sequence Line : 6
Acquired on : 12 May 15
Report Created on: 13 May 15
                                                    Instrument Method: DX.MTH
                                04:25 PM
                                09:15 AM
                                                    Analysis Method : DX.MTH
```



```
Data File Name
                : C:\HPCHEM\6\DATA\05-15-15\014F0301.D
Operator
                                               Page Number
                 : mwdl
Instrument
                 : GC #6
                                               Vial Number
                                                                : 14
Sample Name
                : 05-972 mb
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
                                                             : 3
Acquired on
                : 15 May 15
                            11:54 AM
                                               Instrument Method: DX.MTH
Report Created on: 18 May 15
                            09:26 AM
                                               Analysis Method : DX.MTH
```



```
Data File Name
                 : C:\HPCHEM\6\DATA\05-15-15\003F0201.D
Operator
                 : mwdl
                                               Page Number
Instrument
                 : GC #6
                                               Vial Number
Sample Name
                 : 500 Dx 44-94C
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line
Acquired on : 15 May 15
                             09:15 AM
                                               Instrument Method: DX.MTH
Report Created on: 18 May 15
                             09:26 AM
                                               Analysis Method : DX.MTH
```

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( 505195 SAI	MPLE CHAY OF CUSTODY	ME	05/12/15 ( 153
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)		Page#ofTURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	XStandard (2 Weeks) X RUSH
Address 2811 Fairview Avenue E, Suite 2000	2914-001		Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS		SAMPLE DISPOSAL Dispose after 30 days
Phone #206-306-1900			Return samples Will call with instructions

					,	Ī	Ī	ANALYSES REQUESTED								
Sample ID	Sample Location	Sample Depth Ocualu	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082	<del>- (198)</del>	Notes  Notes  Analyze per  5/14/15 Mg
S-BO1-C4-255	C4	755	0/1	5/10/15	0720	Son	. 6	(8)	(3)	8					X	
5-801-84-255	B4	22	02		0735	1	6	8		Ø					X	
5-BO1-A1-250	AI	250	03		0615		6	X	入	〉						Standard TAT
S-BUI-AZ-250	A2		oy		0270		6	×	X	k						
S-BOT A3-250	A3		05		0812		6	×	X	×						
S-1301-B1 -250	BI		06		0223		6	>	χ	X						
5-139-132-250	B2		07		0875		4	×	X	×						
5-BOI-CZ -250	C2		08		0817		Ø	<b>x</b>	×	X						
S-BOI-62-25V	63		09		0830		O	X	*	þ						
5-801-83-250	83	Í	10 V		0\$35	1	6	*	4	¥						

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

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

Received by:		Samples rece	eived at <u>4</u>	ွှင့ က
Relinquished by:				
Received by:	Mocha Edch	PhBn	Į	1
Relinquished by:	y Gr Fisher	55	SINK	14/0
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME

5051	95
------	----

City, State, ZIP Seattle, Washington 98102

206-306-1900

SoundEarth Strategies, Inc.

Fax#

206-306-1907

Company

Address_

Phone #

ME 03/12/15 SAMPLE CHAY OF CUSTODY SAMPLERS (signature) Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr PROJECT NAME/NO. PO# 2811 Fairview Avenue E, Suite 2000 REMARKS

TURNAROUND TIME Standard (2 Weeks) ≫ RUSH

Rush charges authorized by:

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

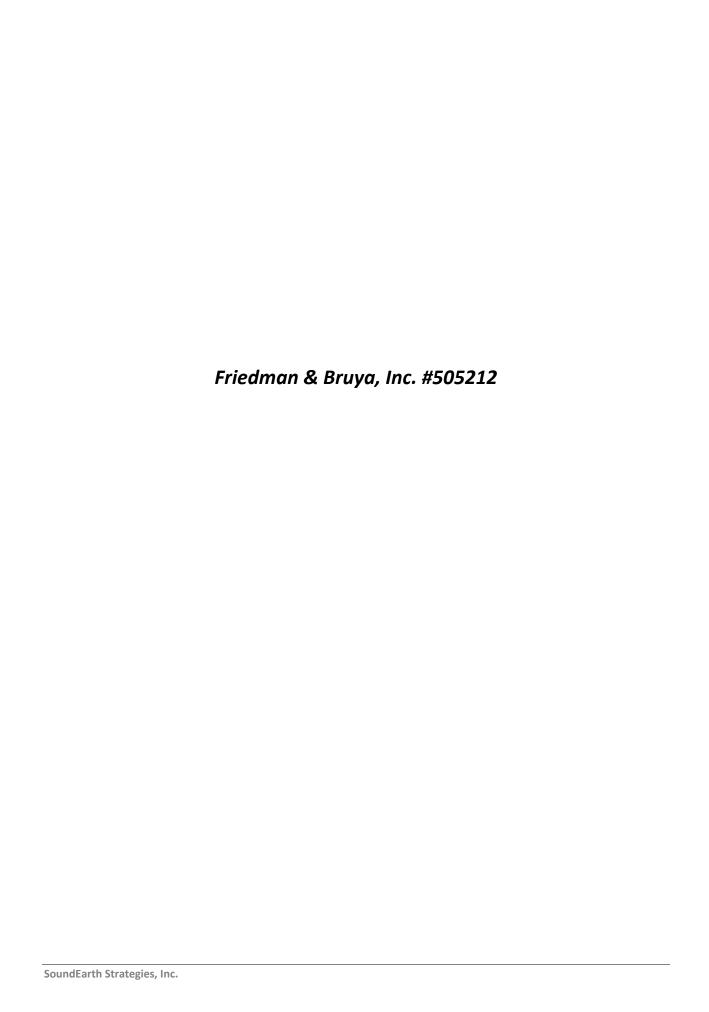
						<u> </u>					Al	NALYSE	ANALYSES REQUESTED				
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes	
S-BOI-A4-250	MY	/( A· 1	-	5/p/r	1030	501 L	6	X	<b>V</b>	人							
5-B01-B4-250	BH	12		<b>\</b>	1035	(	6	χ	×	>							
S-BSW01-BG-255	B5	13			1125		9	X	$\searrow$	$\searrow$						Rugh	
5-55W01-A4-255 5-55W01-B5-25	PY	14			1135		Y	X	×	×							
5-55WOI-B5-295	BS	15-)		ملد	1140	ک	6	Y	X	×						1	
											:						
					~												
	<u></u>			7													

80 24 hr

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

FORMS\COC\COC.DOC

Received by:		Samples n	eceived at 4	c
Relinquished by:			·	
Received by	Mochael Edch!	Fagn	L	L
Relinquished by:	Liz Fires	SE	5/12/15	1410
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME



#### ENVIRONMENTAL CHEMISTS

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

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

May 18, 2015

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 14, 2015 from the SOU 0914-001-12 20150514, F&BI 505212 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl **Project Manager** 

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU0518R.DOC

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

## **CASE NARRATIVE**

This case narrative encompasses samples received on May 14, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150514, F&BI 505212 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u> 505212 -01 S-NSW01-C1-255

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/18/15
Date Received: 05/14/15

Project: SOU_0914-001-12_20150514, F&BI 505212

Date Extracted: 05/14/15 Date Analyzed: 05/14/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-NSW01-C1-255 505212-01	<0.02	<0.02	<0.02	< 0.06	<2	89
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	77

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/18/15
Date Received: 05/14/15

Project: SOU_0914-001-12_20150514, F&BI 505212

Date Extracted: 05/14/15 Date Analyzed: 05/14/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 48-168)
S-NSW01-C1-255 505212-01	<50	<250	104
Method Blank 05-968 MB	<50	<250	106

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/18/15
Date Received: 05/14/15

Project: SOU_0914-001-12_20150514, F&BI 505212

# 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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Benzene	mg/kg (ppm)	0.5	78	78	69-120	0
Toluene	mg/kg (ppm)	0.5	89	89	70-117	0
Ethylbenzene	mg/kg (ppm)	0.5	89	89	65-123	0
Xylenes	mg/kg (ppm)	1.5	88	89	66-120	1
Gasoline	mg/kg (ppm)	20	105	105	71-131	0

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/18/15
Date Received: 05/14/15

Project: SOU_0914-001-12_20150514, F&BI 505212

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505221-01 (Matrix Spike)

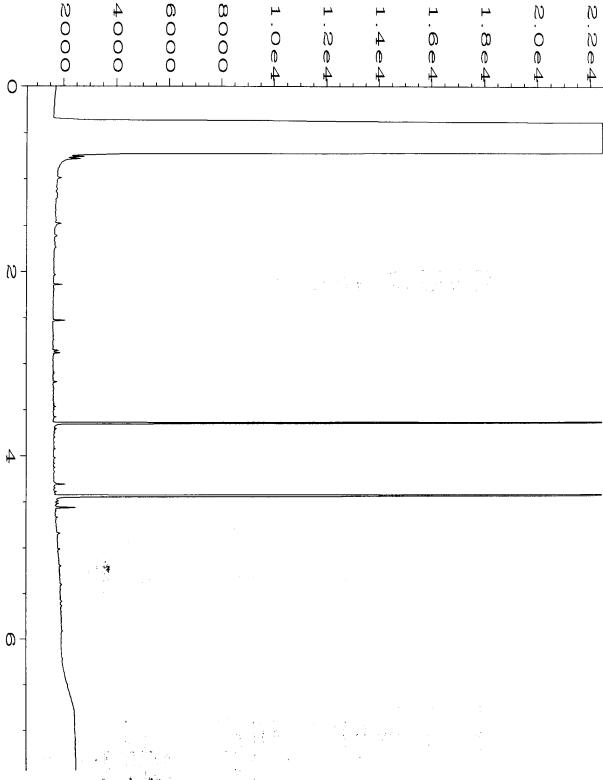
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	100	106	73-135	6

			Percent		
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Diesel Extended	mg/kg (ppm)	5,000	104	74-139	_

#### **ENVIRONMENTAL CHEMISTS**

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

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



```
Data File Name : C:\HPCHEM\4\DATA\05-14-15\012F0401.D

Operator : mwdl Page Number : 1

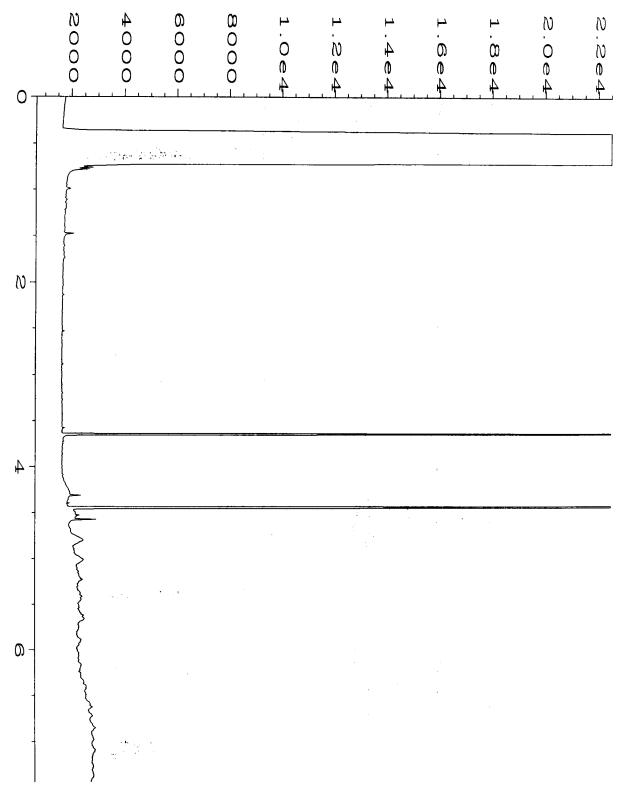
Instrument : GC#4 Vial Number : 12

Sample Name : 505212-01 Injection Number : 1

Run Time Bar Code: Sequence Line : 4

Acquired on : 14 May 15 11:07 AM Instrument Method: DX.MTH

Report Created on: 14 May 15 11:45 AM Analysis Method : DX.MTH
```



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Data File Name : C:\HPCHEM\4\DATA\05-14-15\006F0401.D

Operator : mwdl Page Number : 1

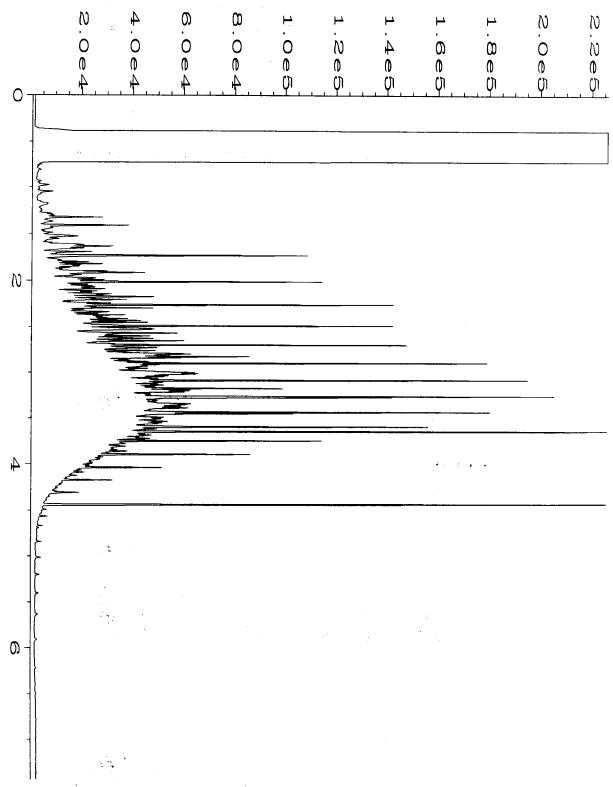
Instrument : GC#4 Vial Number : 6

Sample Name : 05-968 mb Injection Number : 1

Run Time Bar Code: Sequence Line : 4

Acquired on : 14 May 15 09:59 AM Instrument Method: DX.MTH

Report Created on: 14 May 15 11:45 AM Analysis Method : DX.MTH
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SAMPLE CHAY OF CUSTODY ME 65/14/15

 1	05)
(	/

Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAINT LEAS (signature)		TURNAROUND TIME
Company SoundEarth Strategies, Inc.  Address 2811 Fairview Avenue E, Suite 2000	PROJECT NAME/NO. 0914-001-12	PO#	Standard (2 Weeks) RUSH Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS		SAMPLE DISPOSAL Dispose after 30 days Return samples

SAMPLE DISPOSAL ose after 30 days rn samples Will call with instructions

								ANALYSES REQUESTED									
Sample ID	Sample Location	Sample Depth	ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes	
S-NSWU-C1-255	CI	255	O' A.F	5/13/15		Sül	C.	X	X	Y							
														-			
												Sampl	es nec	eived :	nt <u>4</u>	_•c	
															,		

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	liz Fings	SES	5/14/5	0700
Received by:	S. Oborn	F+B, Inc	5/14/15	07.03
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC



#### ENVIRONMENTAL CHEMISTS

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

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

May 28, 2015

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 22, 2015 from the SOU 0914-001-12 20150522, F&BI 505407 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl **Project Manager** 

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU0528R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### **CASE NARRATIVE**

This case narrative encompasses samples received on May 22, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150522, F&BI 505407 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
505407 -01	S-NSW01-A1-250
505407 -02	S-NSW01-B1-250
505407 -03	S-NSW01-C1-250
505407 -04	S-ESW01-A1-250

The benzene concentration for samples S-NSW01-C1-250 and S-ESW01-A1-250 was reported below the lowest calibration standard. The data were qualified accordingly.

All other quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/28/15 Date Received: 05/22/15

Project: SOU_0914-001-12_20150522, F&BI 505407

Date Extracted: 05/22/15

Date Analyzed: 05/22/15 and 05/26/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-NSW01-A1-250 505407-01	< 0.02	<0.02	<0.02	< 0.06	4.6	88
S-NSW01-B1-250 505407-02	< 0.02	< 0.02	< 0.02	< 0.06	<2	88
S-NSW01-C1-250 505407-03 1/5	< 0.02 j	< 0.1	3.1	9.5	790	101
S-ESW01-A1-250 505407-04 1/5	<0.02 j	<0.1	2.0	5.3	560	101
Method Blank 05-1237 MB	< 0.02	< 0.02	< 0.02	< 0.06	<2	87

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/28/15 Date Received: 05/22/15

Project: SOU_0914-001-12_20150522, F&BI 505407

Date Extracted: 05/22/15 Date Analyzed: 05/22/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

a l m	D. 1D		Surrogate
Sample ID	<u>Diesel Range</u>	Motor Oil Range	(% Recovery)
Laboratory ID	$(C_{10}-C_{25})$	$(C_{25}-C_{36})$	(Limit 56-165)
S-NSW01-A1-250 505407-01	< 50	<250	94
S-NSW01-B1-250 505407-02	< 50	<250	90
S-NSW01-C1-250 505407-03	130 x	<250	100
S-ESW01-A1-250 505407-04	180 x	<250	99
Method Blank 05-1009 MB	<50	<250	105

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/28/15 Date Received: 05/22/15

Project: SOU_0914-001-12_20150522, F&BI 505407

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

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Benzene	mg/kg (ppm)	0.5	90	77	69-120	16
Toluene	mg/kg (ppm)	0.5	94	92	70-117	2
Ethylbenzene	mg/kg (ppm)	0.5	96	93	65-123	3
Xylenes	mg/kg (ppm)	1.5	95	92	66-120	3
Gasoline	mg/kg (ppm)	20	100	100	71-131	0

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/28/15 Date Received: 05/22/15

Project: SOU_0914-001-12_20150522, F&BI 505407

#### QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505396-05 (Matrix Spike)

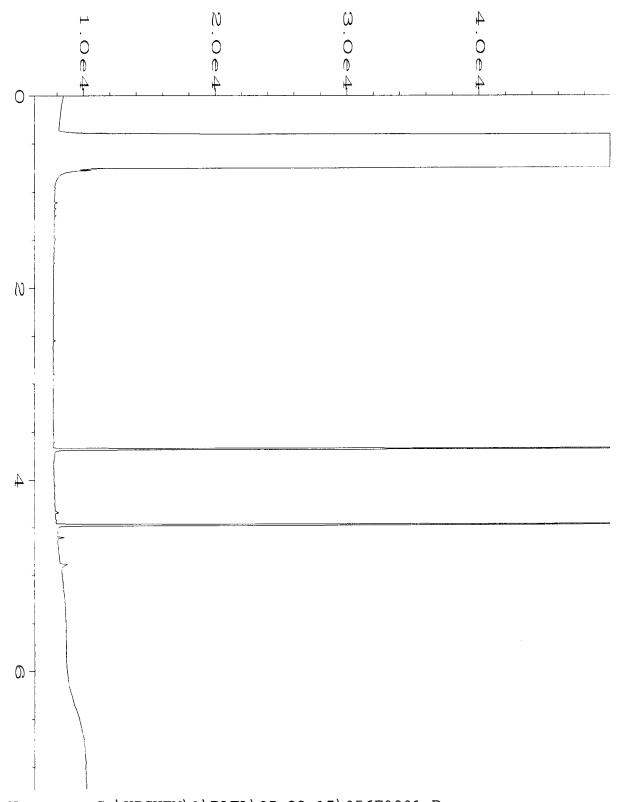
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	100	97	63-146	3

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5.000	108	79-144

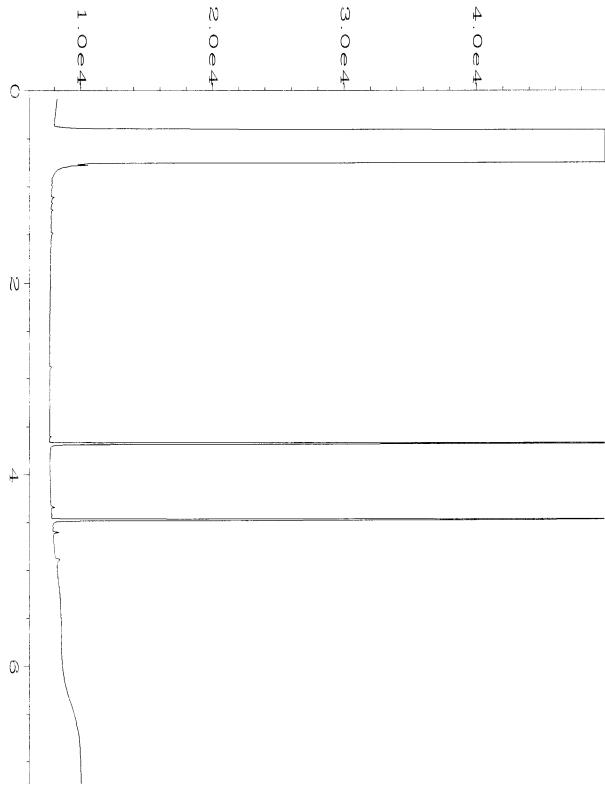
#### **ENVIRONMENTAL CHEMISTS**

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

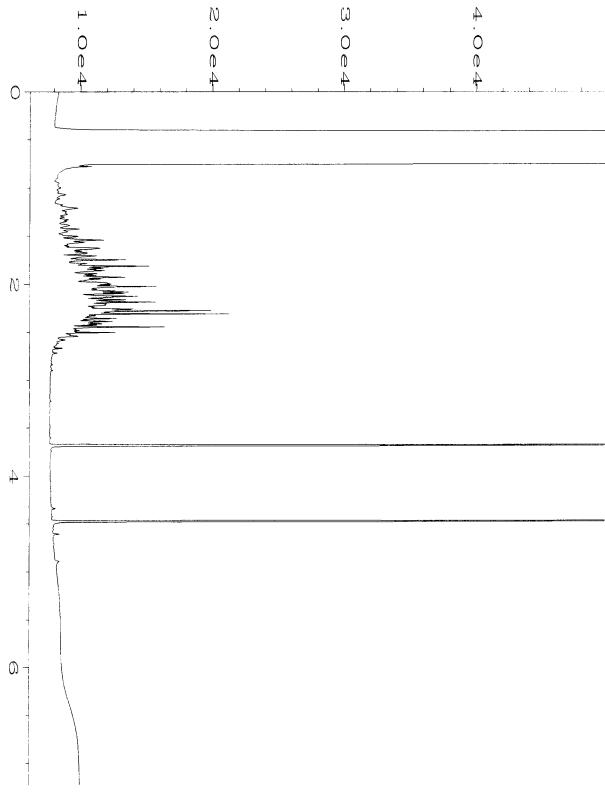
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



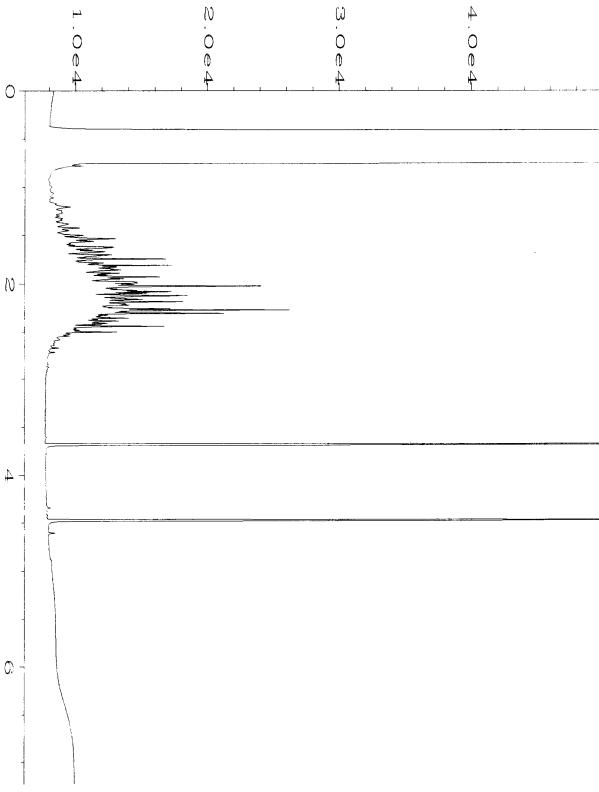
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                                              Vial Number
Instrument
                : GC1
                                                               : 56
                                              Injection Number: 1
Sample Name
                : 505407-01
Run Time Bar Code:
                                              Sequence Line : 9
                                              Instrument Method: DX.MTH
Acquired on : 22 May 15 08:23 PM
                                              Analysis Method : DX.MTH
Report Created on: 26 May 15
                           10:09 AM
```



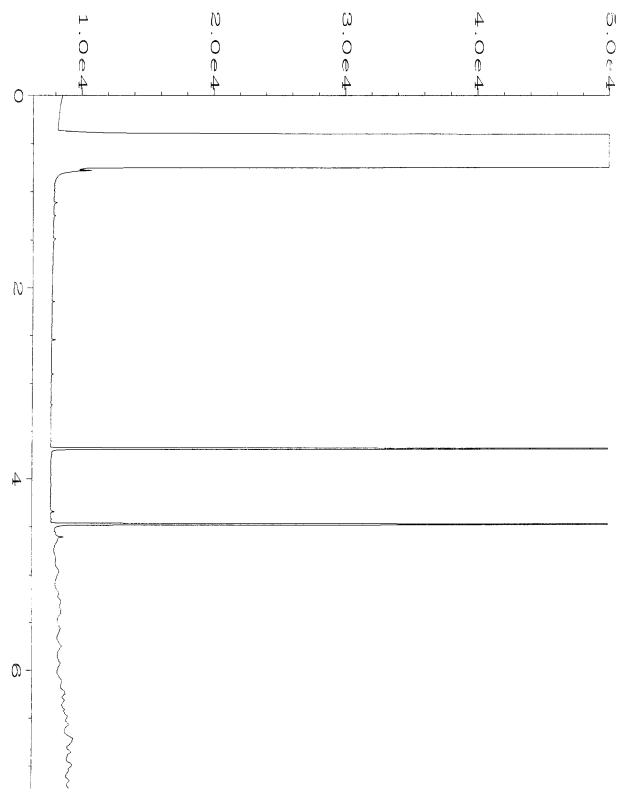
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                                               Page Number
Operator
Instrument
                : GC1
                                              Vial Number
                                                               : 57
                                               Injection Number : 1
Sample Name
                : 505407-02
Run Time Bar Code:
                                               Sequence Line : 9
                                               Instrument Method: DX.MTH
Acquired on : 22 May 15 08:34 PM
                                              Analysis Method : DX.MTH
Report Created on: 26 May 15
                            10:09 AM
```



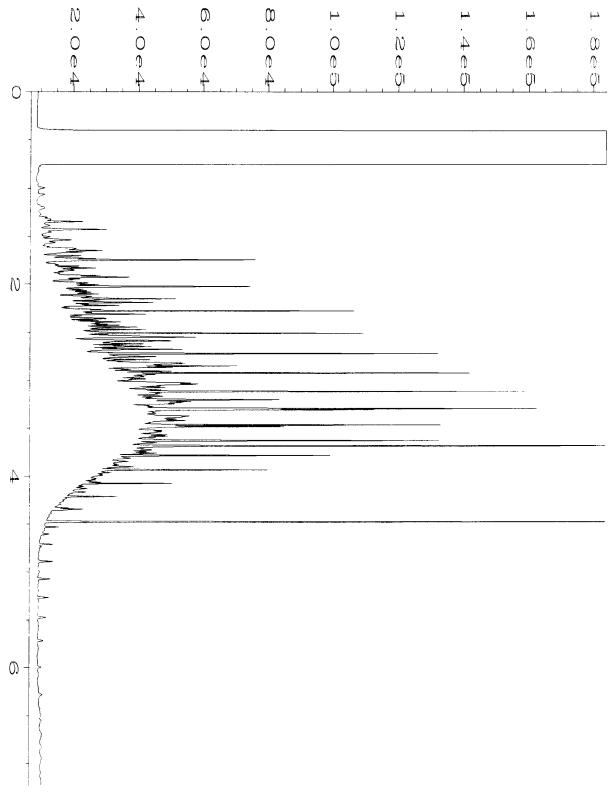
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Data File Name
Operator
                                               Page Number
                : mwdl
                                               Vial Number
                                                               : 58
Instrument
                : GC1
                                               Injection Number: 1
Sample Name
                : 505407-03
                                               Sequence Line : 9
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 22 May 15 08:45 PM
Report Created on: 26 May 15
                                               Analysis Method : DX.MTH
                            10:09 AM
```



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Data File Name
                                              Page Number
Operator
                : mwdl
                                              Vial Number
                                                               : 59
Instrument
                : GC1
                : 505407-04
                                              Injection Number: 1
Sample Name
                                              Sequence Line : 9
Run Time Bar Code:
                                              Instrument Method: DX.MTH
Acquired on : 22 May 15 08:56 PM
                                              Analysis Method : DX.MTH
Report Created on: 26 May 15 10:09 AM
```



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                : mwdl
Operator
                                              Page Number
                                                               : 1
                                              Vial Number
                : GC1
                                                               : 33
Instrument
Sample Name
                                              Injection Number: 1
                : 05-1009 mb
Run Time Bar Code:
                                              Sequence Line : 7
Acquired on : 22 May 15 03:43 PM
                                              Instrument Method: DX.MTH
Report Created on: 26 May 15
                            10:04 AM
                                              Analysis Method : DX.MTH
```



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Data File Name
                : mwdl
                                              Page Number
Operator
                                              Vial Number
Instrument
                : GC1
Sample Name
                                              Injection Number: 1
                : 500 Dx 44-94C
Run Time Bar Code:
                                              Sequence Line : 2
                                              Instrument Method: DX.MTH
Acquired on : 22 May 15 09:35 AM
Report Created on: 26 May 15 10:04 AM
                                              Analysis Method : DX.MTH
```

50540	7
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SAMPLE CHA OF CUSTODY -ME 05/22/15 SAMPLERS (signature) Page# Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr TURNAROUND TIME Standard (2 Weeks) PROJECT NAME/NO. PO# SoundEarth Strategies, Inc. Company 0914-601-12 RUSH Rush charges authorized by: Address 2811 Fairview Avenue E, Suite 2000 REMARKS SAMPLE DISPOSAL City, State, ZIP Seattle, Washington 98102 Dispose after 30 days Return samples Phone # 206-306-1900 Fax# 206-306-1907

Will call with instructions

										<b>,</b>	Al	NALYSE	S REQU	JESTED	)	
Sample ID	Sample Location	Sample Depth Elevin	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
5-115WG-A1-250	21	250	016	5/23/04	0530	5211	5	X	χ	X						
5-145mor BH250 S-Nowor-C1-250 S-ESWOR-AI-250	131		02		0840		ń	$\propto$	X	×						
5-NSW01-C1-250	Cj		<i>ا</i>		1010		5	7	×	4						
5-ESWOJ-A1-250	Al		ay V	1	1230		ڼ	-9	×	X						
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

Received by:		Samples receiv	ed at <u>5                                    </u>	2
Relinquished by:	·	•		
Received by h	- Mhan Phan	FCBI	5/22/13	1410
Relinquished by:	fir takes	5E(	5/14/5	1416
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME

FORMS\COC\COC.DOC



#### ENVIRONMENTAL CHEMISTS

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

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

May 29, 2015

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 26, 2015 from the SOU 0914-001-12 20150526, F&BI 505424 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU0529R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### **CASE NARRATIVE**

This case narrative encompasses samples received on May 26, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150526, F&BI 505424 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
505424 -01	S-ESW01-A2-250
505424 -02	S-ESW01-A3-250
505424 -03	S-NSW01-A1-245
505424 -04	S-NSW01-B1-245
505424 -05	S-NSW01-C1-245

The benzene concentration for sample S-ESW01-A2-250 was reported below the lowest calibration standard. The data were qualified accordingly.

All other quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/29/15 Date Received: 05/26/15

Project: SOU_0914-001-12_20150526, F&BI 505424

Date Extracted: 05/26/15

Date Analyzed: 05/26/15 and 05/27/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-ESW01-A2-250 505424-01 1/5	<0.02 j	1.6	1.6	5.8	700	89
S-ESW01-A3-250 505424-02	< 0.02	< 0.02	< 0.02	0.12	14	89
S-NSW01-A1-245 505424-03	0.045	< 0.02	< 0.02	< 0.06	<2	88
S-NSW01-B1-245 505424-04 1/10	0.30	<0.2	4.0	20	800	80
S-NSW01-C1-245 505424-05	< 0.02	<0.02	0.027	<0.06	<2	88
Method Blank 05-1239 MB	<0.02	< 0.02	<0.02	<0.06	<2	88

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 05/29/15 Date Received: 05/26/15

Project: SOU_0914-001-12_20150526, F&BI 505424

Date Extracted: 05/26/15 Date Analyzed: 05/26/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 56-165)
S-ESW01-A2-250 505424-01	160 x	<250	93
S-ESW01-A3-250 505424-02	< 50	<250	104
S-NSW01-A1-245 505424-03	< 50	<250	99
S-NSW01-B1-245 505424-04	< 50	<250	102
S-NSW01-C1-245 505424-05	<50	<250	104
Method Blank 05-1013 MB	<50	<250	101

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/29/15 Date Received: 05/26/15

Project: SOU_0914-001-12_20150526, F&BI 505424

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

Laboratory Code: 505423-01 (Duplicate)

		Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	79	69-120
Toluene	mg/kg (ppm)	0.5	92	70-117
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123
Xylenes	mg/kg (ppm)	1.5	94	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

#### ENVIRONMENTAL CHEMISTS

Date of Report: 05/29/15 Date Received: 05/26/15

Project: SOU_0914-001-12_20150526, F&BI 505424

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505408-01 (Matrix Spike)

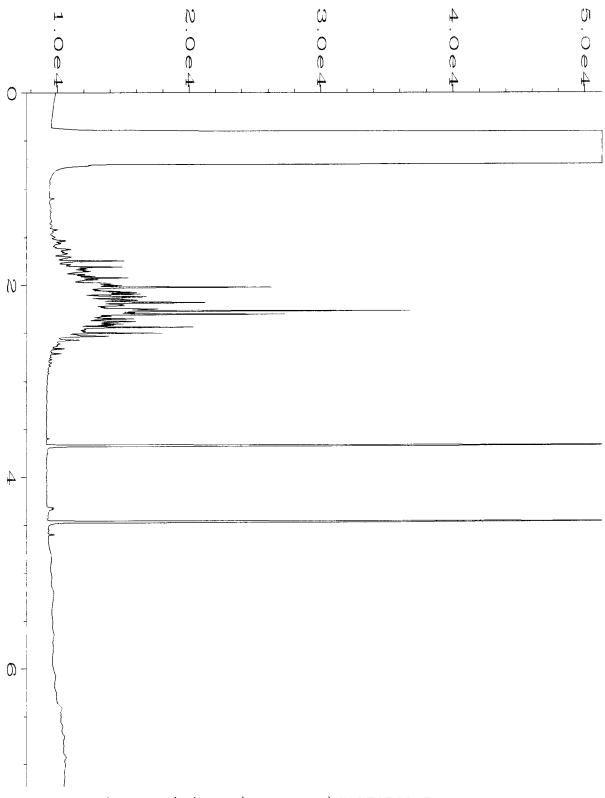
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	101	97	63-146	4

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	107	79-144

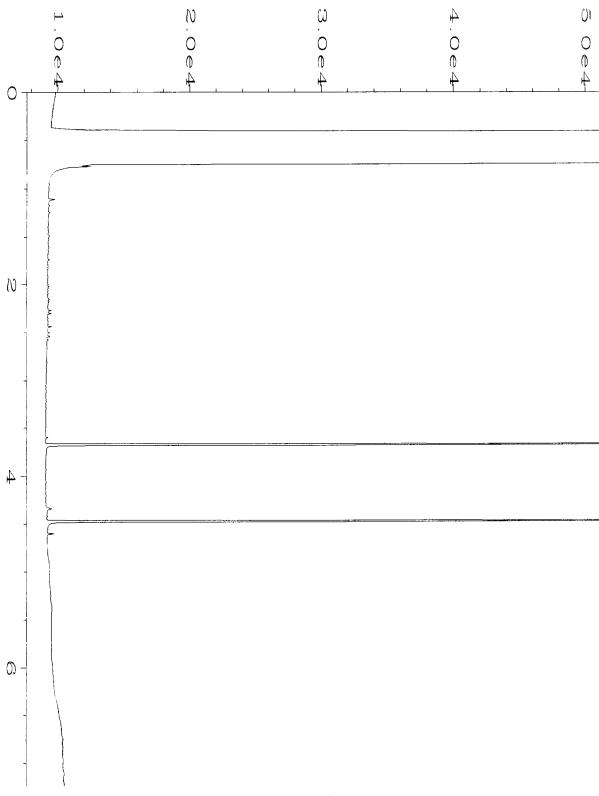
#### **ENVIRONMENTAL CHEMISTS**

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

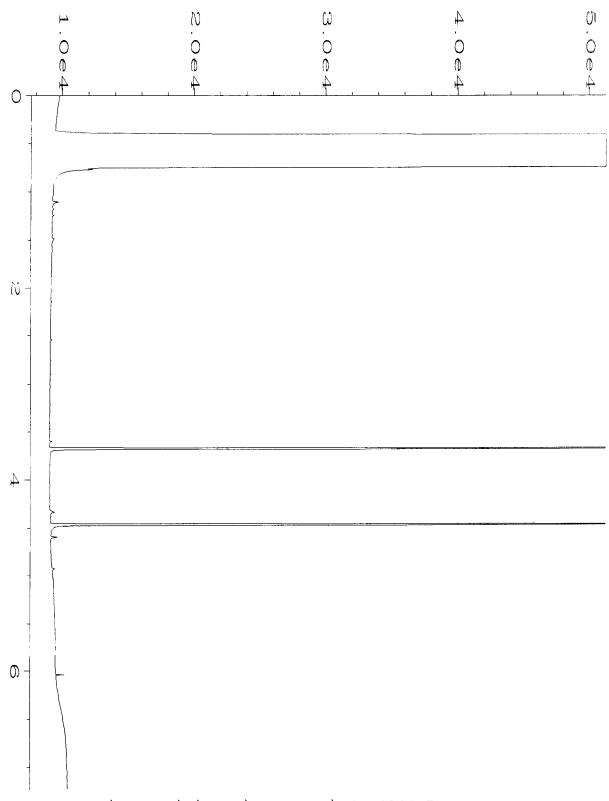
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



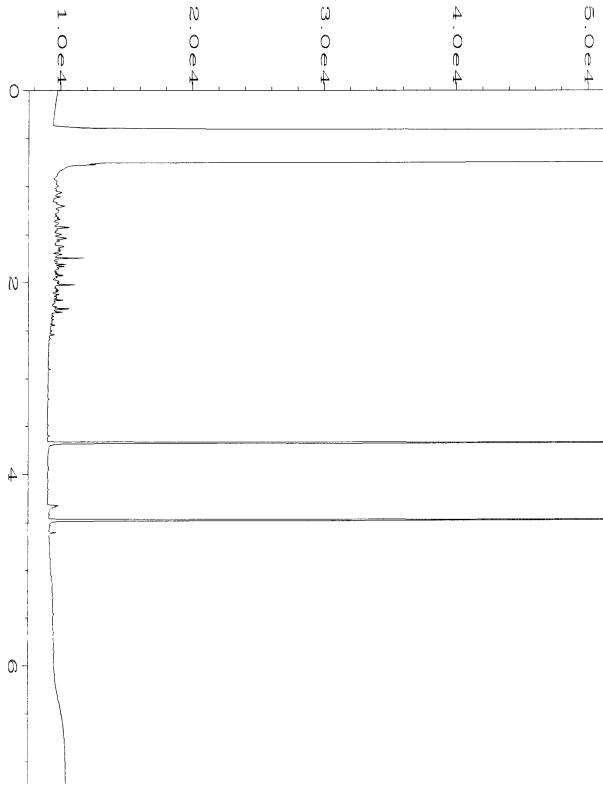
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                                               Sequence Line : 7
Run Time Bar Code:
Acquired on : 26 May 15 06:45 PM
                                               Instrument Method: DX.MTH
Report Created on: 27 May 15 08:43 AM
                                               Analysis Method : DX.MTH
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                                             Vial Number
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                                             Injection Number: 1
Sample Name
                : 505424-02
Run Time Bar Code:
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                                             Instrument Method: DX.MTH
Acquired on : 26 May 15 06:57 PM
Report Created on: 27 May 15 08:43 AM
                                             Analysis Method : DX.MTH
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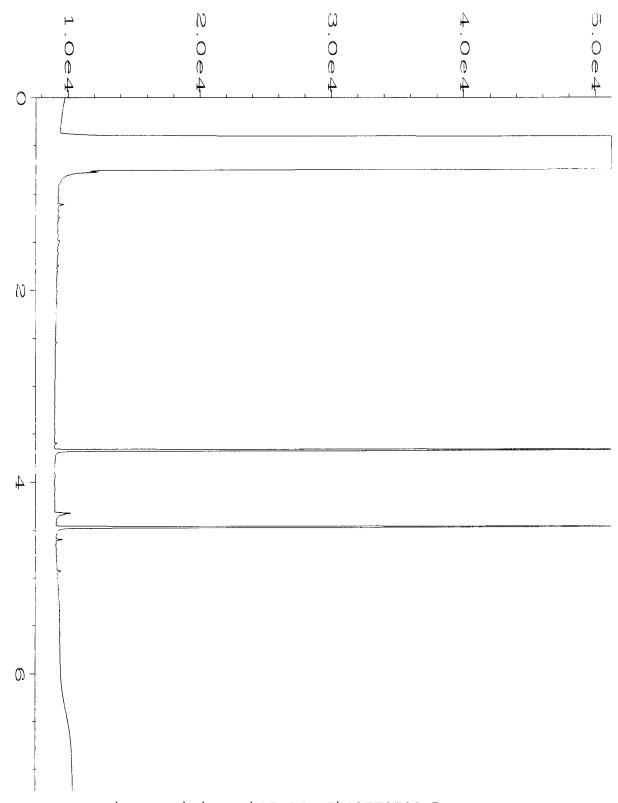


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Instrument
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                : GC1
                                                                : 35
                : 505424-03
                                               Injection Number: 1
Sample Name
                                               Sequence Line : 7
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 26 May 15 07:08 PM
Report Created on: 27 May 15 08:43 AM
                                               Analysis Method : DX.MTH
```

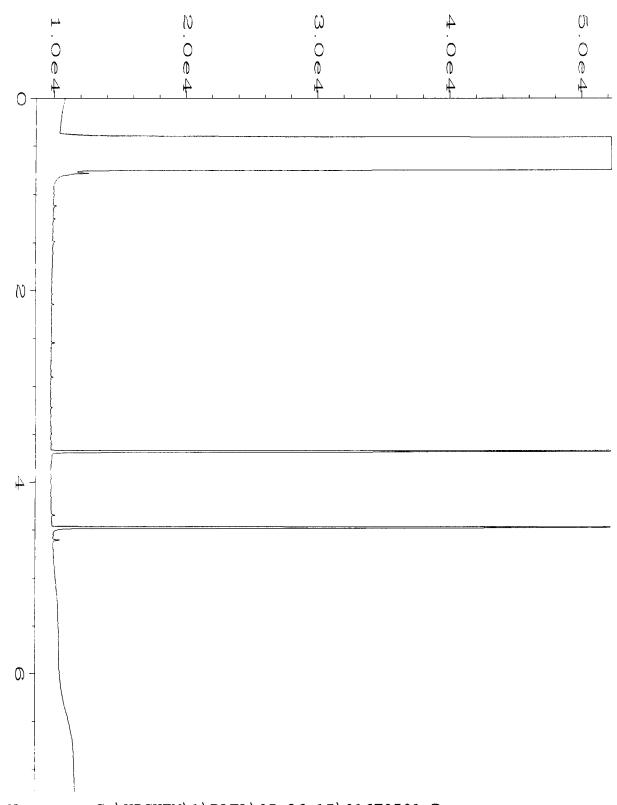


3.40

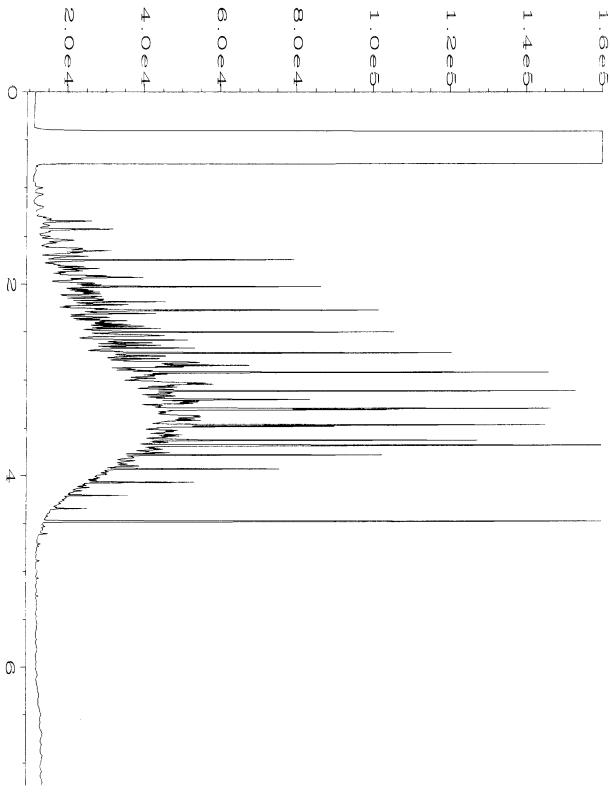
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Data File Name
                                              Page Number
Operator
                : mwdl
                                                               : 1
Instrument
                : GC1
                                              Vial Number
                                                               : 36
Sample Name
                : 505424-04
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line : 7
                                              Instrument Method: DX.MTH
Acquired on : 26 May 15 07:19 PM
                                              Analysis Method : DX.MTH
Report Created on: 27 May 15
                            08:43 AM
```



```
Data File Name
                : C:\HPCHEM\1\DATA\05-26-15\037F0701.D
                                              Page Number
Operator
                : mwdl
                                              Vial Number
Instrument
                : GC1
                                                               : 37
                : 505424-05
                                              Injection Number: 1
Sample Name
                                              Sequence Line : 7
Run Time Bar Code:
                                              Instrument Method: DX.MTH
Acquired on : 26 May 15 07:30 PM
Report Created on: 27 May 15 08:43 AM
                                              Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\05-26-15\016F0501.D
Data File Name
                                              Page Number
Operator
                : mwdl
                                              Vial Number
Instrument
                : GC1
                                                               : 16
Sample Name
                : 05-1013 mb
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line : 5
Acquired on : 26 May 15 03:14 PM
                                              Instrument Method: DX.MTH
Report Created on: 27 May 15 08:43 AM
                                              Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\05-26-15\003F0201.D
Data File Name
Operator
                 : mwdl
                                               Page Number
Instrument
                                               Vial Number
                                                                : 3
                 : GC1
Sample Name
                : 500 Dx 44-94C
                                               Injection Number: 1
                                               Sequence Line : 2
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 26 May 15 08:48 AM
Report Created on: 27 May 15
                            08:44 AM
                                               Analysis Method : DX.MTH
```

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SAMPLE CHA OF CUSTODY ME 05-26-15

PO#

Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.
Address 2811 Fairview Avenue E, Suite 2000	, ,
City, State, ZIP Seattle, Washington 98102	REMARKS [A14]
Phone # 206-306-1900 Fax # 206-306-1907	

Page# TURNAROUND TIME Standard (2 Weeks) RUSH_ Rush charges authorized by:

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

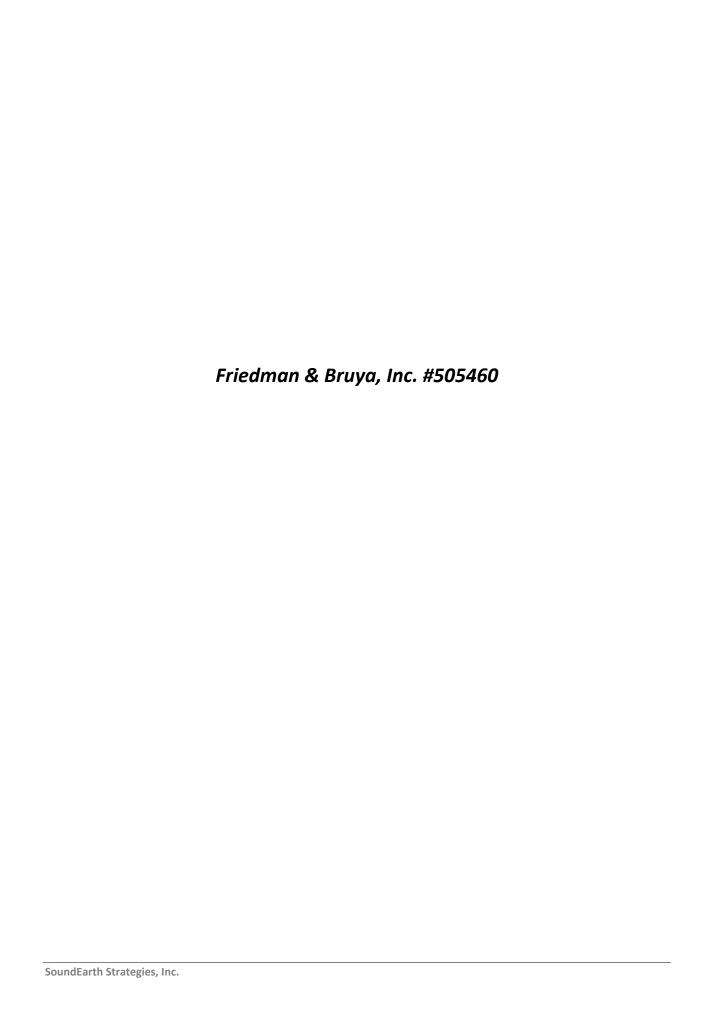
								ANALYSES REQUESTED										
Sample ID ;	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		,	Notes	•
5-ESWO1-A2-250	ΑZ	256	OLA.E	5/24/15	0910	SOIL	$\mathcal{L}_{\beta}^{*}$	X	X	X								
S-ESWOI-A3-250	A 3	200	02 ]		0915	1	5		X	X								
5-15wol- A1-245	Al	245	03		1035		<i>C</i> .	`.	X	×								
5 -NSW01-81-245	B1	245	04		1037		5			×								
5-NSW01-01-245	RI	245	05		1040		5	~	7	X								
															;			
,													Samp	ios rec	dved	at _3	°C	

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

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	las Firke	1/27	1/20/15	1340
Received by:	hoff tra stin	Fotin	5/26/15	1340
Relinquished by: V				
Received by:				

FORMS\COC\COC.DOC



#### **ENVIRONMENTAL CHEMISTS**

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

June 2, 2015

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 28, 2015 from the SOU_0914-001-12_20150528, F&BI 505460 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0602R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on May 28, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150528, F&BI 505460 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
505460 -01	S-B01-B1-242
505460 -02	S-B01-C1-242
505460 -03	S-B01-B3-243

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/15 Date Received: 05/28/15

Project: SOU_0914-001-12_20150528, F&BI 505460

Date Extracted: 05/28/15 Date Analyzed: 05/28/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-B1-242 505460-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	93
S-B01-C1-242 505460-02	< 0.02	< 0.02	< 0.02	< 0.06	<2	93
S-B01-B3-243 505460-03	<0.02	<0.02	< 0.02	< 0.06	<2	92
Method Blank 05-1241 MB2	< 0.02	< 0.02	< 0.02	< 0.06	<2	78

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/02/15 Date Received: 05/28/15

Project: SOU_0914-001-12_20150528, F&BI 505460

Date Extracted: 05/28/15 Date Analyzed: 05/28/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 56-165)
S-B01-B1-242 505460-01	< 50	<250	117
S-B01-C1-242 505460-02	< 50	<250	105
S-B01-B3-243 505460-03	<50	<250	118
Method Blank 05-1021 MB	<50	<250	102

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/15 Date Received: 05/28/15

Project: SOU_0914-001-12_20150528, F&BI 505460

# 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: 505442-04 (Duplicate)

		Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	mg/kg (ppm)	0.5	88	69-120		
Toluene	mg/kg (ppm)	0.5	90	70-117		
Ethylbenzene	mg/kg (ppm)	0.5	91	65-123		
Xylenes	mg/kg (ppm)	1.5	90	66-120		
Gasoline	mg/kg (ppm)	20	100	71-131		

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/02/15 Date Received: 05/28/15

Project: SOU_0914-001-12_20150528, F&BI 505460

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505443-01 (Matrix Spike)

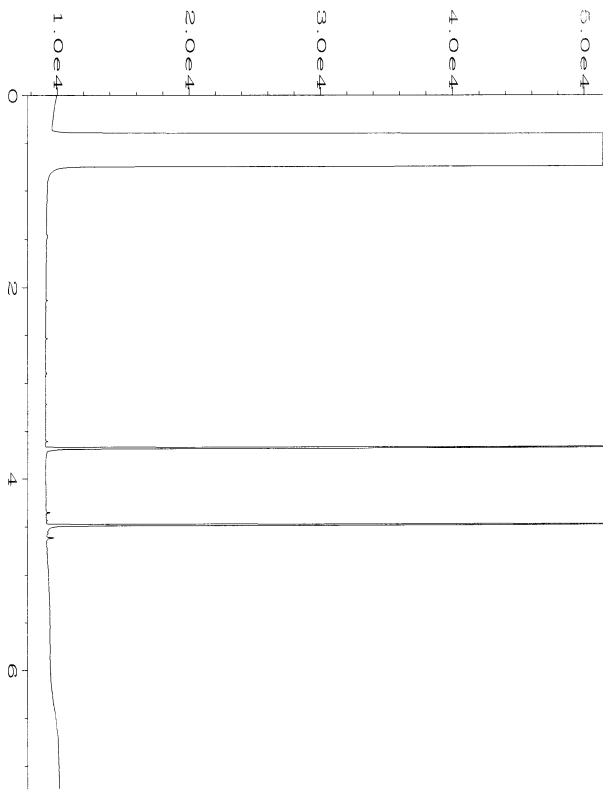
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	101	96	64-133	5

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

#### **ENVIRONMENTAL CHEMISTS**

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

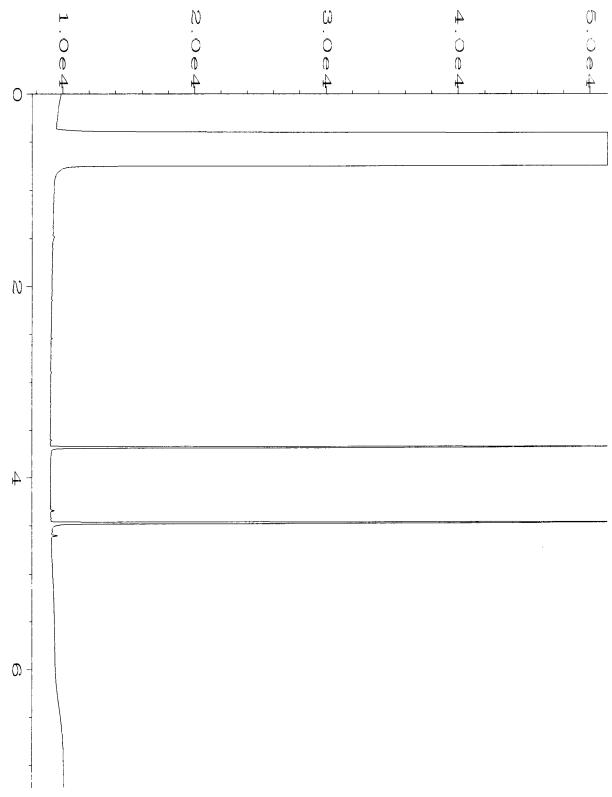
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



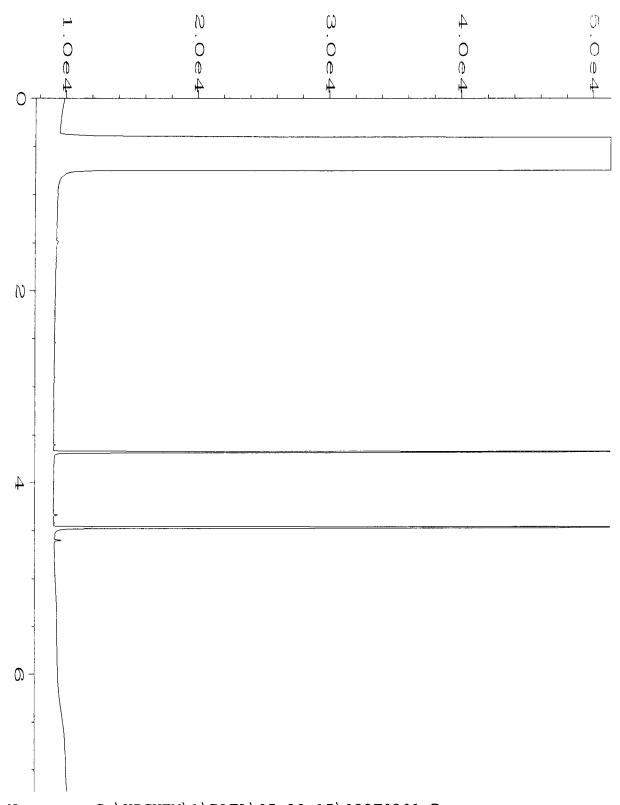
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2 4

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Data File Name
                                              Page Number
Operator
                : mwdl
                                              Vial Number
                                                             : 20
Instrument
                : GC1
                                              Injection Number: 1
                : 505460-01
Sample Name
Run Time Bar Code:
                                              Sequence Line : 3
                                              Instrument Method: DX.MTH
Acquired on : 28 May 15 12:49 PM
Report Created on: 29 May 15 08:52 AM
                                              Analysis Method : DX.MTH
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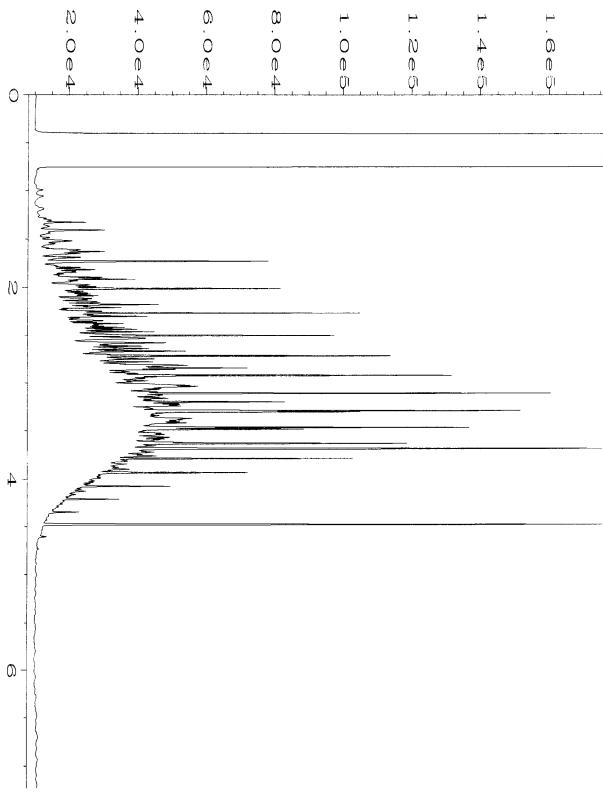
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Data File Name
                                               Page Number
Operator
                : mwdl
                                              Vial Number
                : GC1
                                                               : 21
Instrument
Sample Name
                                               Injection Number: 1
                : 505460-02
Run Time Bar Code:
                                               Sequence Line : 3
                                               Instrument Method: DX.MTH
Acquired on : 28 May 15 12:58 PM
                                              Analysis Method : DX.MTH
Report Created on: 29 May 15 08:52 AM
```



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Data File Name : C:\HPCHEM\1\DATA\05-28-15\022F0301.D
                                             Page Number
Operator
                : mwdl
                                             Vial Number : 22
Instrument
                : GC1
                                             Injection Number: 1
Sample Name
                : 505460-03
Run Time Bar Code:
                                             Sequence Line : 3
                                             Instrument Method: DX.MTH
Acquired on : 28 May 15 01:09 PM
Report Created on: 29 May 15 08:52 AM
                                             Analysis Method : DX.MTH
```



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Data File Name
              : C:\HPCHEM\1\DATA\05-28-15\038F0701.D
                                             Page Number
Operator
                : mwdl
                                             Vial Number
Instrument
                : GC1
                                             Injection Number: 1
Sample Name
                : 05-1024 mb
Run Time Bar Code:
                                             Sequence Line : 7
                                             Instrument Method: DX.MTH
Acquired on : 28 May 15 06:17 PM
Report Created on: 29 May 15 08:53 AM
                                             Analysis Method : DX.MTH
```



```
Data File Name
                : C:\HPCHEM\1\DATA\05-28-15\003F0201.D
                                              Page Number
Operator
                : mwdl
                                              Vial Number
Instrument
                : GC1
                                              Injection Number: 1
Sample Name
                : 500 Dx 44-94C
Run Time Bar Code:
                                              Sequence Line : 2
                                              Instrument Method: DX.MTH
Acquired on : 28 May 15 09:16 AM
Report Created on: 29 May 15 08:53 AM
                                              Analysis Method : DX.MTH
```

505 460	MPLE CHA OF CUSTODY	ME 05/28	15 , VS()
Send Report to R. Roberts; S. Stumpt; E. Forbes; J. Cyr	SAMPLERS (signature)		Page #ofTURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	Standard (2 Weeks) RUSH
Address 2811 Fairview Avenue E, Suite 2000	0914-001-12		Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS Same day		SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907			Return samples Will call with instructions

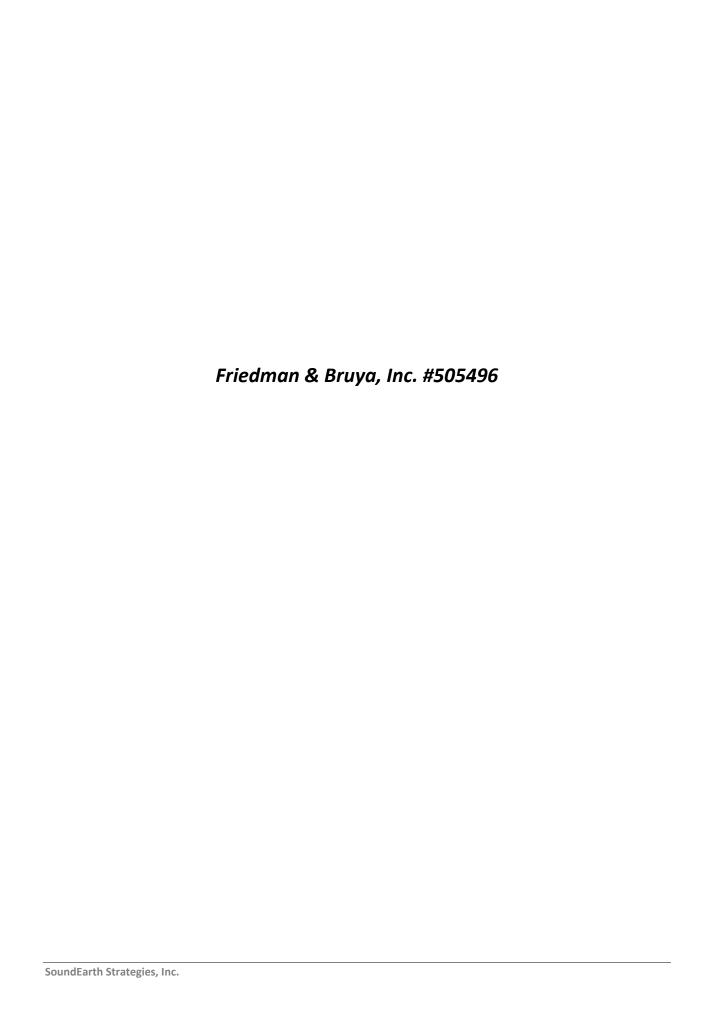
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					! !						1	ALIGE	S ILE Q	JESTEI	, 	T	
Sample ID ;	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		N	otes
5-1307-131-242	BI	242	B) AE	5/28/14	1050	Soil	5	λ	X	X							
5-301-61-242	((	1942	02/		1055		5	X	X	入							
5-801-63-243	133	243	83 )	1	1100	1	5	~	×	×							
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	·											San	nples	receive	d at _	18°C	
	<u> </u>																

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Liz Forte	SES	5/28/15	1135
Received by:	James Blug	FSB	6/25	(135
Relinquished by:	/ / /			1 33
Received by:				

FORMS\COC\COC.DOC

Fax (206) 283-5044



#### **ENVIRONMENTAL CHEMISTS**

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

June 3, 2015

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 29, 2015 from the SOU_0914-001-12_20150529, F&BI 505496 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0603R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on May 29, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150529, F&BI 505496 project. Samples were logged in under the laboratory ID's listed below.

SoundEarth Strategies
S-ESW01-A1-245
S-ESW01-A2-245
S-ESW01-A3-245
S-ESW01-A4-245

All quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/03/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505496

Date Extracted: 05/29/15

Date Analyzed: 05/29/15 and 06/01/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-ESW01-A1-245 505496-01	<0.02	< 0.02	< 0.02	< 0.06	<2	76
S-ESW01-A2-245 505496-02 1/5	<0.02 j	4.8	8.9	39	1,300	141
S-ESW01-A3-245 505496-03	< 0.02	< 0.02	0.023	0.24	3.7	88
S-ESW01-A4-245 505496-04	<0.02	<0.02	<0.02	< 0.06	<2	89
Method Blank 05-1244 MB	< 0.02	< 0.02	< 0.02	< 0.06	<2	89

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/03/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505496

Date Extracted: 06/01/15 Date Analyzed: 06/01/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 56-165)
S-ESW01-A1-245 505496-01	< 50	<250	103
S-ESW01-A2-245 505496-02	610 x	300	94
S-ESW01-A3-245 505496-03	3,200 x	<250	109
S-ESW01-A4-245 505496-04	< 50	<250	101
Method Blank 05-1033 MB	< 50	<250	92

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/03/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505496

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

Laboratory Code: 505484-01 (Duplicate)

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	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	80	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	93	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

#### ENVIRONMENTAL CHEMISTS

Date of Report: 06/03/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505496

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 506006-05 (Matrix Spike)

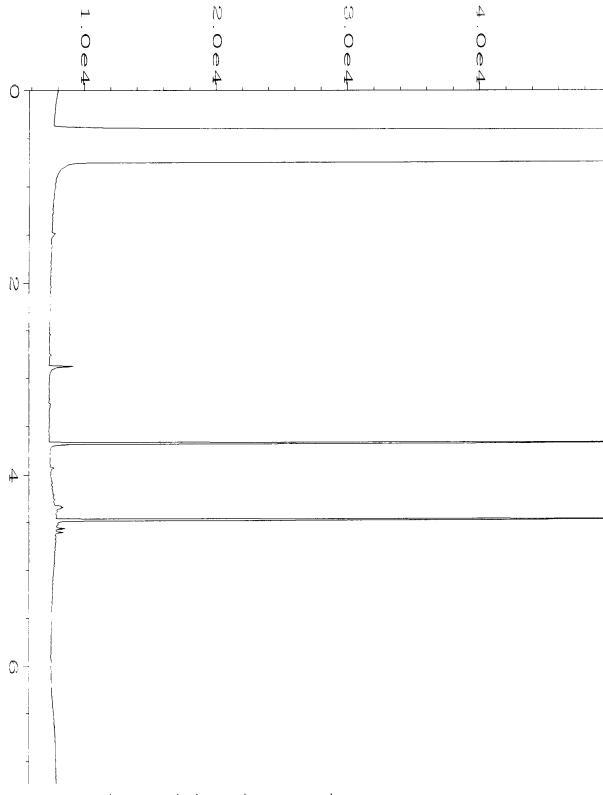
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	5,400	114 b	90 b	63-146	24 b

			Percent		
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Diesel Extended	mg/kg (ppm)	5,000	104	79-144	

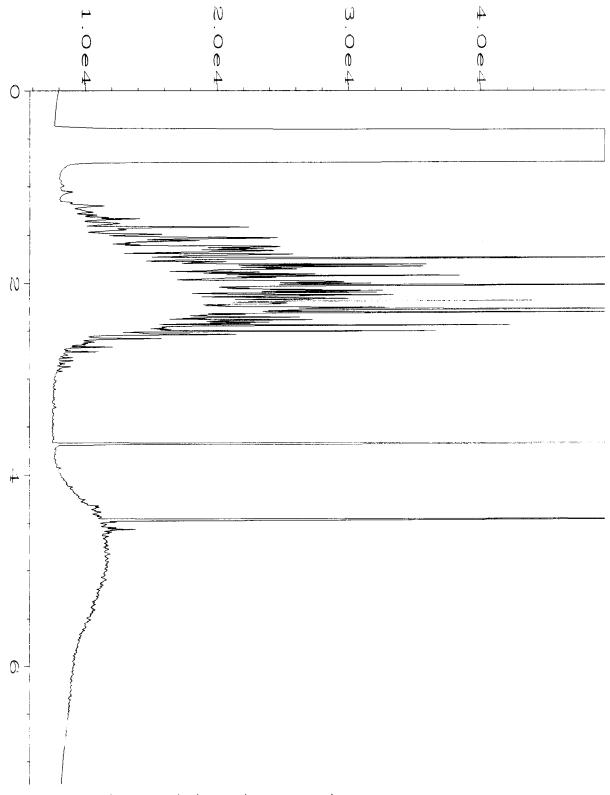
#### **ENVIRONMENTAL CHEMISTS**

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

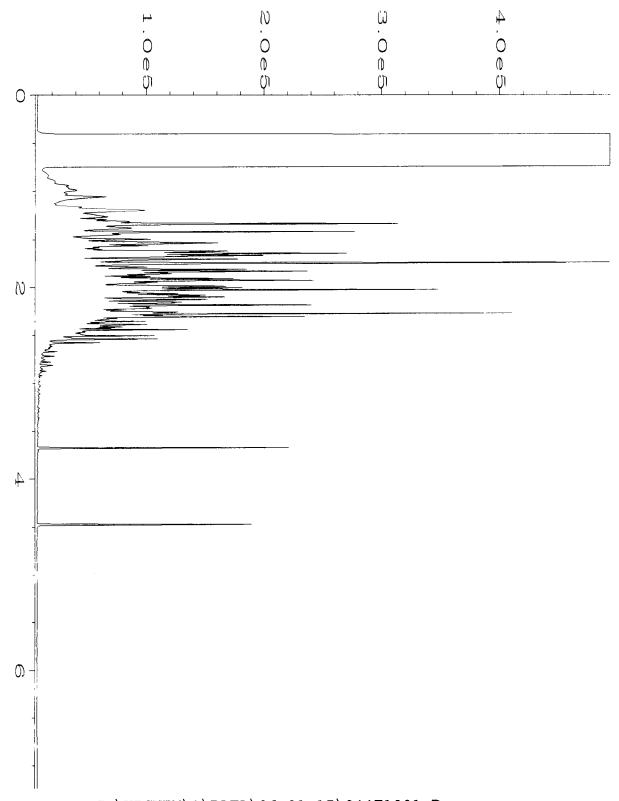
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



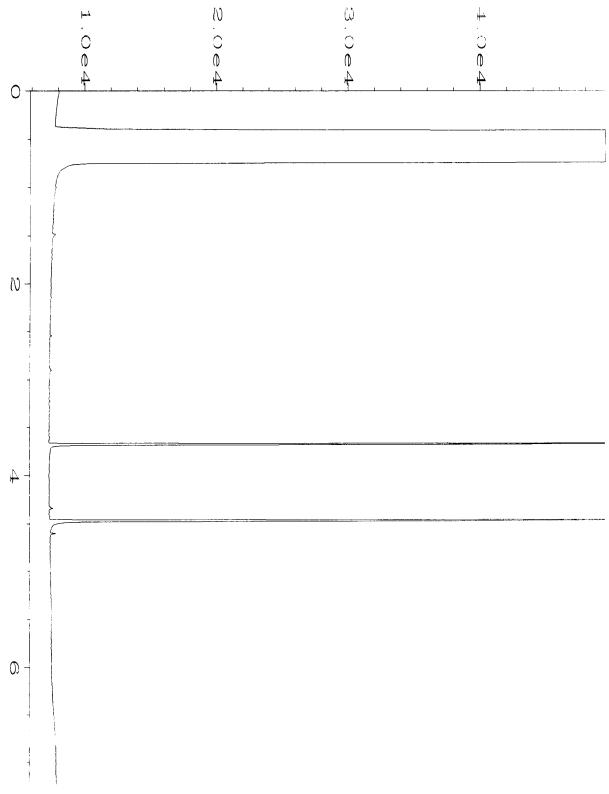
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Data File Name
                                                 Page Number
Vial Number
Operator
                 : mwdl
                                                                   : 1
                                                                   : 42
Instrument
                 : GC1
                                                 Injection Number: 1
                 : 505496-01
Sample Name
                                                 Sequence Line : 10
Run Time Bar Code:
                                                 Instrument Method: DX.MTH
                 : 01 Jun 15 07:11 PM
Acquired on
Report Created on: 02 Jun 15 10:07 AM
                                                 Analysis Method : DX.MTH
```



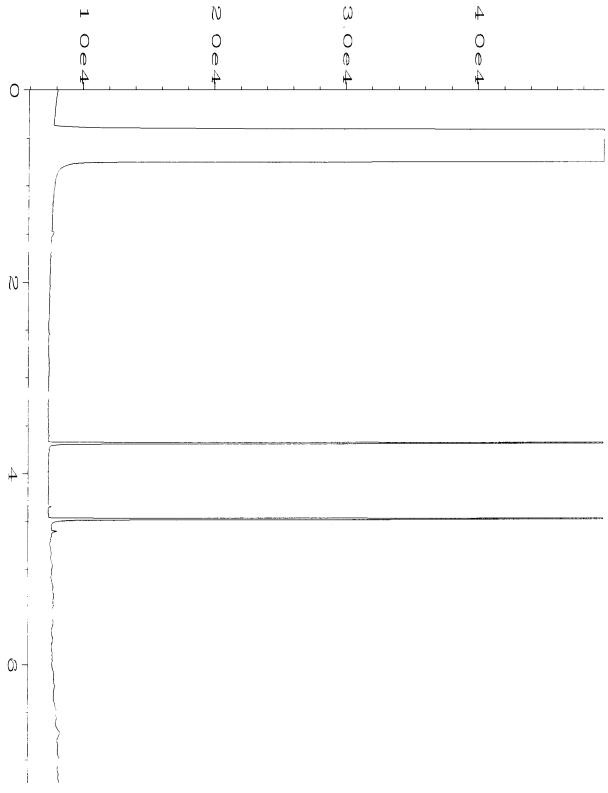
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                                               Page Number
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Operator
                                               Vial Number
                 : GC1
                                                                : 43
Instrument
                                               Injection Number: 1
Sample Name
                 : 505496-02
                                               Sequence Line : 10
Run Time Bar Code:
                : 01 Jun 15 07:22 PM
                                               Instrument Method: DX.MTH
Acquired on
                                               Analysis Method : DX.MTH
Report Created on: 02 Jun 15 10:07 AM
```



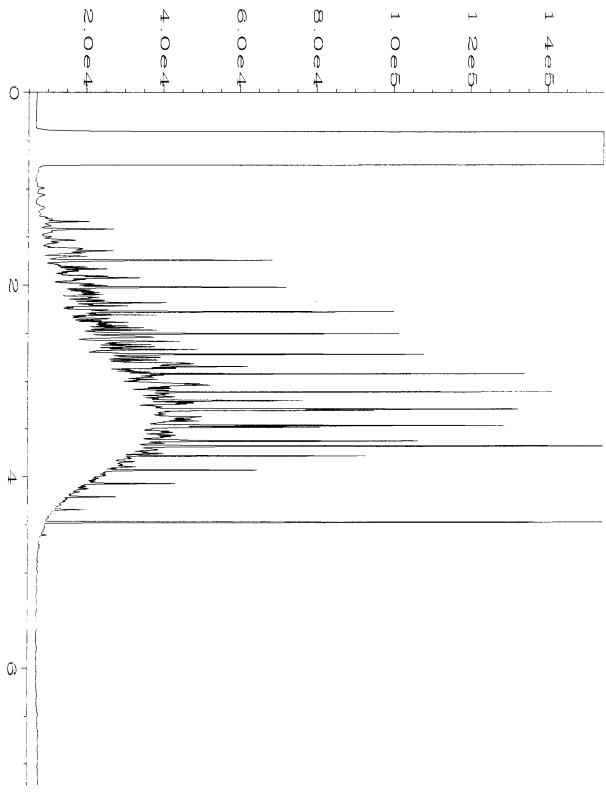
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Data File Name
                                               Page Number
Operator
                 : mwdl
                                               Vial Number
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Instrument
                 : GC1
                                               Injection Number: 1
                 : 505496-03
Sample Name
Run Time Bar Code:
                                               Sequence Line : 10
                                               Instrument Method: DX.MTH
Acquired on
                 : 01 Jun 15 07:34 PM
                                               Analysis Method : DX.MTH
                            10:07 AM
Report Created on: 02 Jun 15
```



```
: C:\HPCHEM\1\DATA\06-01-15\045F1001.D
Data File Name
Operator
                                               Page Number
                 : mwdl
                                                                : 1
                                               Vial Number
Instrument
                 : GC1
                                                                : 45
                                               Injection Number: 1
Sample Name
                 : 505496-04
Run Time Bar Code:
                                               Sequence Line : 10
                                               Instrument Method: DX.MTH
                : 01 Jun 15 07:45 PM
Acquired on
Report Created on: 02 Jun 15
                                               Analysis Method : DX.MTH
                            10:07 AM
```



```
: C:\HPCHEM\1\DATA\06-01-15\025F0801.D
Data File Name
                : mwdl
                                               Page Number
Operator
                                               Vial Number
Instrument
                                                                : 25
                : GC1
                                               Injection Number: 1
Sample Name
                : 05-1033 mb
Run Time Bar Code:
                                               Sequence Line : 8
Acquired on
                                               Instrument Method: DX.MTH
                : 01 Jun 15 03:39 PM
Report Created on: 02 Jun 15
                            10:07 AM
                                               Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\06-01-15\003F0201.D
Data File Name
Operator
                : mwdl
                                               Page Number
                                               Vial Number
Instrument
                : GC1
Sample Name
                : 500 Dx 44-94C
                                               Injection Number : 1
Run Time Bar Code:
                                               Sequence Line : 2
Acquired on : 01 Jun 15 08:54 AM
                                               Instrument Method: DX.MTH
Report Created on: 02 Jun 15 10:07 AM
                                               Analysis Method : DX.MTH
```

← 505 49 6 SA	MPLE CHA—OF CUSTODY	ME 5/29/1	<u>≤</u> ← ↑05/ ﴾ * 1
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)		Page # of
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO. 09/4-201-12	PO#	Standard (2 Weeks)
Address 2811 Fairview Avenue E, Suite 2000	0919-161-16		Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS		SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907			Return samples Will call with instructions

											A	NALYSE	ES REQU	JESTED	)	
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
5-15401-A) 745	A:	245	OIAE	5/29/15	1220	SOK	5	χ	X	Y						Sunda. 1
5-ESWOY-A4-245 5-ESWOY-A4-245	AZ	745	02		123		5	4	X	7						<i>O</i> · · · · · · · · · · · · · · · · · · ·
5-8:NOI-A3-245	AR	245	03 1		205		5	X	j	7						
5-ESMOV-A4-247	As	245	04°C	e	17.00		3	7	/	'Χ.						
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										_						

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	bij kake i	(E)	5/19/15	1335
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Received by:	<u> </u>			
Toolston by.		Jampies received to +	_ <b>-</b> 6	



#### **ENVIRONMENTAL CHEMISTS**

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

June 4, 2015

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 29, 2015 from the SOU_0914-001-12_20150529, F&BI 505501 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0604R.DOC

#### ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on May 29, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150529, F&BI 505501 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	SoundEarth Strategies
505501 -01	S-B01-A1-242
505501 -02	S-B01-A2-242
505501 -03	S-B01-B2-242

All quality control requirements were acceptable.

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/04/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505501

Date Extracted: 05/29/15 Date Analyzed: 05/29/15

## RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-A1-242 505501-01	< 0.02	< 0.02	< 0.02	< 0.06	<2	86
S-B01-A2-242 505501-02	< 0.02	< 0.02	<0.02	< 0.06	<2	87
S-B01-B2-242 505501-03	<0.02	<0.02	<0.02	<0.06	<2	86
Method Blank 05-1244 MB	<0.02	< 0.02	< 0.02	< 0.06	<2	89

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/04/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505501

Date Extracted: 05/29/15 Date Analyzed: 05/29/15

## RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 56-165)
S-B01-A1-242 505501-01	<50	<250	96
S-B01-A2-242 505501-02	< 50	<250	99
S-B01-B2-242 505501-03	< 50	<250	101
Method Blank 05-1027 MB	<50	<250	93

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505501

# 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: 505484-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	80	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	93	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15 Date Received: 05/29/15

Project: SOU_0914-001-12_20150529, F&BI 505501

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505477-01 (Matrix Spike)

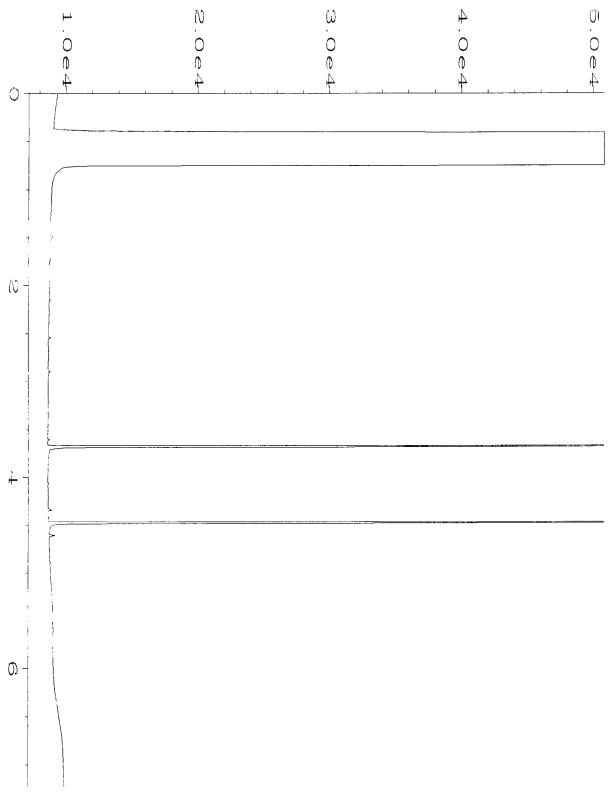
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	112	112	63-146	0

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	112	79-144

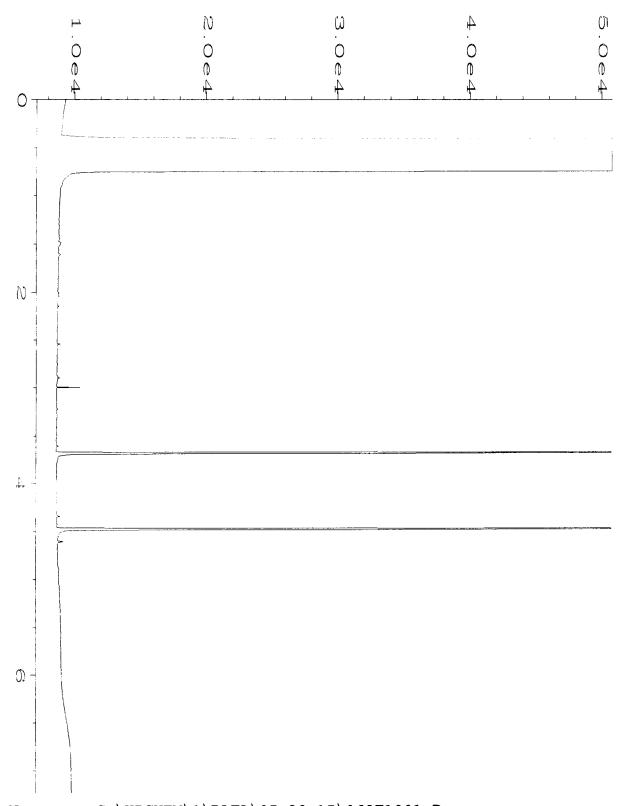
### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

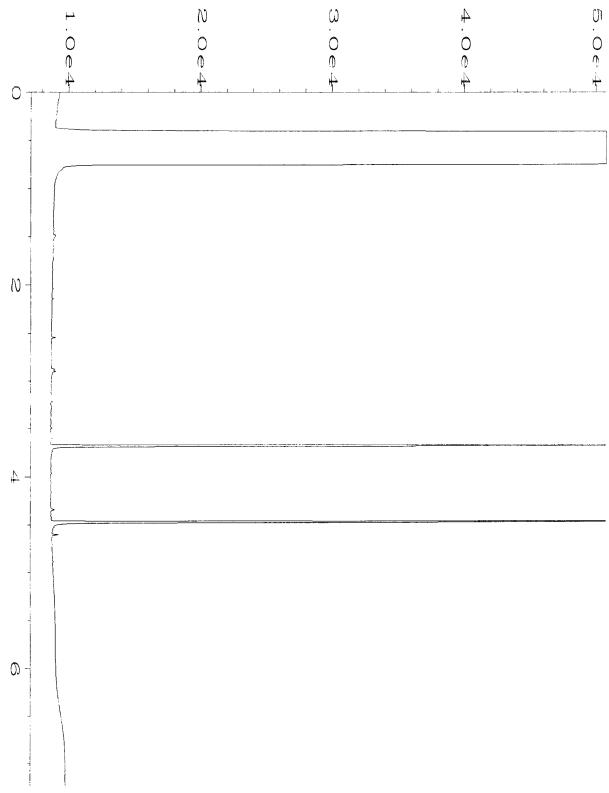
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



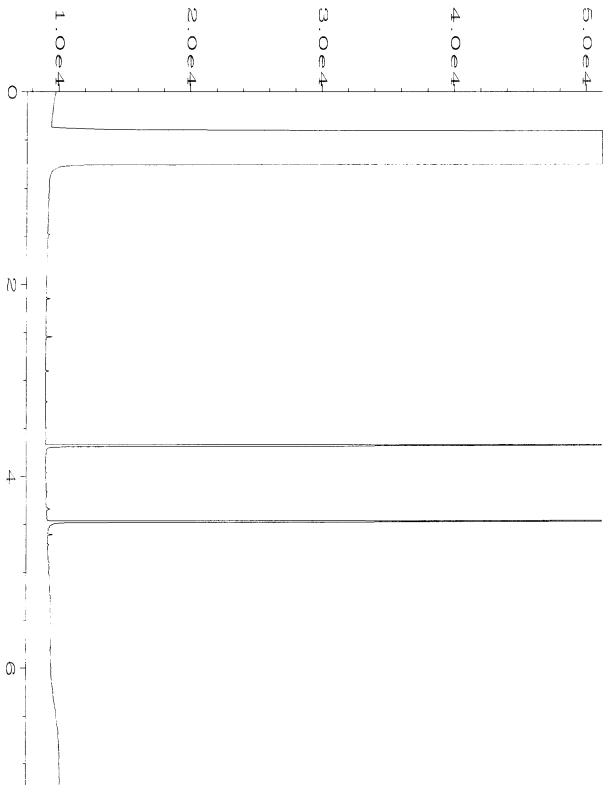
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                                              Vial Number
Instrument
                                                               : 68
                : GC1
                                              Injection Number: 1
                : 505501-01
Sample Name
                                              Sequence Line : 10
Run Time Bar Code:
                                              Instrument Method: DX.MTH
Acquired on : 29 May 15 11:16 PM
                                              Analysis Method : DX.MTH
Report Created on: 01 Jun 15 09:37 AM
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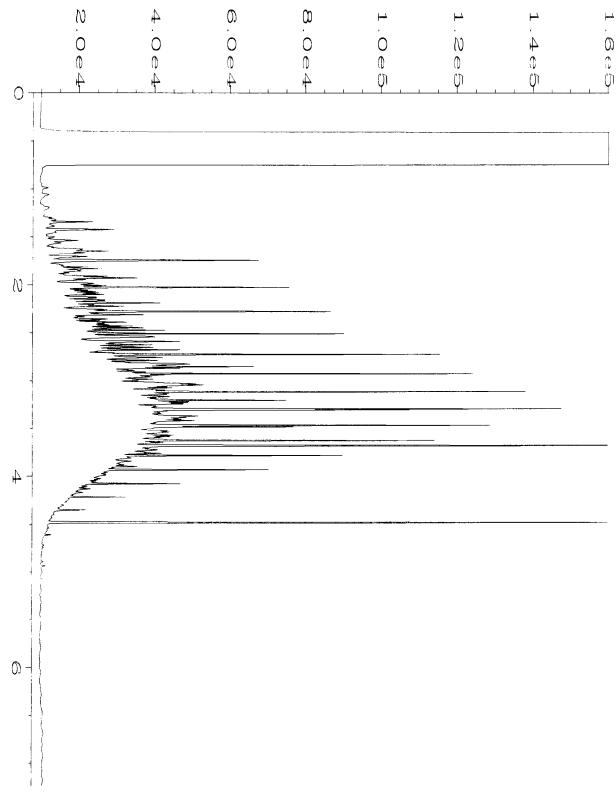
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Data File Name
                                              Page Number
Operator
                : mwdl
Instrument
                : GC1
                                              Vial Number
                : 505501-02
                                              Injection Number: 1
Sample Name
Run Time Bar Code:
                                              Sequence Line : 10
                                              Instrument Method: DX.MTH
Acquired on : 29 May 15 11:27 PM
Report Created on: 01 Jun 15 09:37 AM
                                              Analysis Method : DX.MTH
```



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Data File Name
                : mwdl
                                               Page Number
Operator
Instrument
                : GC1
                                               Vial Number
                                                                : 70
                                               Injection Number: 1
Sample Name
                : 505501-03
Run Time Bar Code:
                                               Sequence Line : 10
                                               Instrument Method: DX.MTH
Acquired on
                : 29 May 15 11:39 PM
Report Created on: 01 Jun 15 09:37 AM
                                               Analysis Method : DX.MTH
```



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Data File Name : C:\HPCHEM\1\DATA\05-29-15\021F0301.D
                                              Page Number
Operator
                : mwdl
Instrument
                : GC1
                                              Vial Number
                                                               : 21
Sample Name
                : 05-1027 mb
                                              Injection Number: 1
Run Time Bar Code:
                                              Sequence Line
                                              Instrument Method: DX.MTH
Acquired on : 29 May 15 12:54 PM
Report Created on: 01 Jun 15 09:38 AM
                                              Analysis Method : DX.MTH
```



```
: C:\HPCHEM\1\DATA\05-29-15\003F0201.D
Data File Name
Operator
                : mwdl
                                               Page Number
                                              Vial Number
Instrument
                : GC1
Sample Name
                                               Injection Number: 1
                : 500 Dx 44-94C
Run Time Bar Code:
                                               Sequence Line : 2
Acquired on : 29 May 15 09:01 AM
                                               Instrument Method: DX.MTH
Report Created on: 01 Jun 15 09:36 AM
                                              Analysis Method : DX.MTH
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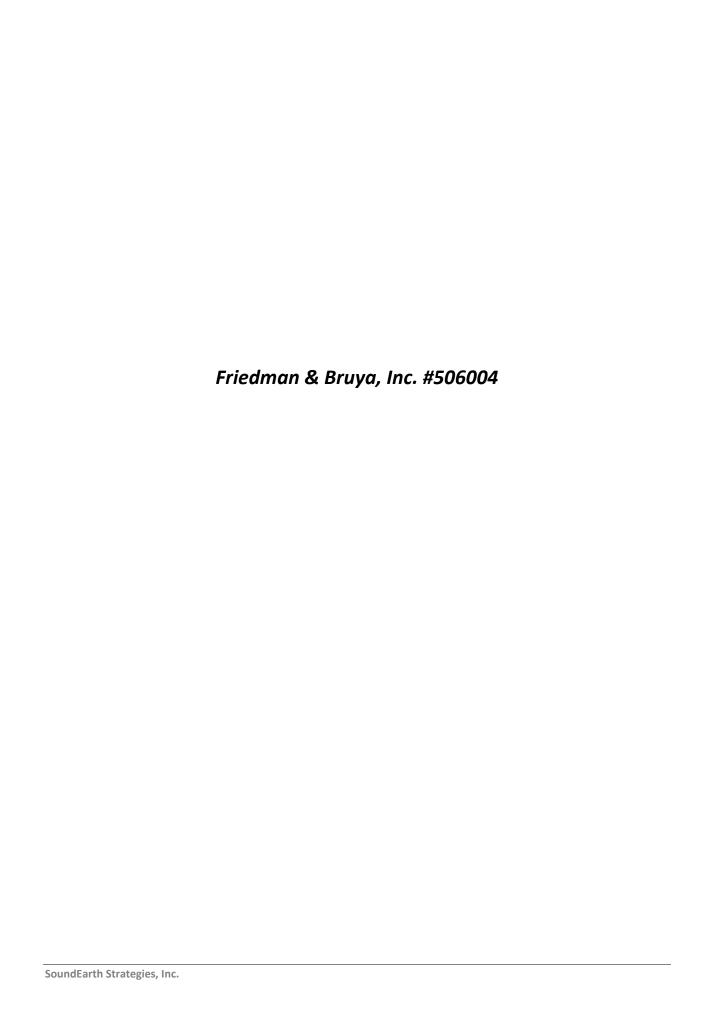
- 505501 SA	MPLE CHA_OF CUSTODY	ME 5/29/15	
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)		Page # of TURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO:	PO#	Standard (2 Weeks)
Address 2811 Fairview Avenue E, Suite 2000			Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS /		SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907			Return samples Will call with instructions

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Sample ID	Sample Location	Sample Depth		Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082	Notes
5-601 AL- 2112	<i>f</i> *	69%	O NE	Shalis	1435	SOIL	3	$\chi$	X	X					
5-801-A2 296	1/2		02		1440		5	×	K	$\lambda$					,
5-8-01-62-141	62	j. 7.	03	1	1445		<u>ر</u>	>	×	$\lambda$					
			<b>V</b>												
		ال _ا حو													 ·
								-							

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

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
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### **ENVIRONMENTAL CHEMISTS**

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

June 3, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on June 1, 2015 from the SOU_0914-001-12_20150601, F&BI 506004 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

**Enclosures** 

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0603R.DOC

## ENVIRONMENTAL CHEMISTS

## **CASE NARRATIVE**

This case narrative encompasses samples received on June 1, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150601, F&BI 506004 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
506004 -01	S-SSW01-A4-245
506004 -02	S-ESW01-A4-250
506004 -03	S-B01-A3-240.5
506004 -04	S-SSW01-B4-245

All quality control requirements were acceptable.

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/03/15 Date Received: 06/01/15

Project: SOU_0914-001-12_20150601, F&BI 506004

Date Extracted: 06/01/15 Date Analyzed: 06/01/15

## RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	Benzene	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-SSW01-A4-245 506004-01	< 0.02	< 0.02	0.14	< 0.06	<2	88
S-ESW01-A4-250 506004-02	< 0.02	< 0.02	< 0.02	< 0.06	<2	88
S-B01-A3-240.5 506004-03	< 0.02	< 0.02	0.42	2.5	14	89
S-SSW01-B4-245 506004-04	<0.02	<0.02	<0.02	< 0.06	<2	89
Method Blank 05-1246 MB	<0.02	< 0.02	<0.02	< 0.06	<2	88

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/03/15 Date Received: 06/01/15

Project: SOU_0914-001-12_20150601, F&BI 506004

Date Extracted: 06/01/15 Date Analyzed: 06/01/15

## RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID Laboratory ID	Diesel Range (C ₁₀ -C ₂₅ )	Motor Oil Range (C ₂₅ -C ₃₆ )	Surrogate (% Recovery) (Limit 53-144)
S-SSW01-A4-245 506004-01	< 50	<250	111
S-ESW01-A4-250 506004-02	< 50	<250	98
S-B01-A3-240.5 506004-03	< 50	<250	96
S-SSW01-B4-245 506004-04	<50	<250	110
Method Blank 05-1032 MB	<50	<250	101

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/03/15 Date Received: 06/01/15

Project: SOU_0914-001-12_20150601, F&BI 506004

# 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: 505509-04 (Duplicate)

-	_	Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	77	69-120
Toluene	mg/kg (ppm)	0.5	88	70-117
Ethylbenzene	mg/kg (ppm)	0.5	90	65-123
Xylenes	mg/kg (ppm)	1.5	90	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/03/15 Date Received: 06/01/15

Project: SOU_0914-001-12_20150601, F&BI 506004

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505507-01 (Matrix Spike)

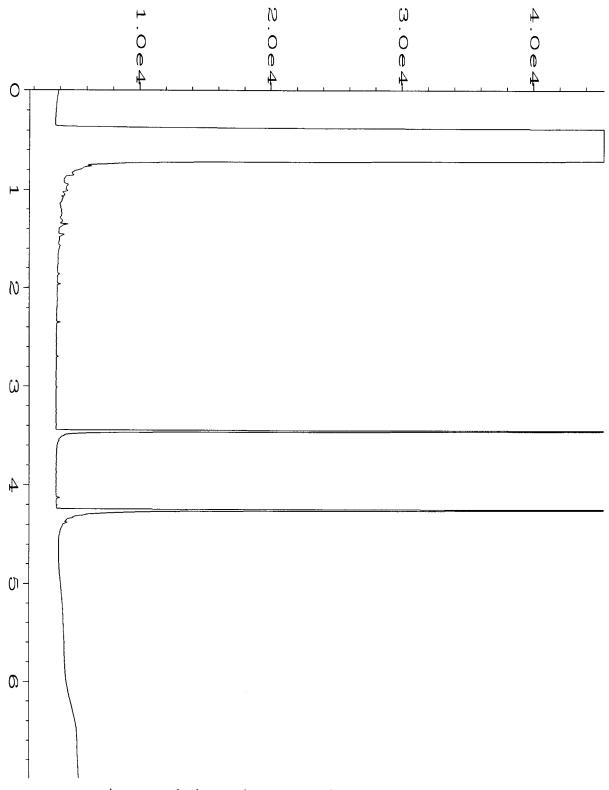
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	117	116	64-133	1

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	103	58-147

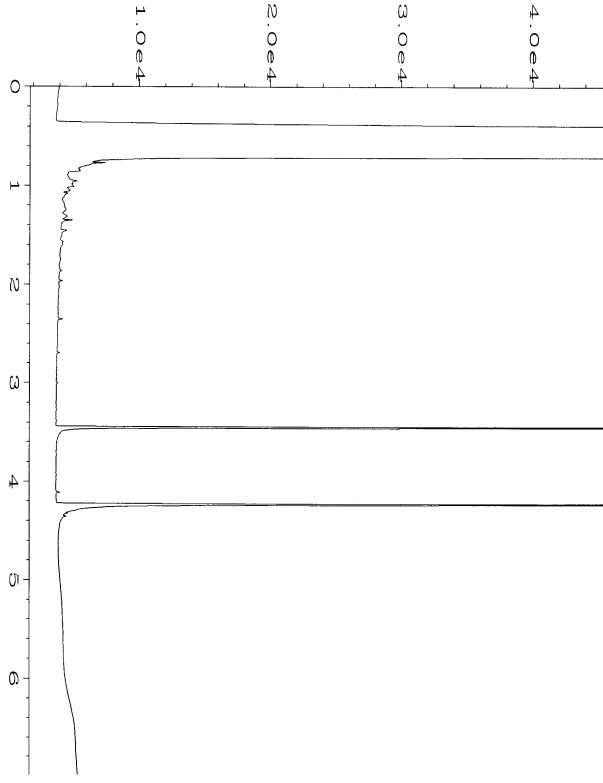
### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

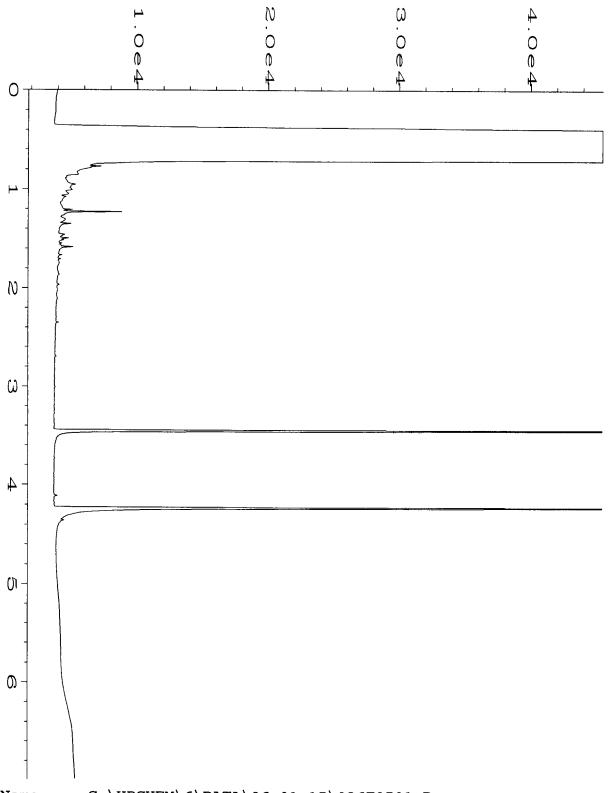
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



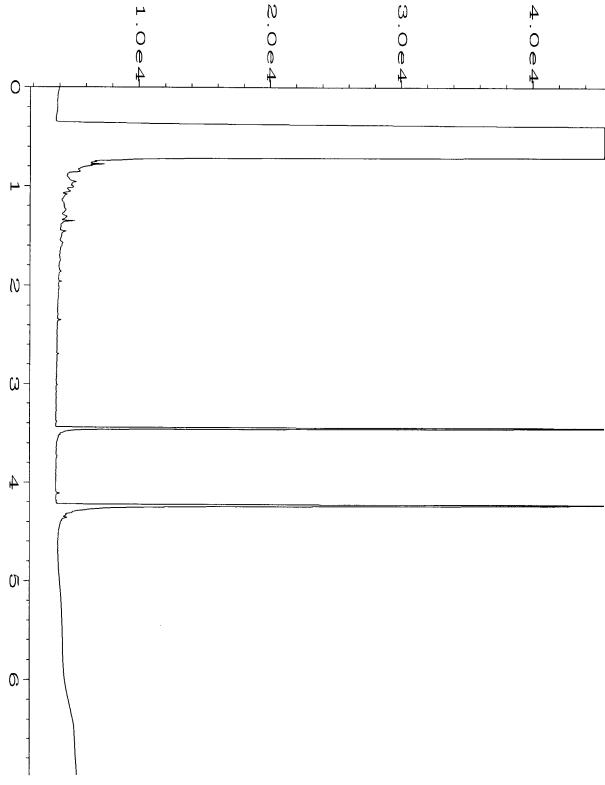
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                 : mwdl
                                                 Page Number
                                                                  : 1
Instrument
                 : GC #6
                                                 Vial Number
                                                                  : 24
Sample Name
                 : 506004-01
                                                 Injection Number : 1
                                                 Sequence Line
Run Time Bar Code:
                                                                  : 5
Acquired on
                 : 01 Jun 15
                              01:17 PM
                                                 Instrument Method: DX.MTH
Report Created on: 01 Jun 15
                              02:17 PM
                                                 Analysis Method : END.MTH
```



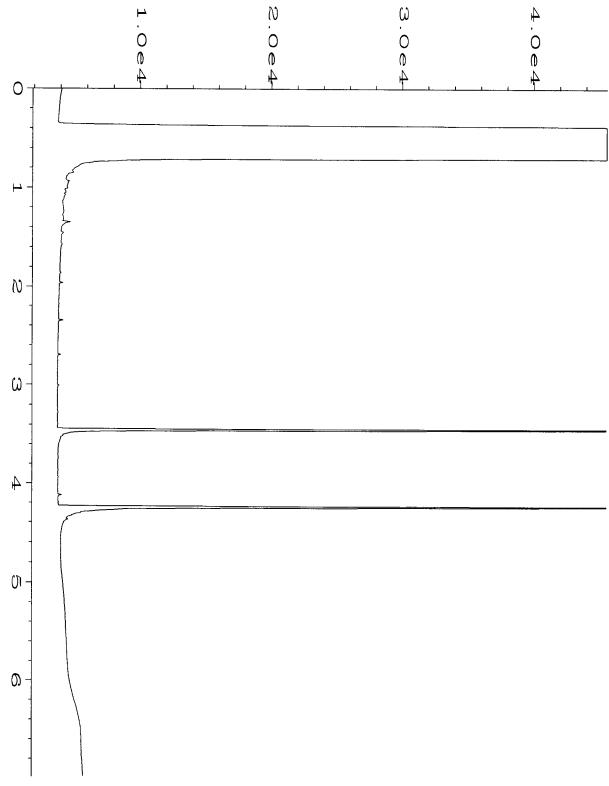
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Operator
                   mwdl
                                                Page Number
Instrument
                 : GC #6
                                                Vial Number
                                                                  : 25
Sample Name
                 : 506004-02
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line
                                                Instrument Method: DX.MTH
Acquired on
                 : 01 Jun 15
                              01:26 PM
Report Created on: 01 Jun 15
                              02:17 PM
                                                Analysis Method : END.MTH
```



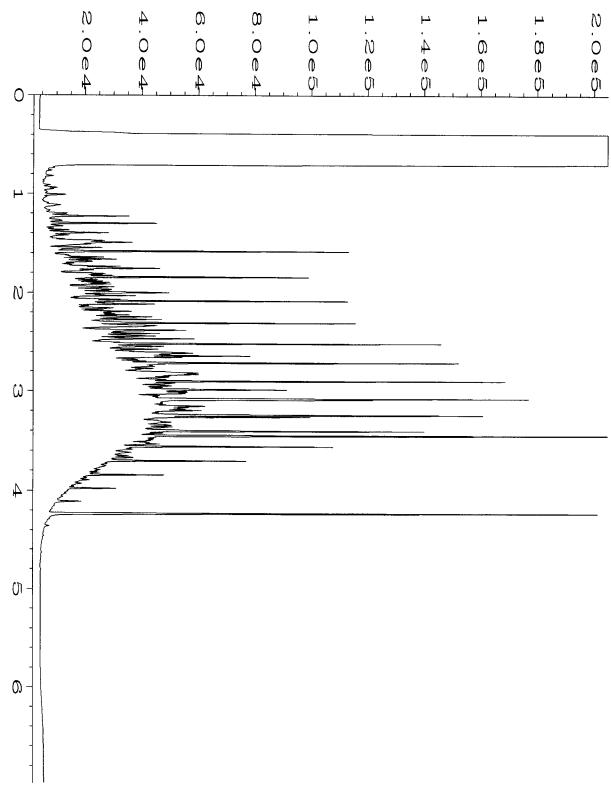
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                                                Page Number
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Instrument
                 : GC #6
                                                Vial Number
                                                                  : 26
Sample Name
                 : 506004-03
                                                Injection Number: 1
                                                Sequence Line
Run Time Bar Code:
                                                               : 5
Acquired on
                 : 01 Jun 15
                              01:36 PM
                                                Instrument Method: DX.MTH
Report Created on: 01 Jun 15
                                                Analysis Method : END.MTH
                              02:17 PM
```



```
Data File Name
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                 : mwdl
                                                Page Number
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Instrument
                 : GC #6
                                                Vial Number
                                                                  : 27
Sample Name
                 : 506004-04
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line : 5
                                                Instrument Method: DX.MTH
Acquired on
                 : 01 Jun 15
                              01:47 PM
Report Created on: 01 Jun 15
                              02:17 PM
                                                Analysis Method : END.MTH
```



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Data File Name
Operator
                 : mwdl
                                               Page Number
Instrument
                 : GC #6
                                               Vial Number
                                                                : 6
Sample Name
                 : 05-1032 mb
                                               Injection Number: 1
Run Time Bar Code:
                                               Sequence Line : 3
Acquired on
                                               Instrument Method: DX.MTH
            : 01 Jun 15
                             09:37 AM
Report Created on: 01 Jun 15
                             02:18 PM
                                               Analysis Method : END.MTH
```



```
Data File Name
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Operator
                 : mwdl
                                                Page Number
Instrument
                                                Vial Number
                 : GC #6
                                                                 : 3
Sample Name
                 : 500 Dx 44-94C
                                                Injection Number: 1
Run Time Bar Code:
                                                Sequence Line
                                                              : 2
                                                Instrument Method: DX.MTH
Acquired on
                : 01 Jun 15
                              09:12 AM
Report Created on: 01 Jun 15 02:19 PM
                                                Analysis Method : END.MTH
```

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Send Report to	<u>R.</u>	Roberts;	<u>S.</u>	Stumpf;	Ε.	Forbes; J.	Cyr
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Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, Washington 98102

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

Page # ______ of ____

TURNAROUND TIME
Standard (2 Weeks)

(RUSH_______
Rush charges authorized by:

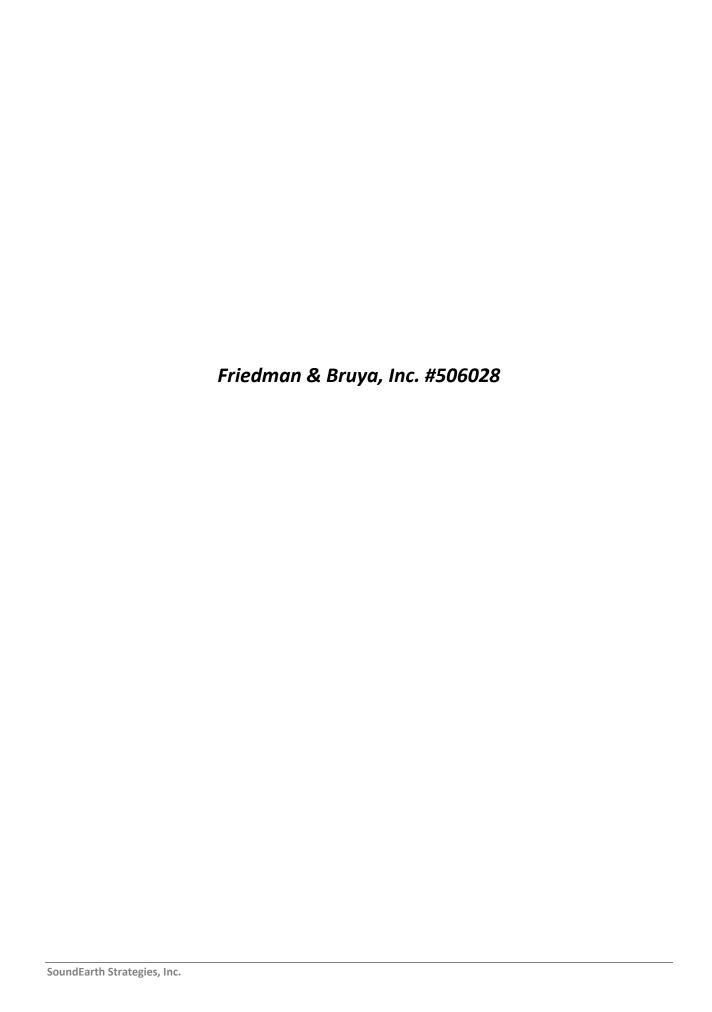
SAMPLE DISPOSAL Dispose after 30 days Return samples Will call with instructions

			ŧ.								A	NALYSE	S REQU	JESTED		
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
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5-601-45-240.6	<i>#</i> "	1465	03		1050		įį	X	>	<i>&gt;</i>						
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	1.1 /2/11	3.33	616	11:30
Received by:	VIND	FA	6/1/15	11:30
Relinquished by:			100	
Received by:	8	Samples specied at 3	_°c	



### ENVIRONMENTAL CHEMISTS

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

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

June 4, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on June 2, 2015 from the SOU 0914-001 20150602, F&BI 506028 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr

SOU0604R.DOC

## FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

## **CASE NARRATIVE**

This case narrative encompasses samples received on June 2, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001_20150602, F&BI 506028 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

506028 -01 S-B01-C5-250

All quality control requirements were acceptable.

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/04/15 Date Received: 06/02/15

Project: SOU_0914-001_20150602, F&BI 506028

Date Extracted: 06/02/15 Date Analyzed: 06/02/15

## RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
S-B01-C5-250 506028-01	< 0.02	< 0.02	< 0.02	<0.06	<2	87
Method Blank	< 0.02	< 0.02	< 0.02	< 0.06	<2	88

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/04/15 Date Received: 06/02/15

Project: SOU_0914-001_20150602, F&BI 506028

Date Extracted: 06/02/15 Date Analyzed: 06/02/15

## RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Sample ID	<u>Diesel Range</u>	Motor Oil Range	Surrogate (% Recovery)
Laboratory ID	$(C_{10}-C_{25})$	$(C_{25}-C_{36})$	(Limit 56-165)
S-B01-C5-250 506028-01	<50	<250	104
Method Blank	< 50	<250	110

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15 Date Received: 06/02/15

Project: SOU_0914-001_20150602, F&BI 506028

# 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: 506023-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

		Percent				
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Benzene	mg/kg (ppm)	0.5	79	69-120		
Toluene	mg/kg (ppm)	0.5	92	70-117		
Ethylbenzene	mg/kg (ppm)	0.5	92	65-123		
Xylenes	mg/kg (ppm)	1.5	92	66-120		
Gasoline	mg/kg (ppm)	20	100	71-131		

## ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15 Date Received: 06/02/15

Project: SOU_0914-001_20150602, F&BI 506028

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 506028-01 (Matrix Spike)

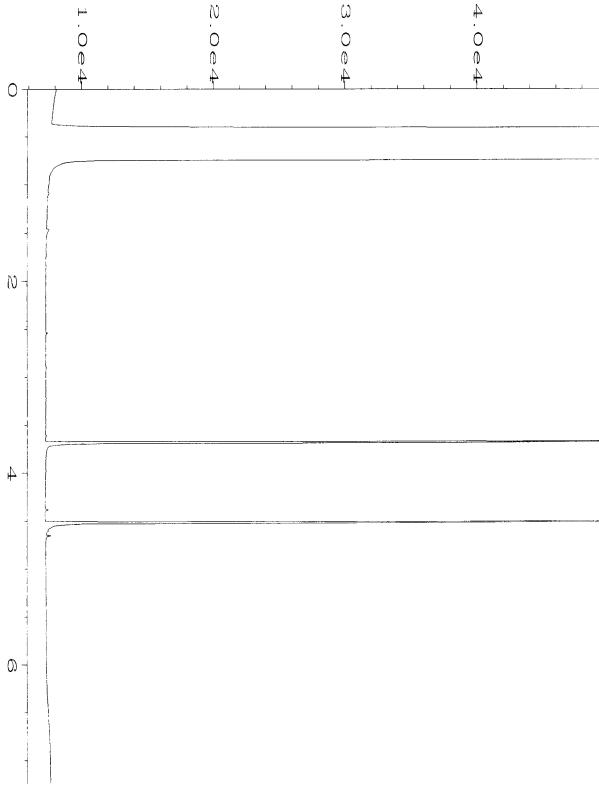
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	109	115	63-146	5

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	109	79-144

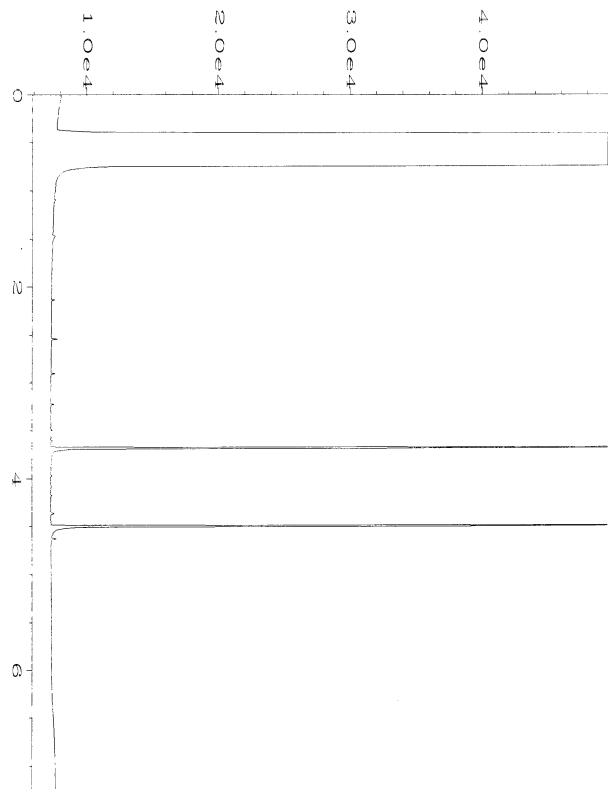
### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

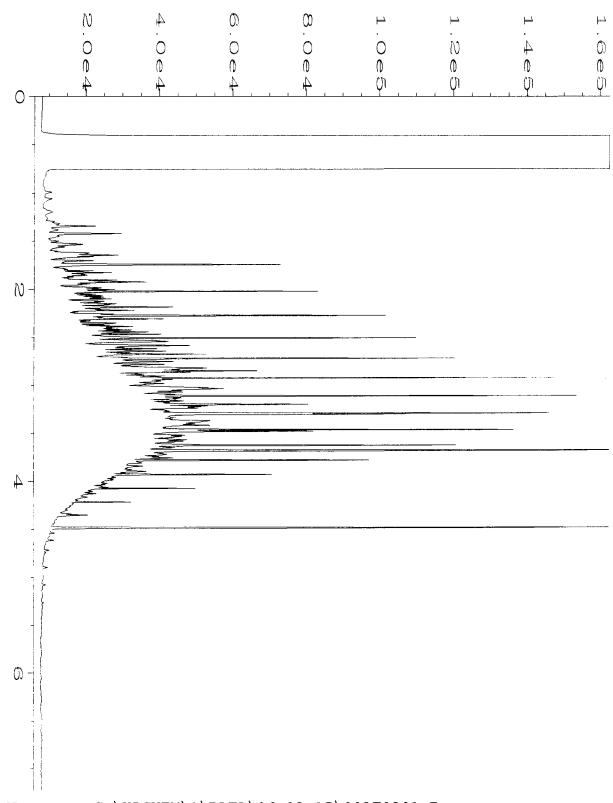
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



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Data File Name
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                                                Vial Number
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Instrument
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                 : 506028-01
                                                Injection Number: 1
Sample Name
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                             01:08 PM
Acquired on
Report Created on: 03 Jun 15 08:29 AM
                                                Analysis Method : DX.MTH
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Instrument
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Sample Name
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                                               Injection Number: 1
                                               Sequence Line
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 02 Jun 15
                             08:53 AM
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                                              Analysis Method : DX.MTH
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	SAMPLERS (signature)	d d	Page # of
Send Report to <u>R. Roberts; S. Stumpf; E. Forbes; J. Cyr</u>	7/		TURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO#	Standard (2 Weeks) RUSH
Address 2811 Fairview Avenue E, Suite 2000			Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS SAME STATES	·	SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907			Return samples Will call with instructions

					V-1 1/11						Aì	IALYSE	S REQU	ESTED	 7
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082	Notes
5-801 05-200	<i>C</i> 5	25 G	01 C	6/2/15	<i>08</i> ∫ .	Con.	3			×					<b>*</b>
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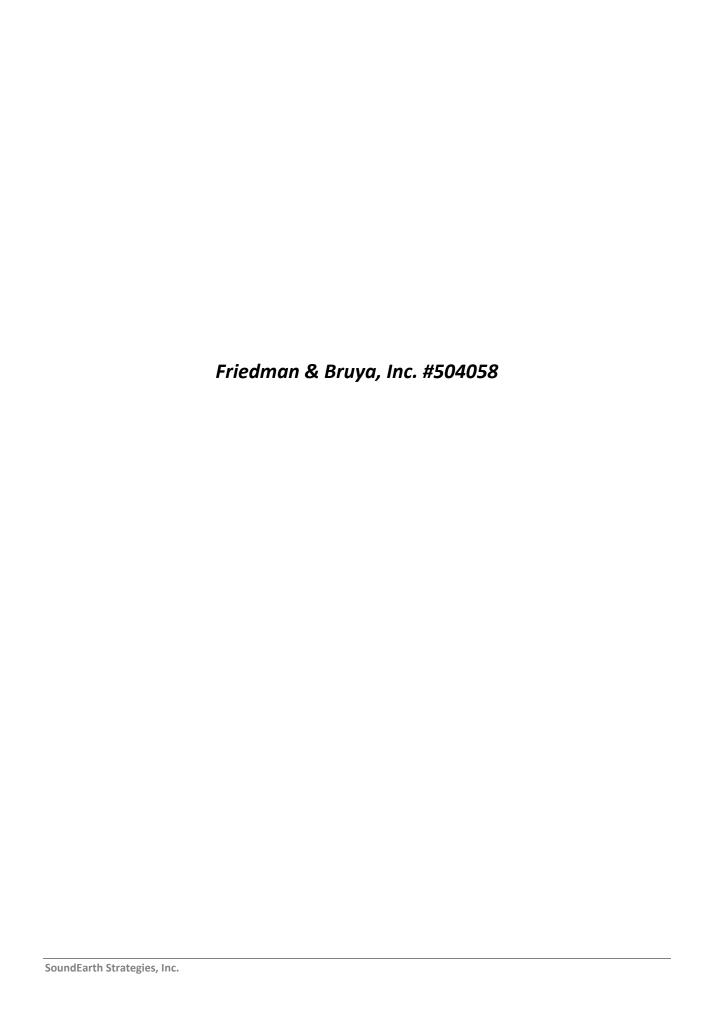
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

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

-	SIGNATURE
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	Received by:
	Relinquished by://
	Received by:

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SIGNATURE	RRINT NAME	COMPANY	DATE	TIME





#### **ENVIRONMENTAL CHEMISTS**

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

April 7, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 2, 2015 from the SOU_0914-001-12_20150402, F&BI 504058 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** 

c: Suzy Stumpf, Liz Forbes, JenniferCyr SOU0407R.DOC

# FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 2, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150402, F&BI 504058 project. Samples were logged in under the laboratory ID's listed below.

	Laboratory ID	SoundEarth Strategies
--	---------------	-----------------------

504058 -01 UST05 504058 -02 UST06

The samples were sent to Fremont for flashpoint analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504058

Date Extracted: 04/02/15 Date Analyzed: 04/02/15

# RESULTS FROM THE ANALYSIS OF SOIL/PRODUCT SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID Results Reported as Not Detected (ND) or Detected (D)

# THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate (% Recovery) (Limit 48-168)
UST05 504058-01 1/200	ND	D	D	90
UST06 504058-02 1/200	ND	D	D	97
Method Blank	ND	ND	ND	93

ND - Material not detected at or above 4,000mg/kg gas, 10,000 mg/kg diesel and 50,000 mg/kg heavy oil.

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Total Metals By EPA Method 200.8

Client ID: UST05 Client: SoundEarth Strategies

Date Received: 04/02/15 Project: SOU_0914-001-12_20150402, F&BI 504058

Lab ID: 504058-01 Date Extracted: 04/03/15 Date Analyzed: 04/03/15 Data File: 504058-01.030 Matrix: Instrument: Soil/Product ICPMS1 Units: mg/kg (ppm) Operator: ML

Upper Lower Limit: **Internal Standard:** % Recovery: Limit: Germanium 85 60 125 84 Indium 60 125 Holmium 90 60 125

Concentration

Analyte: mg/kg (ppm)

Arsenic <1 Barium 20.3 Cadmium <1 Chromium <1 Lead 328 Mercury <1 Selenium <1 Silver <1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Total Metals By EPA Method 200.8

Client ID: UST06 Client: SoundEarth Strategies

Date Received: 04/02/15 Project: SOU_0914-001-12_20150402, F&BI 504058

Lab ID: 504058-02 Date Extracted: 04/03/15 Date Analyzed: 04/03/15 Data File: 504058-02.031 Matrix: Instrument: Soil/Product ICPMS1 Units: mg/kg (ppm) Operator: ML

Upper Lower Limit: **Internal Standard:** % Recovery: Limit: Germanium 91 60 125 88 60 Indium 125 Holmium 94 60 125

Concentration

Analyte: mg/kg (ppm)

Arsenic <1 1.04 Barium Cadmium <1 Chromium <1 Lead 252 Mercury <1 Selenium <1 Silver <1

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Total Metals By EPA Method 200.8

Client ID: Method Blank Client: SoundEarth Strategies

Date Received: NA Project: SOU_0914-001-12_20150402, F&BI 504058

Date Extracted:04/03/15Lab ID:I5-196 mb2Date Analyzed:04/03/15Data File:I5-196 mb2.029Matrix:Soil/ProductInstrument:ICPMS1

Units: mg/kg (ppm) Operator: ML

Upper Lower Limit: **Internal Standard:** % Recovery: Limit: Germanium 98 60 125 98 60 Indium 125 Holmium 101 60 125

Concentration

Analyte: mg/kg (ppm)

Arsenic <1 Barium <1 Cadmium <1 Chromium <1 Lead <1 Mercury <1 Selenium <1 Silver <1

#### **ENVIRONMENTAL CHEMISTS**

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

Client Sample ID: UST05 Client: SoundEarth Strategies

Date Received: 04/02/15 Project: SOU_0914-001-12_20150402, F&BI 504058

Date Extracted: 04/02/15 Lab ID: 504058-01 1/2000

Date Analyzed: 04/03/15 Data File: 040234.D Matrix: Soil/Product 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	95	65	139

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<100
Chloroethane	<100
1,1-Dichloroethene	<100
Methylene chloride	< 500
trans-1,2-Dichloroethene	<100
1,1-Dichloroethane	<100
cis-1,2-Dichloroethene	<100
1,2-Dichloroethane (EDC)	<100

#### **ENVIRONMENTAL CHEMISTS**

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

Client Sample ID: UST06 Client: SoundEarth Strategies

Date Received: 04/02/15 Project: SOU_0914-001-12_20150402, F&BI 504058

Date Extracted: 04/02/15 Lab ID: 504058-02 1/2000

Date Analyzed: 04/03/15 Data File: 040235.D Matrix: Soil/Product Instrument: GCMS4 Units: mg/kg (ppm) Operator: JS

Lower Upper Limit: Limit: Surrogates: % Recovery: 1.2-Dichloroethane-d4 101 62 142 Toluene-d8 98 55 145 4-Bromofluorobenzene 65 95 139

Concentration Compounds: mg/kg (ppm)

Vinyl chloride <100 Chloroethane <100 1.1-Dichloroethene <100 Methylene chloride < 500 trans-1,2-Dichloroethene <100 1.1-Dichloroethane <100 cis-1,2-Dichloroethene <100 1,2-Dichloroethane (EDC) <100 1.1.1-Trichloroethane <100 Trichloroethene <100 Tetrachloroethene <100

#### **ENVIRONMENTAL CHEMISTS**

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

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU_0914-001-12_20150402, F&BI 504058

Date Extracted: 04/02/15 Lab ID: 05-0646 mb
Date Analyzed: 04/02/15 Data File: 040208.D
Matrix: Soil Instrument: GCMS4

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

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	94	65	139

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

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For PCBs By EPA Method 8082A

Client Sample ID: UST05 Client: SoundEarth Strategies

Date Received: 04/02/15 Project: SOU_0914-001-12_20150402, F&BI 504058

Date Extracted: 04/02/15 Lab ID: 504058-01

Date Analyzed: 04/03/15 Data File: 09.D\ECD1A.CH

Matrix: Product Instrument: GC7 Units: mg/kg (ppm) Operator: VM

 $\begin{array}{cc} & & Concentration \\ Compounds: & & mg/kg \ (ppm) \end{array}$ 

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For PCBs By EPA Method 8082A

Client Sample ID: UST06 Client: SoundEarth Strategies

Date Received: 04/02/15 Project: SOU_0914-001-12_20150402, F&BI 504058

Date Extracted: 04/02/15 Lab ID: 504058-02

Date Analyzed: 04/03/15 Data File: 10.D\ECD1A.CH
Matrix: Product Instrument: GC7

Matrix: Product Instrument: GC7
Units: mg/kg (ppm) Operator: VM

Concentration Compounds: mg/kg (ppm)

Aroclor 1221 <2
Aroclor 1232 <2
Aroclor 1016 <2
Aroclor 1242 <2
Aroclor 1248 <2
Aroclor 1254 <2
Aroclor 1260 <2

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For PCBs By EPA Method 8082A

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU_0914-001-12_20150402, F&BI 504058

 Date Extracted:
 04/02/15
 Lab ID:
 05-685 mb

 Date Analyzed:
 04/02/15
 Data File:
 05.D\ECD1A.CH

Matrix: Product Instrument: GC7 Units: operator: ya

Concentration mg/kg (ppm)

Aroclor 1221 <2
Aroclor 1232 <2
Aroclor 1016 <2

Aroclor 1242 <2
Aroclor 1248 <2
Aroclor 1254 <2
Aroclor 1260 <2

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504058

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 504041-02 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Arsenic	mg/kg (ppm)	10	<1	94	95	67-121	1
Barium	mg/kg (ppm)	50	<1	102	106	74-135	4
Cadmium	mg/kg (ppm)	10	<1	97	97	88-121	0
Chromium	mg/kg (ppm)	50	<1	95	88	57-128	8
Lead	mg/kg (ppm)	50	<1	100	99	59-148	1
Mercury	mg/kg (ppm	10	<1	94	94	50-150	0
Selenium	mg/kg (ppm)	5	<1	89	90	55-130	1
Silver	mg/kg (ppm)	10	<1	96	96	73-122	0

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Arsenic	mg/kg (ppm)	10	99	83-113
Barium	mg/kg (ppm)	50	106	85-116
Cadmium	mg/kg (ppm)	10	99	85-114
Chromium	mg/kg (ppm)	50	98	78-121
Lead	mg/kg (ppm)	50	105	80-120
Mercury	mg/kg (ppm)	10	102	70-130
Selenium	mg/kg (ppm)	5	97	87-117
Silver	mg/kg (ppm)	10	100	78-117

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504058

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

Laboratory Code: 504002-02 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	53	51	10-138	4
Chloroethane	mg/kg (ppm)	2.5	< 0.5	69	64	10-176	8
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	68	66	10-160	3
Methylene chloride	mg/kg (ppm)	2.5	< 0.5	65	63	10-156	3
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	72	70	14-137	3
1,1-Dichloroethane	mg/kg (ppm)	2.5	< 0.05	77	74	19-140	4
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	80	78	25-135	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	< 0.05	77	74	12-160	4
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	68	67	10-156	1
Trichloroethene	mg/kg (ppm)	2.5	< 0.02	79	78	21-139	1
Tetrachloroethene	mg/kg (ppm)	2.5	< 0.025	74	74	20-133	0

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Vinyl chloride	mg/kg (ppm)	2.5	85	22-139
Chloroethane	mg/kg (ppm)	2.5	96	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	94	47-128
Methylene chloride	mg/kg (ppm)	2.5	80	42-132
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	92	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	93	68-115
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	95	72-113
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	89	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	88	62-131
Trichloroethene	mg/kg (ppm)	2.5	99	64-117
Tetrachloroethene	mg/kg (ppm)	2.5	104	72-114

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/07/15 Date Received: 04/02/15

Project: SOU_0914-001-12_20150402, F&BI 504058

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF PRODUCT SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

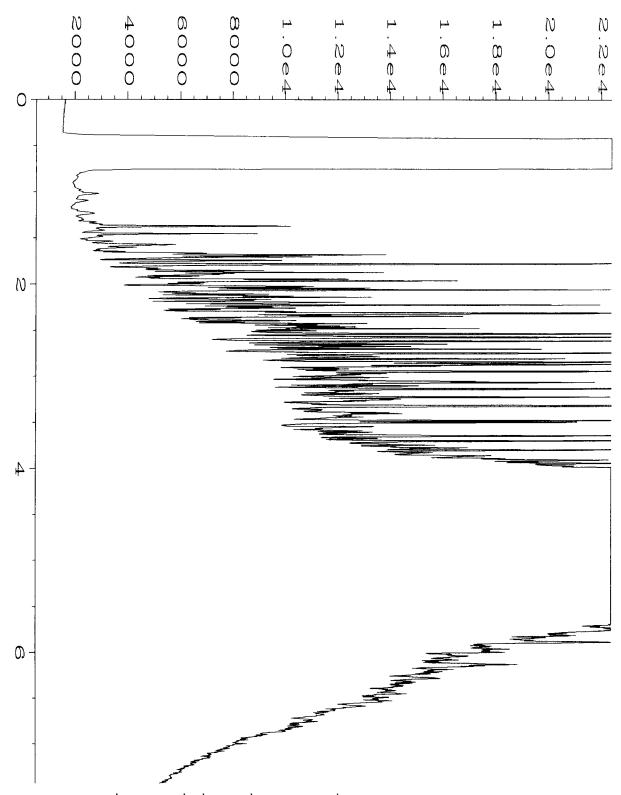
Laboratory Code: Laboratory Control Sample

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Aroclor 1016	mg/kg (ppm)	100	106	97	60-151	9
Aroclor 1260	mg/kg (ppm)	100	111	102	53-144	8

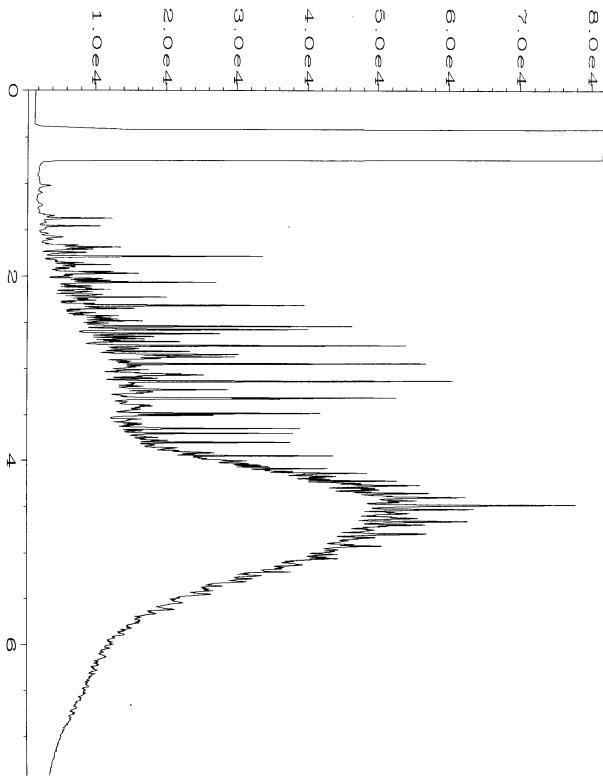
#### **ENVIRONMENTAL CHEMISTS**

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

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



```
: C:\HPCHEM\4\DATA\04-02-15\054F1201.D
Data File Name
Operator
                : mwdl
                                              Page Number
                                              Vial Number
Instrument
                : GC#4
                                                               : 54
Sample Name
                                              Injection Number: 1
                : 504058-01 1/10
Run Time Bar Code:
                                              Sequence Line : 12
Acquired on
              : 03 Apr 15 00:29 AM
                                              Instrument Method: DX.MTH
Report Created on: 03 Apr 15 09:14 AM
                                              Analysis Method : DX.MTH
```



```
Data File Name : C:\HPCHEM\4\DATA\04-02-15\055F1201.D

Operator : mwdl Page Number : 1

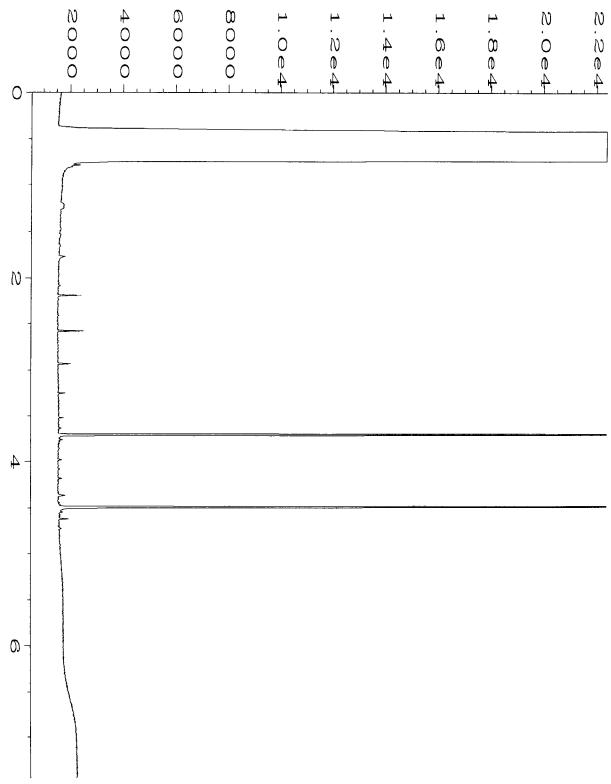
Instrument : GC#4 Vial Number : 55

Sample Name : 504058-02 1/10 Injection Number : 1

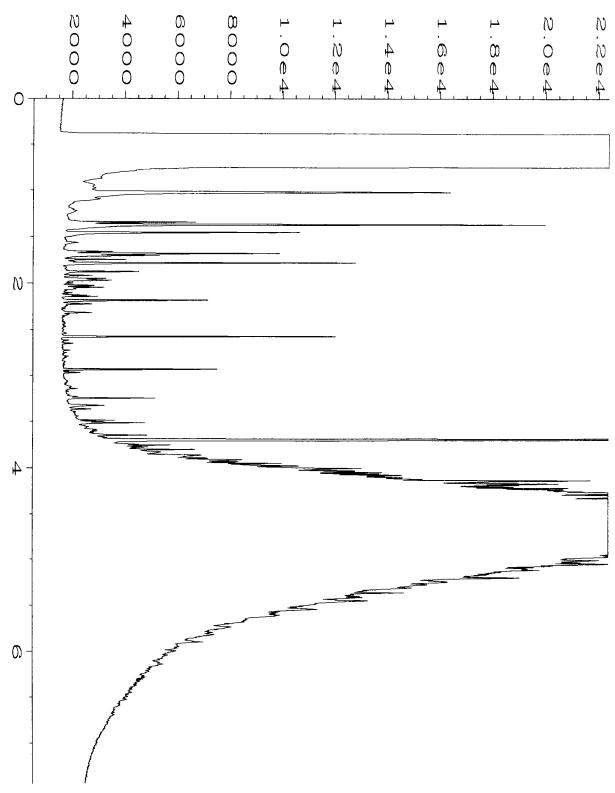
Run Time Bar Code: Sequence Line : 12

Acquired on : 03 Apr 15 00:40 AM Instrument Method: DX.MTH

Report Created on: 03 Apr 15 09:15 AM Analysis Method : DX.MTH
```



```
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Data File Name
                : mwdl
                                               Page Number
Operator
                                                                : 1
                                               Vial Number
                                                                : 51
Instrument
                : GC#4
                                               Injection Number: 1
Sample Name
                : 05-683 mb
                                               Sequence Line : 12
Run Time Bar Code:
Acquired on
             : 02 Apr 15
                                               Instrument Method: DX.MTH
                             11:53 PM
Report Created on: 03 Apr 15
                                               Analysis Method : DX.MTH
                            09:14 AM
```



```
Data File Name : C:\HPCHEM\4\DATA\04-02-15\096F1101.D

Operator : mwdl Page Number : 1

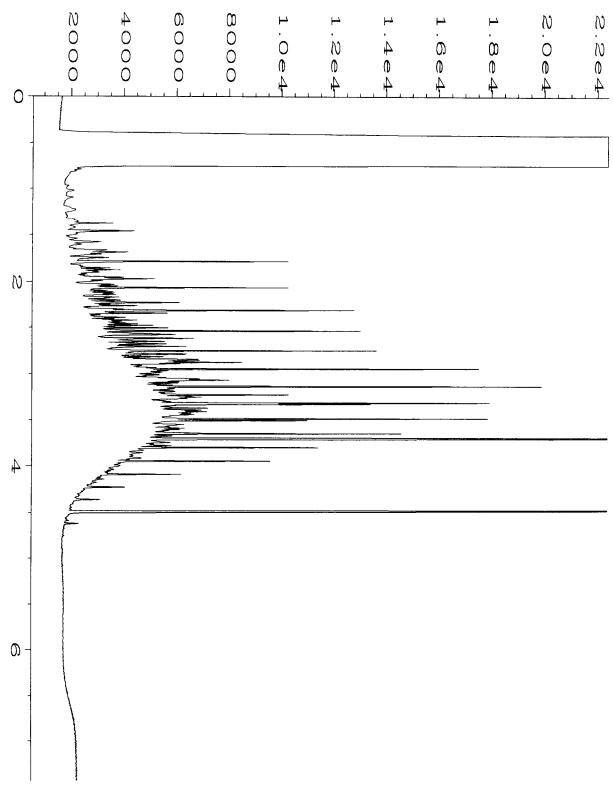
Instrument : GC#4 Vial Number : 96

Sample Name : HCIDs G/M 42-129 Injection Number : 1

Run Time Bar Code: Sequence Line : 11

Acquired on : 02 Apr 15 11:30 PM Instrument Method: DX.MTH

Report Created on: 03 Apr 15 09:14 AM Analysis Method : DX.MTH
```



```
Data File Name : C:\HPCHEM\4\DATA\04-02-15\097F1101.D

Operator : mwdl Page Number : 1

Instrument : GC#4 Vial Number : 97

Sample Name : HCIDs Dx 42-113C Injection Number : 1

Run Time Bar Code: Sequence Line : 11

Acquired on : 02 Apr 15 11:42 PM Instrument Method: DX.MTH

Report Created on: 03 Apr 15 09:14 AM Analysis Method : DX.MTH
```



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya Michael Erdahl 3012 16th Ave. W. Seattle, WA 98119

RE: 504058 Lab ID: 1504023

April 03, 2015

#### **Attention Michael Erdahl:**

Fremont Analytical, Inc. received 2 sample(s) on 4/3/2015 for the analyses presented in the following report.

#### Flashpoint by EPA 1010/ASTM D93

This report consists of the following:

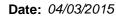
- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway President





CLIENT: Friedman & Bruya Work Order Sample Summary

**Project:** 504058 **Lab Order:** 1504023

 Lab Sample ID
 Client Sample ID
 Date/Time Collected
 Date/Time Received

 1504023-001
 UST05a
 04/02/2015 1:25 PM
 04/03/2015 8:20 AM

1504023-002 UST06 04/02/2015 1:35 PM 04/03/2015 8:20 AM



#### **Case Narrative**

WO#: **1504023**Date: **4/3/2015** 

CLIENT: Friedman & Bruya

**Project:** 504058

#### I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

#### II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

#### III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



#### **Qualifiers & Acronyms**

WO#: **1504023** 

Date Reported: 4/3/2015

#### Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below LOQ
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit

#### Acronyms:

%Rec - Percent Recovery

**CCB - Continued Calibration Blank** 

**CCV - Continued Calibration Verification** 

DF - Dilution Factor

HEM - Hexane Extractable Material

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



#### **Analytical Report**

Batch ID: R21648

WO#: **1504023** 

Analyst: WC

Date Reported: 4/3/2015

CLIENT: Friedman & Bruya

**Project:** 504058

Lab ID: 1504023-001 Collection Date: 4/2/2015 1:25:00 PM

Client Sample ID: UST05a Matrix: Product

Analyses Result RL Qual Units DF Date Analyzed

Flashpoint by EPA 1010/ASTM D93

Flashpoint 201 °F 1 4/3/2015 3:54:52 PM

NOTES:

Flame died when inserted; possible flash due to vapors putting out the flame. Flame stayed lit before and after noted temperature.

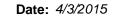
**Lab ID:** 1504023-002 **Collection Date:** 4/2/2015 1:35:00 PM

Client Sample ID: UST06 Matrix: Product

Analyses Result RL Qual Units DF Date Analyzed

Flashpoint by EPA 1010/ASTM D93 Batch ID: R21648 Analyst: WC

Flashpoint 91.4 °F 1 4/3/2015 3:54:52 PM





**Work Order:** 1504023

Project:

**QC SUMMARY REPORT** 

**CLIENT:** Friedman & Bruya

504058

Flashpoint by EPA 1010/ASTM D93

Sample ID LCS-R21648	SampType: LCS			Units: °F		Prep Da	te: <b>4/3/201</b>	5	RunNo: <b>216</b>	648	
Client ID: LCSW	Batch ID: <b>R21648</b>					Analysis Da	te: <b>4/3/201</b>	5	SeqNo: 410	0501	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Flashpoint	134		152.0	0	88.5	65	135				



#### Sample Log-In Check List

Client Name: FB	Work Order Numb	er: <b>1504023</b>	
Logged by: Clare Griggs	Date Received:	4/3/2015 8	3:20:00 AM
Chain of Custody			
1. Is Chain of Custody complete?	Yes 🗸	No $\square$	Not Present
2. How was the sample delivered?	<u>Client</u>		
Log In			
3. Coolers are present?	Yes 🗸	No 🗌	NA 🗆
4. Shipping container/cooler in good condition?	Yes 🗹	No $\square$	
5. Custody seals intact on shipping container/cooler?	Yes	No $\square$	Not Required 🗹
6. Was an attempt made to cool the samples?	Yes 🗸	No 🗌	NA 🗆
7. Were all coolers received at a temperature of >0°C to 10.0°C	Yes 🗹	No 🗌	NA 🗆
8. Sample(s) in proper container(s)?	Yes 🗸	No $\square$	
9. Sufficient sample volume for indicated test(s)?	Yes 🗹	No $\square$	
10. Are samples properly preserved?	Yes 🗹	No 🗌	
11. Was preservative added to bottles?	Yes	No 🗸	NA 🗆
12. Is the headspace in the VOA vials?	Yes	No 🗌	NA 🗹
13. Did all samples containers arrive in good condition(unbroken)?	Yes 🗹	No $\square$	
14. Does paperwork match bottle labels?	Yes 🗹	No 🗆	
15. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗌	
16. Is it clear what analyses were requested?	Yes <b>⊻</b>	No $\square$	
17. Were all holding times able to be met?	Yes 🗹	No $\square$	
Special Handling (if applicable)			
18. Was client notified of all discrepancies with this order?	Yes	No $\square$	NA 🗹
Person Notified: Dat	e		
By Whom: Via	: eMail Pho	one  Fax [	In Person
Regarding:			
Client Instructions:			
19. Additional remarks:			

#### **Item Information**

Item #	Temp °C	Condition
Cooler	5.4	Good
Sample	4.0	Good

# SUBCONTRACT SAMPLE CHAIN OF CUSTODY 150 4023

Cond Person To	Michael	I Padal 1			SOBCONI	mac1	ER	+	1			1		Page #		
Send Report To	Michael	Erdahl		-				Frem	u=						OUND TI	ME
CompanyAddress		nn and Bruya th Ave W	, Inc.		PROJECT NAME/NO. 5 04 058						PO#		□ Stand RUS! Rush cl	dard (2/M H 4/3 harges at	thorized	by:
City, State, ZIP Phone #(206) 28			06) 283-5044			ease Er	mail R	esults					☐ Dispo	SAMPLE ose after rn sampl	DISPOS 30 days es instructio	TOWNS CO.
Sample ID	Lab ID	Date Sampled	Time Sampled	Mat	rix # of jars	Dioxins and Furans by 8290	БРН	VPH	Nitrate	Sulfate	Alkalinity	Fleshpart			-	tes
USTO5 a		4/2/15	1325	pred								x				
UST 04		*	1335	7	- 1							*				
								1	1			+				
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3012 16th Avenue West -

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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Received by:				

## SUBCONTRACT SAMPLE CHAIN OF CUSTODY 150 4023

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WA 98119	ress 3012 16th Ave W			, , , ,	58		PROJECT NAME/NO. PO# 5 0 4 0 5 8 D-4 4 8					rd (2 Weeks) 4/3/15 rges authorized	by:
State, ZIP_Seattle, WA 98119 e#_(206) 285-8282 Fax #_(206) 283-5044		_ [	REMARKS  Please Email Results						SAMPLE DISPOSAL  Dispose after 30 days Return samples Will call with instructions				
Date Sampled	Time Sampled	Matr	ix # of jars	C	ЕРН	VPH	Nitrate	Sulfate	Alkalinity	Phylogia		N	otes
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Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
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Received by Convo	Clave Gnigs	FAI	413/15	8:20
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Received by:				

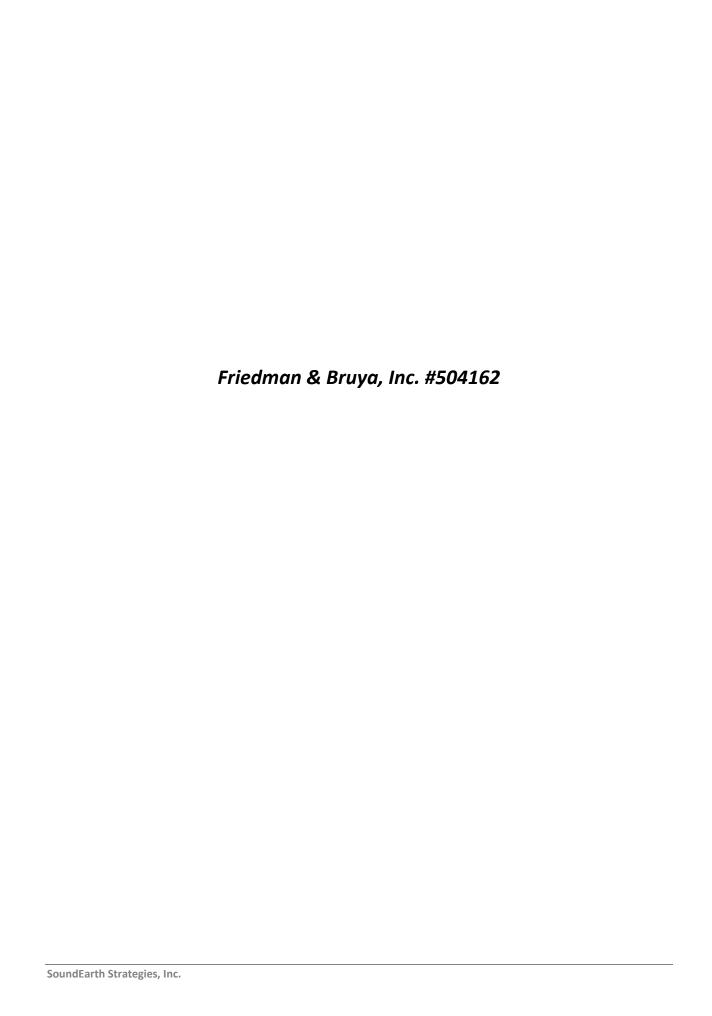
( 504058 SA	MPLE CHAY OF CUSTODY $ME$	04-02-15
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr	SAMPLERS (signature)	Page # of TURNAROUND TIME
Company SoundEarth Strategies, Inc.	PROJECT NAME/NO.	PO# Standard (2 Weeks) RUSH
Address 2811 Fairview Avenue E, Suite 2000		Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS	SAMPLE DISPOSAL Dispose after 30 days
Phone # 206-306-1900 Fax # 206-306-1907		Return samples Will call with instructions

											Al	NALYSI	ES REQU	JESTEL	)		
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	CVOCs by 8260C	よった人 名 Metals <b>by 290</b> .8	PCBs by Method 8082	4010	F1065 (1310-	Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	62 Fartes	Si	4/2/15	450
Received by:	Dd 1/0	F832	1/	15.50
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Received by:				



#### **ENVIRONMENTAL CHEMISTS**

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

April 14, 2015

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 9, 2015 from the SOU_0914-001-12_20150409, F&BI 504162 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA. INC.

Michael Erdahl Project Manager

Enclosures

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr SOU0414R.DOC

#### ENVIRONMENTAL CHEMISTS

# **CASE NARRATIVE**

This case narrative encompasses samples received on April 9, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150409, F&BI 504162 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
504162 -01	UST05-BTM01-261
504162 -02	UST06-BTM01-261
504162 -03	UST05-NSW01-262
504162 -04	UST06-ESW01-262
504162 -05	UST06-WSW01-262
504162 -06	UST06-SSW01-263

All quality control requirements were acceptable.

# ENVIRONMENTAL CHEMISTS

Date of Report: 04/14/15 Date Received: 04/09/15

Project: SOU_0914-001-12_20150409, F&BI 504162

Date Extracted: 04/09/15 Date Analyzed: 04/09/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-150)
UST05-BTM01-261	< 0.02	< 0.02	< 0.02	< 0.06	<2	87
UST06-BTM01-261 504162-02	< 0.02	<0.02	< 0.02	< 0.06	<2	87
UST05-NSW01-262 504162-03	< 0.02	<0.02	< 0.02	< 0.06	<2	88
UST06-ESW01-262 504162-04	< 0.02	< 0.02	< 0.02	< 0.06	<2	87
UST06-WSW01-262 504162-05	< 0.02	< 0.02	< 0.02	< 0.06	<2	87
UST06-SSW01-263 504162-06	< 0.02	<0.02	<0.02	< 0.06	<2	88
Method Blank 05-0697 MB2	< 0.02	< 0.02	<0.02	< 0.06	<2	88

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/14/15 Date Received: 04/09/15

Project: SOU_0914-001-12_20150409, F&BI 504162

Date Extracted: 04/10/15 Date Analyzed: 04/10/15

# 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 48-168)
UST05-BTM01-261 504162-01	87 x	580	105
UST06-BTM01-261 504162-02	< 50	<250	95
UST05-NSW01-262 504162-03	< 50	<250	100
UST06-ESW01-262 504162-04	< 50	<250	105
UST06-WSW01-262 504162-05	< 50	<250	98
UST06-SSW01-263 504162-06	< 50	<250	102
Method Blank 05-735 MB	<50	<250	106

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/14/15 Date Received: 04/09/15

Project: SOU_0914-001-12_20150409, F&BI 504162

# 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: 504104-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (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

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	87	69-120
Toluene	mg/kg (ppm)	0.5	88	70-117
Ethylbenzene	mg/kg (ppm)	0.5	87	65-123
Xylenes	mg/kg (ppm)	1.5	87	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/14/15 Date Received: 04/09/15

Project: SOU_0914-001-12_20150409, F&BI 504162

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504162-01 (Matrix Spike)

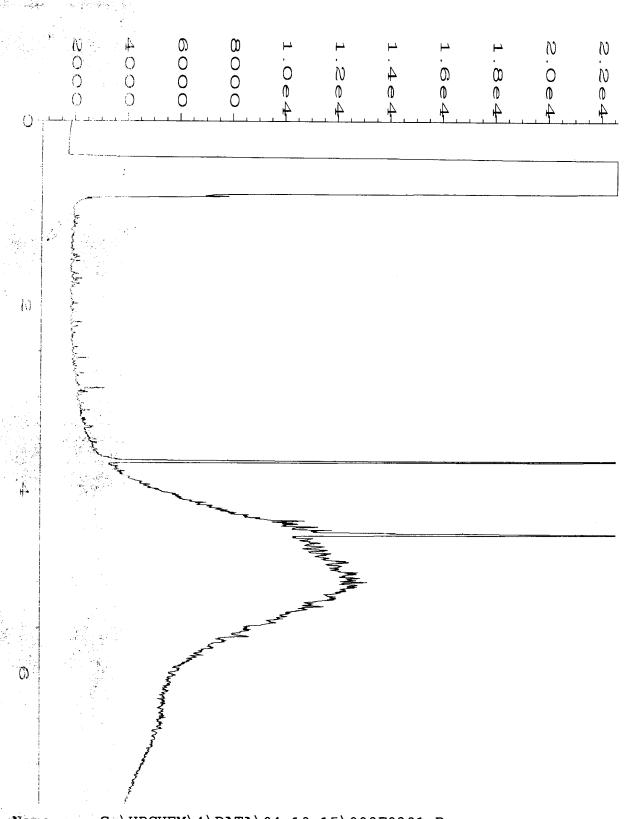
			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	390	97	106	73-135	9

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	74-139

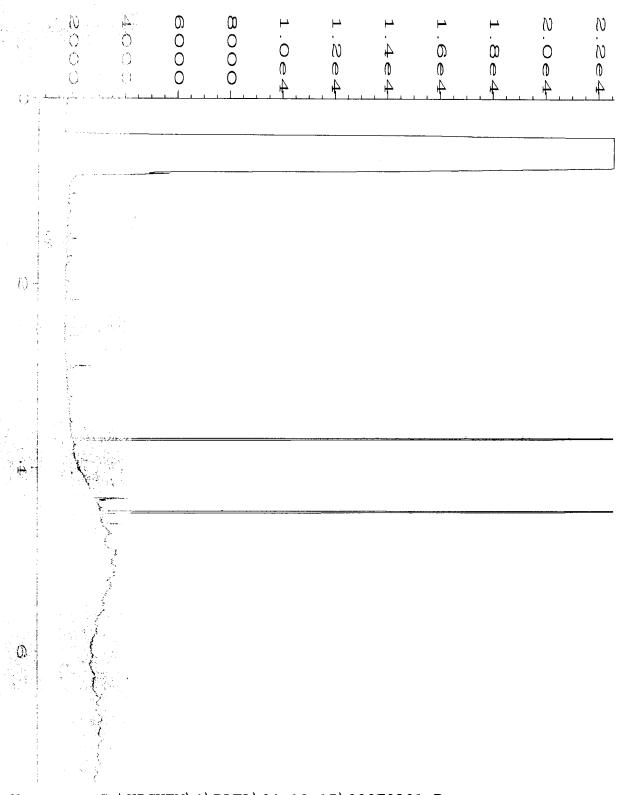
#### **ENVIRONMENTAL CHEMISTS**

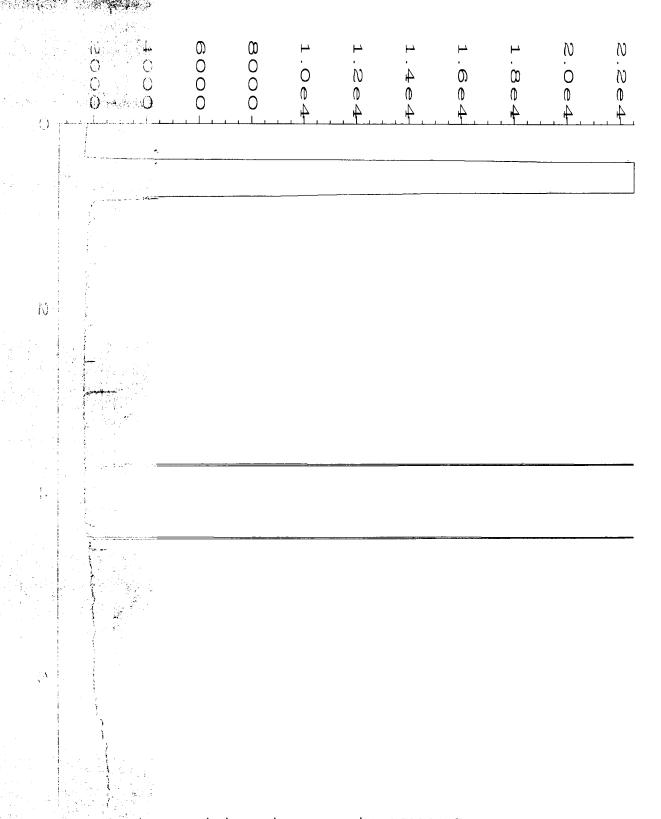
#### **Data Qualifiers & Definitions**

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

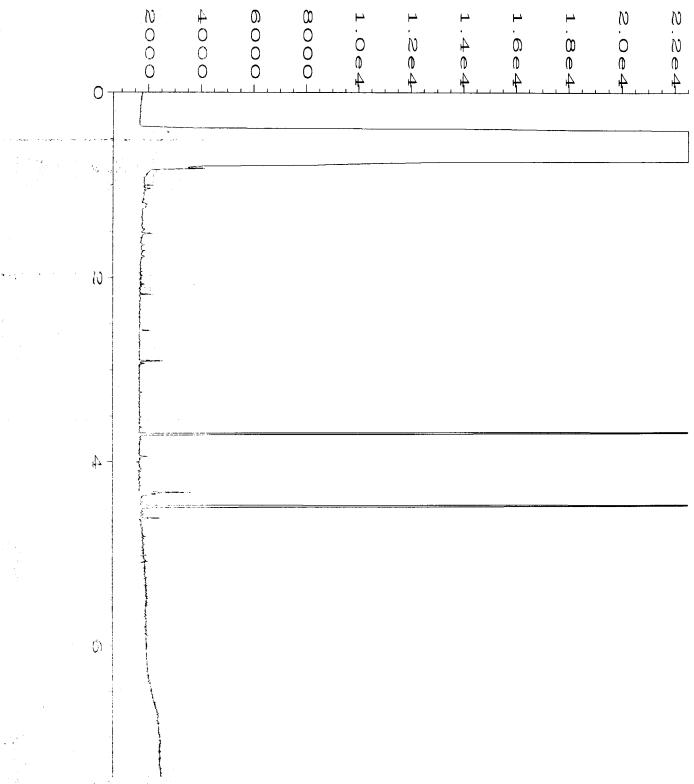


Data life Name : C:\HPCHEM\4\DATA\04-10-15\	008F0301.D
Operator : C:\HPCHEM\4\DATA\04-10-15\	Page Number : 1
Instrument CC#4	Vial Number : 8
Sample Name 504162-01	Injection Number : 1
Run Time Bar Code:	Sequence Line : 3
Acquired on : 10 Apr 15 11:31 AM	Instrument Method: DX.MTH
Report Created on: 13 Apr 15 09:49 AM	Analysis Method : DX.MTH

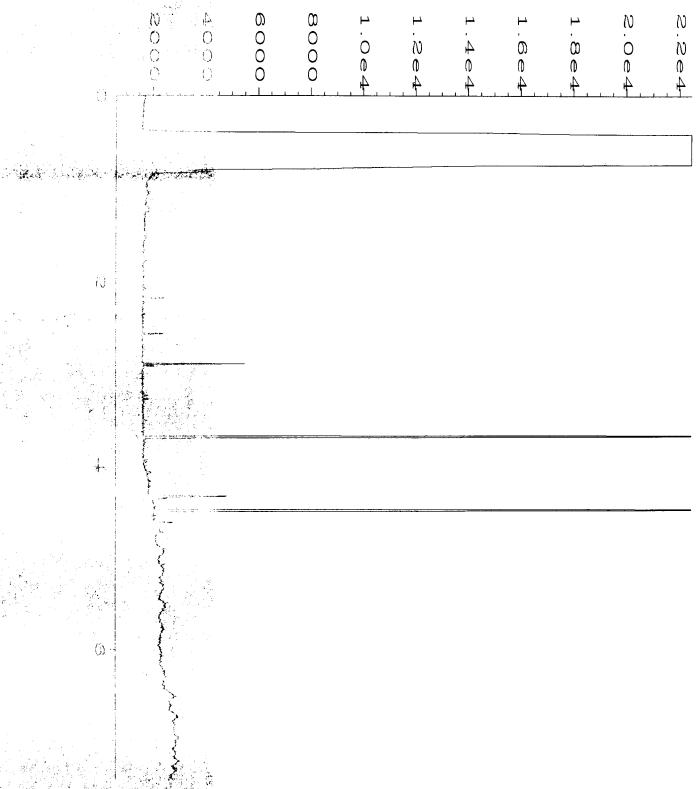




C:\HPCHEM\4\DATA\04-10-15\010F0301.D Data File Name Page Number Operator : mwdl : 1 Vial Number : 10 : GC#4 Instrument Injection Number: 1 Sample Name 504162-03 Sequence Line : 3 Run Time Bar Code: Acquired on : 10 Apr 15 11:54 AM Report Created on: 13 Apr 15 09:50 AM Instrument Method: DX.MTH Analysis Method : DX.MTH

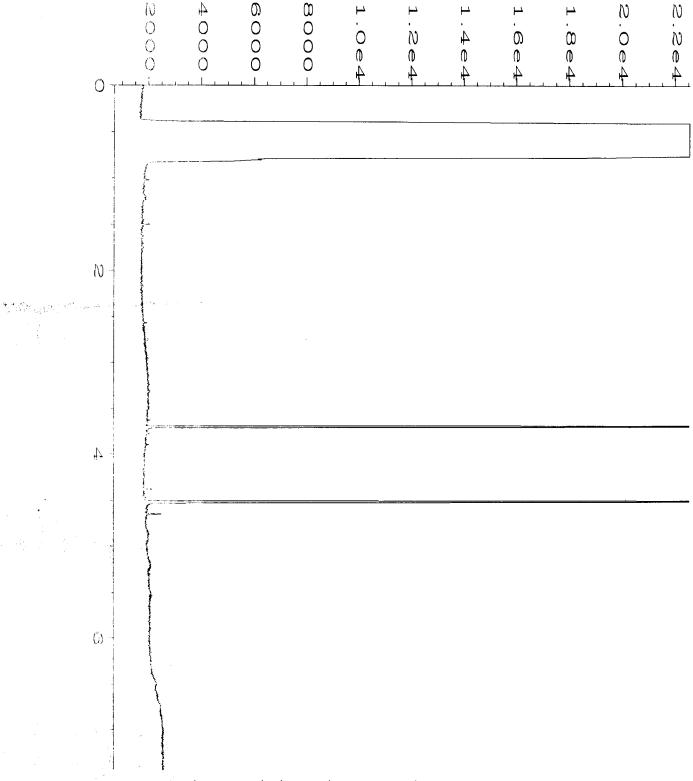


Data File Name : C:\HPCHEM\4\DATA\04-10-15\011F0301.D : mwdl Page Number : 1 Vial Number : 11 Page Number Operator : GC#4 Instrument Sample Name Injection Number: 1 : 504162-04 Sequence Line : 3 Run Time Bar Code: Acquired on : 10 Apr 15 12:05 PM Instrument Method: DX.MTH Report Created on: 13 Apr 15 09:50 AM Analysis Method : DX.MTH



\HPCHEM\4\DATA\04-10-15\012F0401.D Data File, Operator GC#4 Page Number Instrument Vial Number : 504162-05 Injection Number: 1 Sample Name Run Time Bar Code: Sequence Line : 4 Instrument Method: DX.MTH Acquired on : 10 Apr 15 01:38 PM Report Created on: 13 Apr 15 09:50 AM Analysis Method : DX.MTH

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Data File Name : C:\HPCHEM\4\DATA\04-10-15\006F0301.D

Operator : mwdl Page Number : 1

Instrument : GC#4 Vial Number : 6

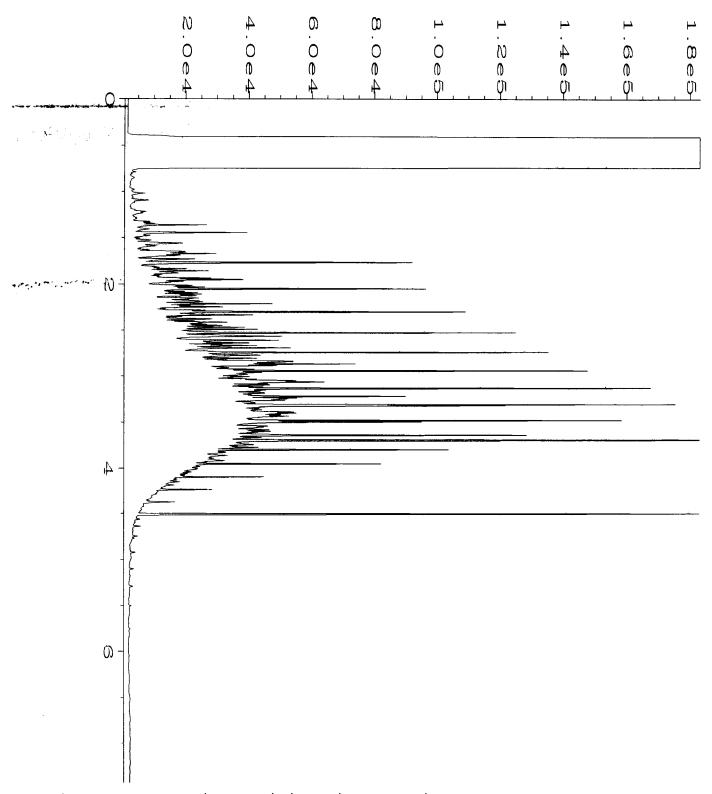
Sample Name : 05-735 mb Injection Number : 1

Run Time Bar Code: Sequence Line : 3

Acquired on : 10 Apr 15 11:10 AM Instrument Method: DX.MTH

Report Created on: 13 Apr 15 09:49 AM Analysis Method : DX.MTH

.



Data File Name : C:\HPCHEM\4\DATA\04-10-15\003F0201.D Operator Page Number : mwdl Instrument : GC#4 Vial Number Injection Number: 1 Sample Name : 500 Dx 44-94C Run Time Bar Code: Sequence Line : 2 Acquired on : 10 Apr 15 09:26 AM Instrument Method: DX.MTH Report Created on: 13 Apr 15 09:49 AM Analysis Method : DX.MTH SAMPLE CHA OF CUSTODY

CUSTODY ME 4/9/15

Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr
Company SoundEarth Strategies, Inc.
Address 2811 Fairview Avenue E, Suite 2000
City, State, ZIP Seattle, Washington 98102
Phone #206-306-1900Fax #206-306-1907

SAMPLERS (signature)	
PROJECT NAME/NO. 5KS Shell / 0914-001-12	PO#
DEMARKO	l

REMARKS HOLD second 402 jer for possible forensics analysis: 005705-BTM01-261

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ズStandard (	2 Weel	ks)	
RUSH			
Rush charges	antho	rized l	w.

SAMPLE DISPOSAL

Dispose after 30 days
Return samples
Will call with instructions

									T	A	NALYSI	ES REQU	UESTED		
Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082		Notes
		OF	4/8/15	1625	SOIL	6	*	X	×					ĸ	HOLD ONE 402 jet For possible force
	- 1			1630		6	X	×	×					*	HOLD ONE 402 jest
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15TO 6 ESW	262'	04		1644		5	×	×	X						
USTOB WSW	262'	os		1646		5	x	×	×					· · · · ·	
15706 5500	263'	06+		1648	1.	5	X	×	*						
						)	H	4/8/	15						
	Location USTOS BTM USTOG BTM USTOG NSW USTOG ESW USTOG WSW	15 TO 5 BTM 261' 15 TO 6 BTM 261' 15 TO 5 NSW 262' 15 TO 6 ESW 262' 15 TO 6 WSW 262'	Location Depth ID  15 TO 5 BTM 261' OLF  15 TO 6 BTM 261' OLF  15 TO 5 NSW 262' OS E  15 TO 6 ESW 262' OS E  15 TO 6 WSW 262' OS	Location   Depth   ID   Sampled	Location   Depth   ID   Sampled   Sampled     15705 BTM   161   O1 F   4/8/15   1625     15706 BTM   261   O2 F   1630     1640   STOE ESW   262   O4   1644     15706 WSW   262   O5   1646	Location   Depth   ID   Sampled   Sampled   Matrix     15705 BTM   261   O1     1625   301L     15706 BTM   261   O2     1630     15705 NSW   262   O3     1640     15706 ESW   262   O4     1644     15706 WSW   262   O5   1646	Location   Depth   ID   Sampled   Sampled   Matrix   Jars	15 TO 5 BTM 261' ON F 4/8/15 1625 301L 6 × 15 TO 6 BTM 261' ON 1 1630 6 × 15 TO 5 NSW 262' ON 1640 5 × 15 TO 6 ESW 262' ON 1644 5 × 15 TO 6 WSW 262' OS 1646 5 × 15 TO 6 SSW 263' OG 1648 1. 5 ×	15 TO 5 BTM 261' 01 F 4/8/15 1625 301L 6 × × 15 TO 6 BTM 261' 01 1 1630 6 × × 15 TO 5 NSW 262' 05 1640 5 × × 15 TO 6 ESW 262' 04 1644 5 × × 15 TO 6 WSW 262' 05 1646 5 × × 15 TO 6 SSW 263' 064 1648 1. 5 × ×	15 TO 5 BTM 261' ON F 4/8/15 1625 SOIL 6 × × × 15 TO 6 BTM 261' ON 1 1630 6 × × × 15 TO 5 NSW 262' ON E 1640 5 × × × 15 TO 6 ESW 262' ON 1644 5 × × × 15 TO 6 WSW 262' OS 1646 5 × × ×	Sample   Lab   Date   Sampled   Matrix   # of   Jars   Matrix   Jars   Matrix   Ma	Sample Location   Sample   Lab   Date   Time   Sampled   Matrix   # of   Jars   Hdl   Matrix   Hof   Jars   Hdl   Matrix   Hof   Hdl   Hdl   Matrix   Hof   Hdl   Hdl   Matrix   Hof   Hdl   Hdl   Matrix   Hof   Hdl   Hdl   Hdl   Hdl   Hdl   Matrix   Hof   Hdl   Sample   Lab   Date   Time   Sampled   Matrix   # of   Jars   Add   Matrix   # of   Jars   Add   Matrix   Mat	15T05 BTM 261' 01	Sample   Location   Sample   Lab   Date   Sampled   Sampled   Matrix   # of   Jars   Hall   Matrix   Jars   Hall   Hall   Hall   Hall   Hall   Hall   Matrix   Hall   H	

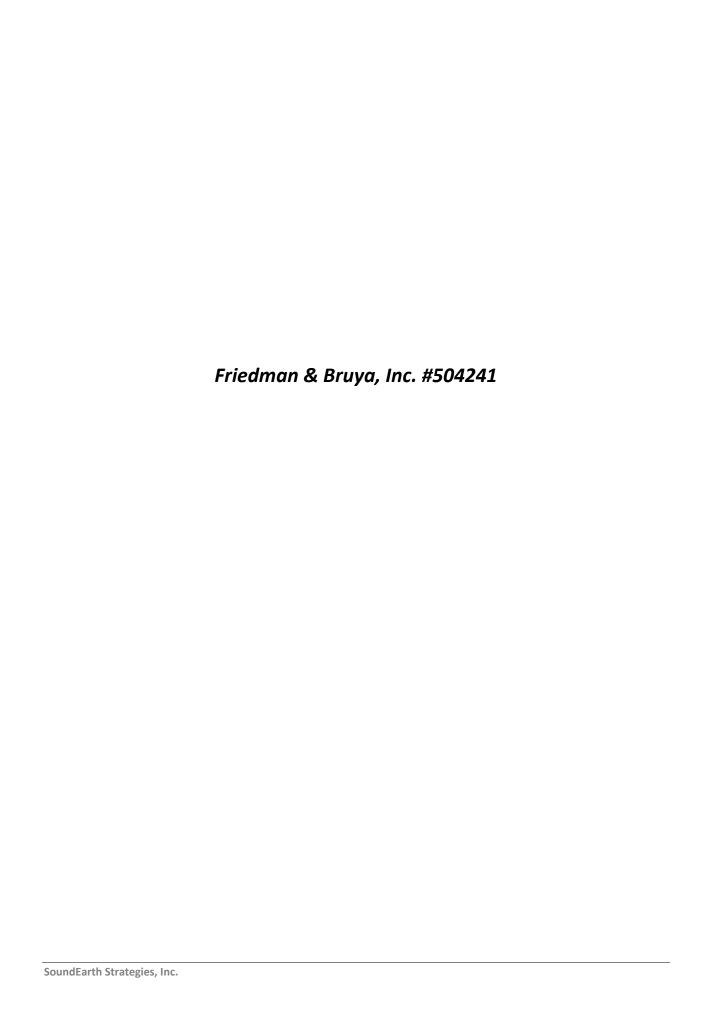
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by	JONATHAN LOEFFLER	SOUNDEARTH	4/8/15	1131
Received by:  Relinquished by:	- Dhan Phan	FeBI	4/9/15	1131
Received by:				
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#### **ENVIRONMENTAL CHEMISTS**

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

April 22, 2015

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 14, 2015 from the SOU_0914-001-12_20150414, F&BI 504241 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

c: Suzy Stumpf, Liz Forbes, Jennifer Cyr, Jonathan Loeffler SOU0422R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### **CASE NARRATIVE**

This case narrative encompasses samples received on April 14, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150414, F&BI 504241 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>SoundEarth Strategies</u>

504241 -01 UST07

Sample UST07 was sent to Fremont for flashpoint analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/22/15 Date Received: 04/14/15

Project: SOU_0914-001-12_20150414, F&BI 504241

Date Extracted: 04/14/15 Date Analyzed: 04/14/15

# RESULTS FROM THE ANALYSIS OF SOIL/PRODUCT SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID Results Reported as Not Detected (ND) or Detected (D)

# THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	<u>Diesel</u>	<u>Heavy Oil</u>	Surrogate (% Recovery) (Limit 56-165)
UST07 504241-01 1/10	D	ND	D	103
Method Blank	ND	ND	ND	105

ND - Material not detected at or above 2,000 mg/kg gas, 5,000 mg/kg diesel and 25,000 mg/kg heavy oil.

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Total Metals By EPA Method 200.8

Client ID: UST07 Client: SoundEarth Strategies

Date Received: Project: SOU_0914-001-12_20150414, F&BI 504241 04/14/15

Lab ID: 504241-01 Date Extracted: 04/14/15 Date Analyzed: 04/15/15 Data File: 504241-01.023 Matrix: Soil/Product Instrument: ICPMS1

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

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	86	60	125
Indium	85	60	125
Holmium	94	60	125

Concentration Analyte: mg/kg (ppm)

Arsenic <1 Barium 4.89 Cadmium <1 Chromium 1.82 Lead 1,230 Mercury <1 Selenium <1 Silver <1

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Total Metals By EPA Method 200.8

Client ID: Method Blank Client: SoundEarth Strategies

Date Received: Project: SOU_0914-001-12_20150414, F&BI 504241 NA

Lab ID: I5-222 mb Date Extracted: 04/14/15 Date Analyzed: 04/15/15 Data File: I5-222 mb.010 Matrix: Soil Instrument: ICPMS1

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

		Lower	Upper
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	94	60	125
Indium	94	60	125
Holmium	102	60	125

Concentration Analyte: mg/kg (ppm)

Arsenic <1 Barium <1 Cadmium <1 Chromium <1 Lead <1 Mercury <1 Selenium <1 Silver <1

#### **ENVIRONMENTAL CHEMISTS**

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

Client Sample ID: UST07 Client: SoundEarth Strategies

Date Received: 04/14/15 Project: SOU_0914-001-12_20150414, F&BI 504241

Date Extracted: 04/14/15 Lab ID: 504241-01 1/2000

Date Analyzed: 04/14/15 Data File: 041407.D

Matrix: Soil/Product Instrument: GCMS4

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

Lower Upper % Recovery: Limit: Limit: **Surrogates:** 1.2-Dichloroethane-d4 99 62 142 Toluene-d8 100 55 145 4-Bromofluorobenzene 99 65 139

Concentration Compounds: mg/kg (ppm)

Vinyl chloride <100 Chloroethane <1,000 1.1-Dichloroethene <100 Methylene chloride <1,000 trans-1,2-Dichloroethene <100 1.1-Dichloroethane <100 cis-1,2-Dichloroethene <100 1,2-Dichloroethane (EDC) <100 1.1.1-Trichloroethane <100 Trichloroethene <40 Tetrachloroethene < 50

#### ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU_0914-001-12_20150414, F&BI 504241

Date Extracted: 04/14/15 Lab ID: 05-0719 mb Date Analyzed: 04/14/15 Data File: 041406.D Matrix: Soil Instrument: GCMS4

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

		Lower	Upper
Surrogates:	% Recovery:	Limit:	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	< 0.02
Tetrachloroethene	< 0.025

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For PCBs By EPA Method 8082A

Client Sample ID: UST07 Client: SoundEarth Strategies

Date Received: 04/14/15 Project: SOU_0914-001-12_20150414, F&BI 504241

Date Extracted: 04/14/15 Lab ID: 504241-01

Date Analyzed: 04/14/15 Data File: 041422.D\ECD1A.CH

Matrix: Product Instrument: GC7 Units: mg/kg (ppm) Operator: mcp

Concentration
Compounds: mg/kg (ppm)

Aroclor 1221 <2
Aroclor 1232 <2
Aroclor 1016 <2

Aroclor 1242 <2
Aroclor 1248 <2
Aroclor 1254 <2
Aroclor 1260 <2

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For PCBs By EPA Method 8082A

Client Sample ID: Method Blank Client: SoundEarth Strategies

Date Received: Not Applicable Project: SOU_0914-001-12_20150414, F&BI 504241

 Date Extracted:
 04/14/15
 Lab ID:
 05-746 mb2

 Date Analyzed:
 04/14/15
 Data File:
 20.D\ECD1A.CH

Matrix: Product Instrument: GC7 Units: mg/kg (ppm) Operator: mcp

Concentration
Compounds: mg/kg (ppm)

Aroclor 1221 <2
Aroclor 1232 <2
Aroclor 1016 <2

Aroclor 1242 <2
Aroclor 1248 <2
Aroclor 1254 <2
Aroclor 1260 <2

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/22/15 Date Received: 04/14/15

Project: SOU_0914-001-12_20150414, F&BI 504241

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 504171-02 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Arsenic	mg/kg (ppm)	10	1.92	75	80	67-121	6
Barium	mg/kg (ppm)	50	20.4	79	86	74-135	8
Cadmium	mg/kg (ppm)	10	<1	89	94	88-121	5
Chromium	mg/kg (ppm)	50	7.50	76	80	57-128	5
Lead	mg/kg (ppm)	50	7.41	81	87	59-148	7
Mercury	mg/kg (ppm	10	<1	93	101	50-150	8
Selenium	mg/kg (ppm)	5	<1	81	84	55-130	4
Silver	mg/kg (ppm)	10	<1	79	85	73-122	7

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Arsenic	mg/kg (ppm)	10	97	83-113
Barium	mg/kg (ppm)	50	104	85-116
Cadmium	mg/kg (ppm)	10	105	85-114
Chromium	mg/kg (ppm)	50	95	78-121
Lead	mg/kg (ppm)	50	102	80-120
Mercury	mg/kg (ppm)	10	100	70-130
Selenium	mg/kg (ppm)	5	99	87-117
Silver	mg/kg (ppm)	10	99	78-117

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/22/15 Date Received: 04/14/15

Project: SOU_0914-001-12_20150414, F&BI 504241

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

Laboratory Code: 504241-01 1/2000 (Duplicate)

		Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet wt)	(Wet wt)	(Limit 20)
Vinyl chloride	mg/kg (ppm)	<100	<100	nm
Chloroethane	mg/kg (ppm)	<1,000	<1,000	nm
1,1-Dichloroethene	mg/kg (ppm)	<100	<100	nm
Methylene chloride	mg/kg (ppm)	<1,000	<1,000	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<100	<100	nm
1,1-Dichloroethane	mg/kg (ppm)	<100	<100	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<100	<100	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<100	<100	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<100	<100	nm
Trichloroethene	mg/kg (ppm)	<40	<40	nm
Tetrachloroethene	mg/kg (ppm)	< 50	< 50	nm

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	89	88	22-139	1
Chloroethane	mg/kg (ppm)	2.5	96	93	10-163	3
1,1-Dichloroethene	mg/kg (ppm)	2.5	96	95	47-128	1
Methylene chloride	mg/kg (ppm)	2.5	116	114	42-132	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	114	110	67-127	4
1,1-Dichloroethane	mg/kg (ppm)	2.5	109	107	68-115	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	111	108	72-113	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	113	111	56-135	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	110	108	62-131	2
Trichloroethene	mg/kg (ppm)	2.5	109	106	64-117	3
Tetrachloroethene	mg/kg (ppm)	2.5	104	102	72-114	2

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/22/15 Date Received: 04/14/15

Project: SOU_0914-001-12_20150414, F&BI 504241

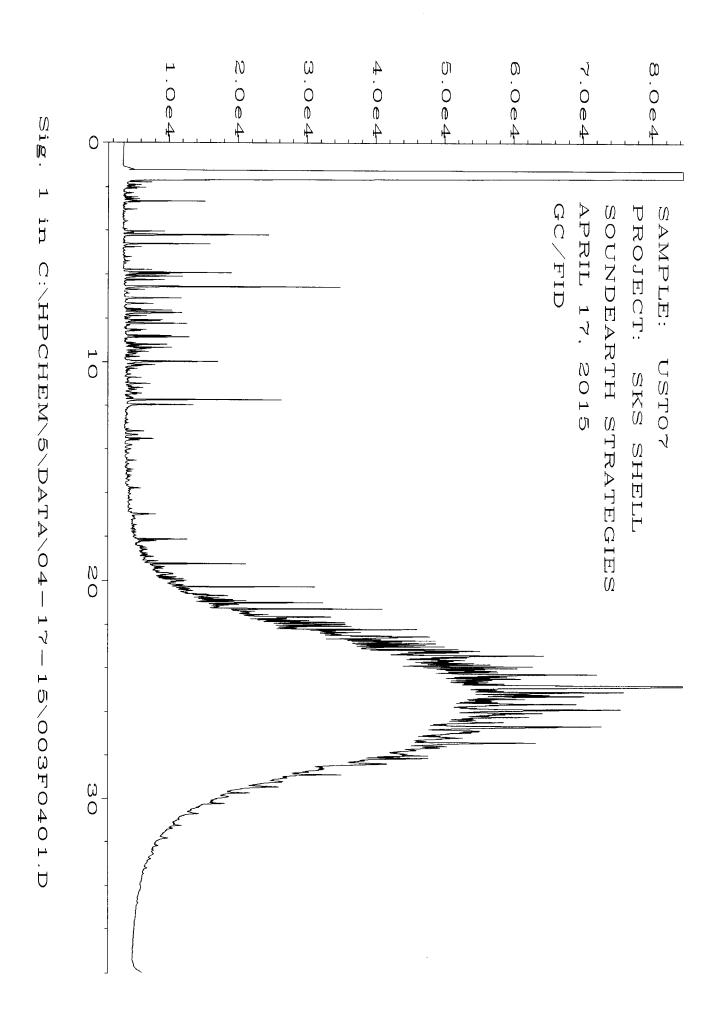
#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF PRODUCT SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

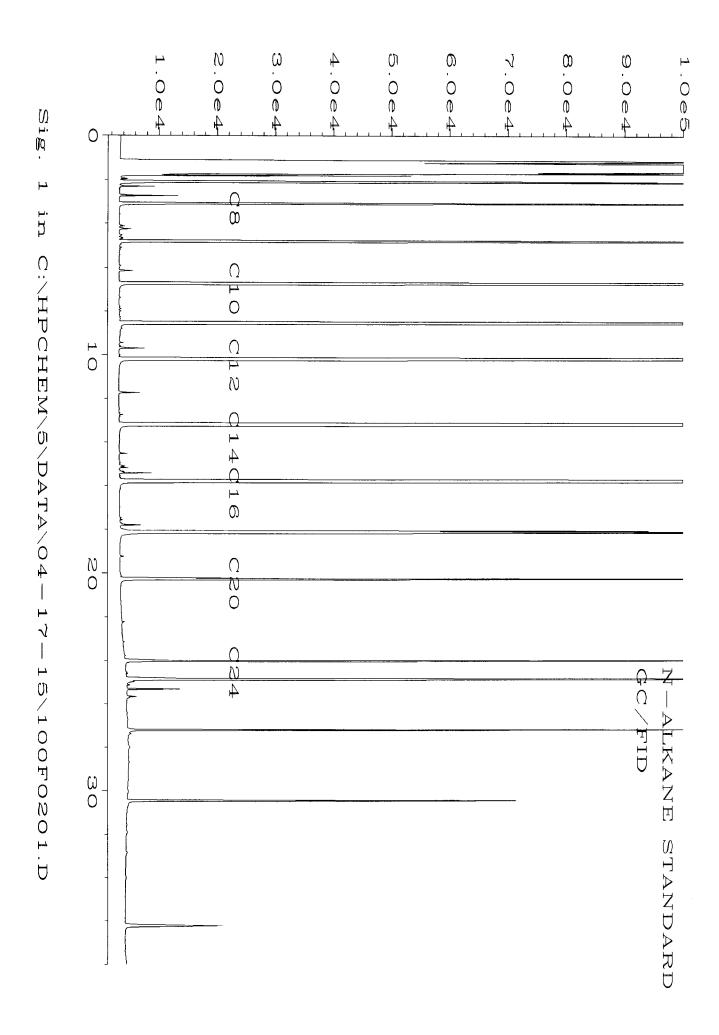
			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Aroclor 1016	mg/kg (ppm)	100	105	110	60-151	5
Aroclor 1260	mg/kg (ppm)	100	105	109	53-144	4

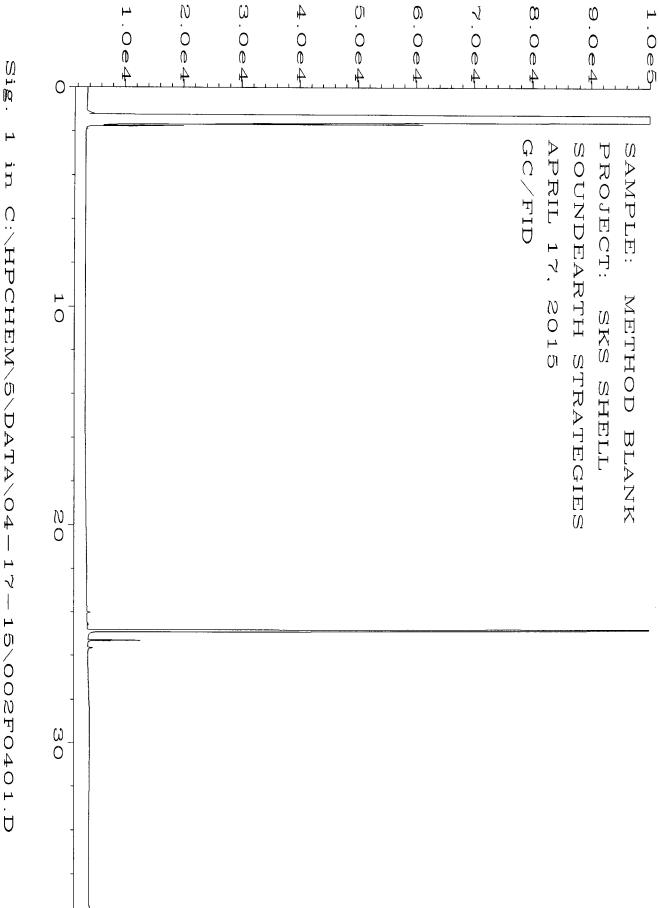
#### **ENVIRONMENTAL CHEMISTS**

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

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







in C:\HPCHEM\5\DATA\04-17-15\002F0401.D



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya Michael Erdahl

3012 16th Ave. W. Seattle, WA 98119

RE: 504241

Lab ID: 1504105

April 15, 2015

#### **Attention Michael Erdahl:**

Fremont Analytical, Inc. received 1 sample(s) on 4/14/2015 for the analyses presented in the following report.

#### Flashpoint by EPA 1010/ASTM D93

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway President



Date: 04/15/2015

CLIENT: Friedman & Bruya Work Order Sample Summary

**Project:** 504241 **Lab Order:** 1504105

Lab Sample ID Client Sample ID Date/Time Collected Date/Time Received

1504105-001 UST07 04/14/2015 10:30 AM 04/14/2015 2:43 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned



#### **Case Narrative**

WO#: **1504105**Date: **4/15/2015** 

**CLIENT:** Friedman & Bruya

**Project:** 504241

#### I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

#### II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS). The LCS is processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

#### III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



## **Qualifiers & Acronyms**

WO#: **1504105** 

Date Reported: **4/15/2015** 

#### Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below LOQ
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit

#### Acronyms:

%Rec - Percent Recovery

**CCB - Continued Calibration Blank** 

**CCV - Continued Calibration Verification** 

DF - Dilution Factor

**HEM** - Hexane Extractable Material

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



## **Analytical Report**

Batch ID: R21812

WO#: **1504105** 

Analyst: WC

Date Reported: 4/15/2015

Client: Friedman & Bruya Collection Date: 4/14/2015 10:30:00 AM

**Project:** 504241

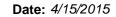
**Lab ID:** 1504105-001 **Matrix:** Product

Client Sample ID: UST07

Analyses Result RL Qual Units DF Date Analyzed

Flashpoint by EPA 1010/ASTM D93

Flashpoint >200 °F 1 4/15/2015 12:40:31 PM





**Work Order:** 1504105

Project:

Analyte

**QC SUMMARY REPORT** 

%RPD RPDLimit Qual

**CLIENT:** Friedman & Bruya

504241

Flashpoint by EPA 1010/ASTM D93

%REC LowLimit HighLimit RPD Ref Val

Sample ID: LCS-R21812	SampType: LCS	Units: °F Prep Date	4/15/2015	RunNo: 21812
Client ID: LCSW	Batch ID: <b>R21812</b>	Analysis Date	4/15/2015	SeqNo: <b>413486</b>

SPK value SPK Ref Val

Flashpoint 151 152.0 0 99.2 65 135

RL

Result



## Sample Log-In Check List

С	lient Name:	FB	Work Order Numb	per: <b>1504105</b>	
Lo	ogged by:	Erica Silva	Date Received:	4/14/2015	2:43:00 PM
Cha	nin of Custo	ody			
		ustody complete?	Yes 🗸	No $\square$	Not Present
2.	How was the	sample delivered?	<u>FedEx</u>		
Log	ı İn				
	Coolers are p	present?	Yes	No 🗹	NA 🗆
•	·		er present (Matrix	= Product)	
4.	Shipping con	tainer/cooler in good condition?	Yes 🗹	No $\square$	
5.	Custody seal	s intact on shipping container/cooler?	Yes	No $\square$	Not Required <b>✓</b>
6.	Was an atten	npt made to cool the samples?	Yes 🗸	No 🗌	NA $\square$
7.	Were all cool	ers received at a temperature of >0°C to 10.0°C	Yes	No 🗸	na 🗆
		Pleas	e refer to item info	ormation .	
8.	Sample(s) in	proper container(s)?	Yes 🗹	No 🗌	
9.	Sufficient sar	mple volume for indicated test(s)?	Yes 🗹	No 🗌	
10.	Are samples	properly preserved?	Yes 🗹	No 🗌	
11.	Was preserva	ative added to bottles?	Yes	No 🗸	NA 🗆
12.	Is the headsp	pace in the VOA vials?	Yes	No $\square$	NA 🗹
13.	Did all sample	es containers arrive in good condition(unbroken)?	Yes 🗹	No $\square$	
14.	Does paperw	ork match bottle labels?	Yes 🗹	No 🗌	
15	Are matrices	correctly identified on Chain of Custody?	Yes 🗹	No 🗆	
		at analyses were requested?	Yes 🗹	No 🗌	
		ing times able to be met?	Yes 🗸	No 🗌	
Spe	cial Handl	ing (if applicable)			
18.	Was client no	otified of all discrepancies with this order?	Yes $\square$	No $\square$	NA 🗹
	Person	Notified: Date:			
	By Who			one  Fax	In Person
	Regardi			L	
	_	nstructions:			
19.	Additional rer	,			

#### **Item Information**

Item #	Temp °C	Condition
Sample	11.4	

## SUBCONTRACT SAMPLE CHAIN OF CUSTODY

100	1 / 1 / 1
	0

Send Report To	Michael	Erdahl			SUE	CONT	RACTI	ER F	remoi	H						MAROUND T	of /
Company	Friedma	and Bruya	, Inc.		PRO	JECT	NAME 0424	NO.				PO#	1.	2 RU	ndard SH	(2 Weeks)	
Address	3012 16	th Ave W		_				1			D	-45	7	Rush		s authorized	
City, State, ZIP_	Seattle,	WA 98119	-		REN	MARKS								□ Dis	pose af	PLE DISPO ter 30 days	SAL
Phone #(206) 28	35-8282	Fax #(2	06) 283-5044			Ple	ease Er	nail R	esults					□ Ret □ Wil	urn sai l call w	mples vith instruct	ions
Sample ID	Lab ID	Date Sampled	Time Sampled	Ма	trix	# of jars	Dioxins and Furans by 8290	ЕРН	VPH	Nitrate	Sulfate	Alkalinity	Flushpoint			N	Jotes
USTO7		4/14/15	1030	produ	ct	- 81							×				
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Friedman & D.	, In		CICNIAMIDE	1				D. 7.1	1			-					
Friedman & Bruyo 3012 16th Avenue	West	Relinquished b	SIGNATURE	1		Mich	ael Erd		NAM	E		Frie		PANY	-	DATE	TIME

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

ž	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Relinguished by C	Michael Erdahl	Friedman & Bruya	4/14/15	1:20
	Received by:	Sophia Gage	Fremont Analytical	H14/15	1443
	Received by:				

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SAMPLE CHA' OF CUSTODY ' ME 04-14.15

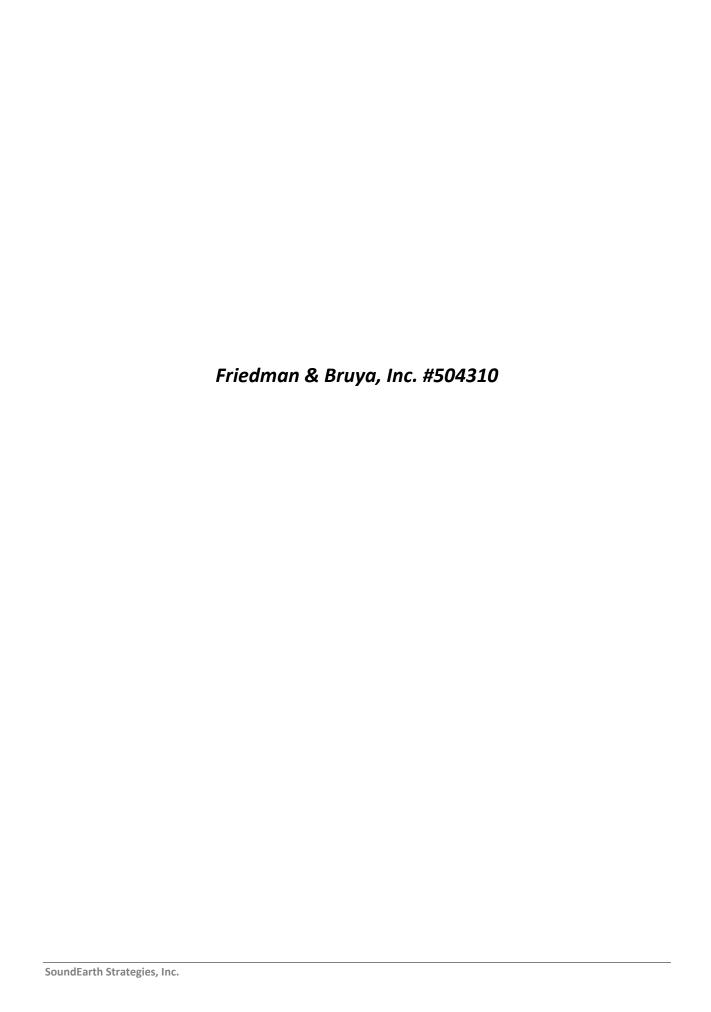
Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr;	SAMPLERS (signature)		Page # of
	PROJECT NAME/NO.	PO# D914-001-12	TURNAROUND TIME Standard (2 Weeks) RUSH 24 TAT
Address 2811 Fairview Avenue E, Suite 2000	10914-001-12	0114-001-12	Rush charges authorized by:
City, State, ZIP Seattle, Washington 98102	REMARKS		SAMPLE DISPOSAL Dispose after 30 days
Phone #206-306-1900Fax #206-306-1907			Return samples Will call with instructions

	1	Γ	<u> </u>			<del></del>												
	i									γ	A	NALYSI	ES REQU	JESTED	)			
Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	cVOCs by 8260C	PCRA 日 Metals by 200.8	PCBs by Method 8082	HCID	FLASHPOINT	Notes  Notes  ✓  ✓  ✓	
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	USTO7	USTO7 USTO7	USTO7 USTO7 —	USTO7 USTO7 — AB	USTO7 USTO7 — AB 4/14/15	Location   Depth   ID   Sampled   Sampled   USTO7   USTO7   AB   Y/14/15   1030	Location Depth ID Sampled Sampled Matrix  USTO7 — AB 4/14/15 1030 Proces	Location Depth ID Sampled Sampled Matrix Jars  USTO7 USTO7 — AB 4/14/15 1030 Proper 2	USTO7 - AB 4/14/15 1030 PECOUCT 2	USTO7 - 48 4/14/15 1030 PRODUCT 2	USTO7 - 48 4/14/15 1030 PRODUT 2	Sample ID  Sample Location  Sample Lab Date ID  Sampled  Sampled  Matrix # of Jars PHALM MATRIX AND AND AND AND AND AND AND AND AND AND	Sample   Location   Sample   Lab   Date   Sampled   Sampled   Matrix   # of   Jars   HdLlm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm   Hdllm	Sample ID   Sample   Lab   Date   Depth   ID   Sampled   Sampled   Matrix   # 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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282

Pn. (206) 285-8282
Fax (206) 283-5044
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#### **ENVIRONMENTAL CHEMISTS**

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

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

April 24, 2015

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

Dear Mr. Roberts:

Included are the results from the testing of material submitted on April 17, 2015 from the SOU_0914-001-12_20150417, F&BI 504310 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** 

c: Suzy Stumpf, Liz Forbes, Jessica Syr

SOU0424R.DOC

#### ENVIRONMENTAL CHEMISTS

#### CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2015 by Friedman & Bruya, Inc. from the SoundEarth Strategies SOU_0914-001-12_20150417, F&BI 504310 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
504310 -01	S-NSW01-C1-265
504310 -02	UST07-BTM01-262
504310 -03	UST07-SSW01-262
504310 -04	UST07-ESW01-262
504310 -05	UST07-WSW01-262
504310 -06	UST07-NSW01-262

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/24/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504310

Date Extracted: 04/17/15 Date Analyzed: 04/17/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	Ethyl <u>Benzene</u>	Total <u>Xylenes</u>	Gasoline <u>Range</u>	Surrogate (% Recovery) (Limit 50-132)
UST07-BTM01-262 504310-02	< 0.02	< 0.02	< 0.02	<0.06	<2	91
UST07-SSW01-262 504310-03	<0.02	< 0.02	<0.02	< 0.06	<2	97
UST07-ESW01-262 504310-04	< 0.02	< 0.02	<0.02	< 0.06	<2	94
UST07-WSW01-262 504310-05	< 0.02	< 0.02	< 0.02	<0.06	<2	97
UST07-NSW01-262 504310-06	< 0.02	<0.02	< 0.02	<0.06	<2	99
Method Blank 05-0754 MB2	<0.02	< 0.02	< 0.02	< 0.06	<2	85

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/24/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504310

Date Extracted: 04/17/15 Date Analyzed: 04/17/15

#### 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)

			Surrogate
Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Motor Oil Range (C ₂₅ -C ₃₆ )	(% Recovery) (Limit 56-165)
UST07-BTM01-262 504310-02	< 50	<250	100
UST07-SSW01-262 504310-03	< 50	<250	102
UST07-ESW01-262 504310-04	< 50	<250	102
UST07-WSW01-262 504310-05	< 50	<250	99
UST07-NSW01-262 504310-06	72 x	420	101
Method Blank 05-804 MB	< 50	<250	101

#### ENVIRONMENTAL CHEMISTS

## Analysis For Total Metals By EPA Method 200.8

Client ID: UST07-BTM01-262 Client: SoundEarth Strategies
Date Received: 04/17/15 Project: SOU_0914-001-12_20150417

 Date Extracted:
 04/20/15
 Lab ID:
 504310-02

 Date Analyzed:
 04/21/15
 Data File:
 504310-02.102

 Matrix:
 Soil
 Instrument:
 ICPMS1

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

Lower Upper Internal Standard: % Recovery: Limit: Limit: Holmium 97 60 125

Concentration

Analyte: mg/kg (ppm)

Lead 3.91

#### ENVIRONMENTAL CHEMISTS

## Analysis For Total Metals By EPA Method 200.8

Client ID: UST07-SSW01-262 Client: SoundEarth Strategies
Date Received: 04/17/15 Project: SOU_0914-001-12_20150417

 Date Extracted:
 04/20/15
 Lab ID:
 504310-03

 Date Analyzed:
 04/21/15
 Data File:
 504310-03.103

 Matrix:
 Soil
 Instrument:
 ICPMS1

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

Lower Upper Internal Standard: % Recovery: Limit: Limit: Holmium 96 60 125

Concentration

Analyte: mg/kg (ppm)

Lead 2.68

#### ENVIRONMENTAL CHEMISTS

## Analysis For Total Metals By EPA Method 200.8

Client ID: UST07-ESW01-262 Client: SoundEarth Strategies
Date Received: 04/17/15 Project: SOU_0914-001-12_20150417

 Date Extracted:
 04/20/15
 Lab ID:
 504310-04

 Date Analyzed:
 04/21/15
 Data File:
 504310-04.105

 Matrix:
 Soil
 Instrument:
 ICPMS1

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

Lower Upper Internal Standard: % Recovery: Limit: Limit: Holmium 97 60 125

Concentration

Analyte: mg/kg (ppm)

Lead 3.24

#### ENVIRONMENTAL CHEMISTS

## Analysis For Total Metals By EPA Method 200.8

Client ID: UST07-WSW01-262 Client: SoundEarth Strategies
Date Received: 04/17/15 Project: SOU_0914-001-12_20150417

 Date Extracted:
 04/20/15
 Lab ID:
 504310-05

 Date Analyzed:
 04/21/15
 Data File:
 504310-05.106

 Matrix:
 Soil
 Instrument:
 ICPMS1

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

Lower Upper Internal Standard: % Recovery: Limit: Limit: Holmium 96 60 125

Concentration

Analyte: mg/kg (ppm)

Lead 4.14

#### ENVIRONMENTAL CHEMISTS

## Analysis For Total Metals By EPA Method 200.8

Client ID: UST07-NSW01-262 Client: SoundEarth Strategies
Date Received: 04/17/15 Project: SOU_0914-001-12_20150417

 Date Extracted:
 04/20/15
 Lab ID:
 504310-06

 Date Analyzed:
 04/21/15
 Data File:
 504310-06.107

 Matrix:
 Soil
 Instrument:
 ICPMS1

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

Lower Upper Internal Standard: % Recovery: Limit: Limit: Holmium 97 60 125

Concentration

Analyte: mg/kg (ppm)

Lead 29.9

#### ENVIRONMENTAL CHEMISTS

## Analysis For Total Metals By EPA Method 200.8

Client ID: Method Blank Client: SoundEarth Strategies
Date Received: NA Project: SOU_0914-001-12_20150417

Date Extracted: 04/20/15 Lab ID: I5-229 mb
Date Analyzed: 04/21/15 Data File: I5-229 mb.098
Matrix: Soil Instrument: ICPMS1

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

Lower Upper Internal Standard: % Recovery: Limit: Limit: Holmium 98 60 125

Concentration

Analyte: mg/kg (ppm)

Lead <1

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/24/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504310

# 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: 504291-01 (Duplicate)

			Duplicate	
	!	Sample Result	Result	RPD
Analyte	Reporting Units	(Wet Wt)	(Wet Wt)	(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

			Percent	
		Spike	Recovery	Acceptance
Analyte	Reporting Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	0.5	80	69-120
Toluene	mg/kg (ppm)	0.5	90	70-117
Ethylbenzene	mg/kg (ppm)	0.5	89	65-123
Xylenes	mg/kg (ppm)	1.5	87	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/24/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504310

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504310-02 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	< 50	100	102	63-146	2

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	79-144

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/24/15 Date Received: 04/17/15

Project: SOU_0914-001-12_20150417, F&BI 504310

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 504331-01 (Matrix Spike)

			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Lead	mg/kg (ppm)	50	<1	101	101	59-148	0

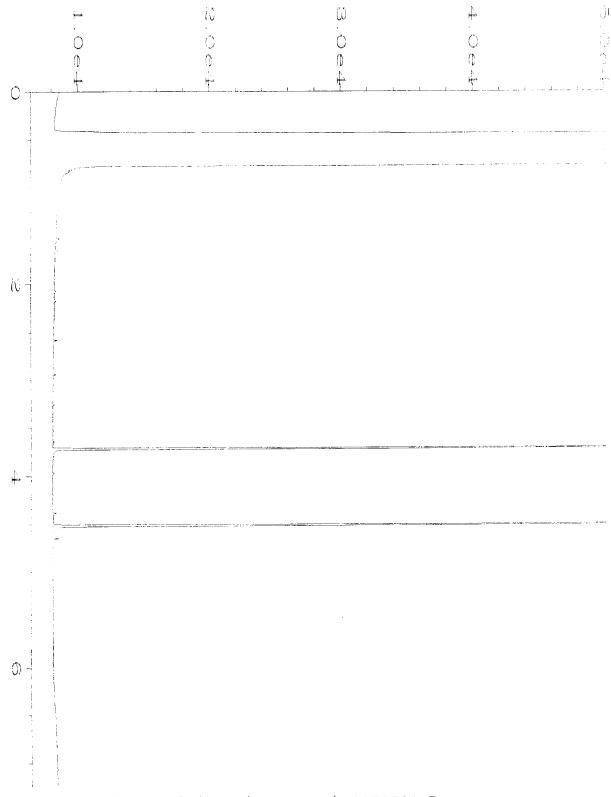
Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Lead	mg/kg (ppm)	50	102	80-120

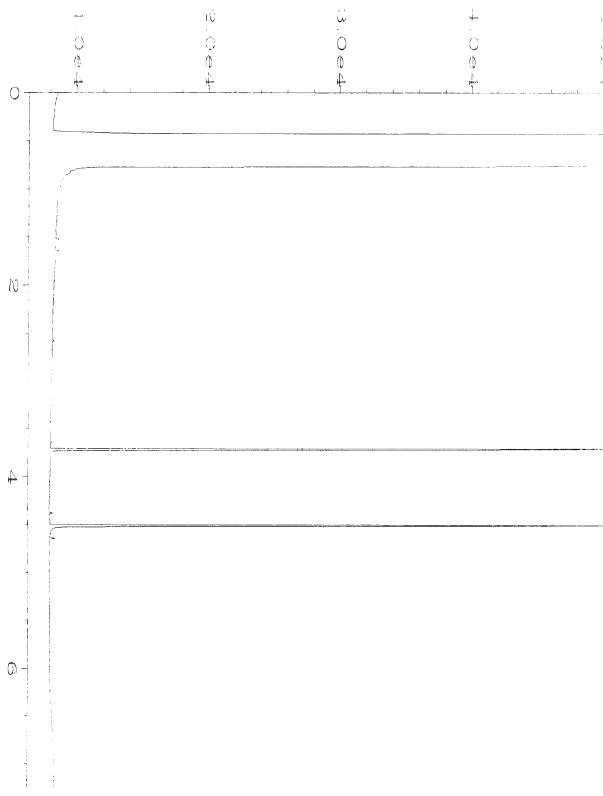
#### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

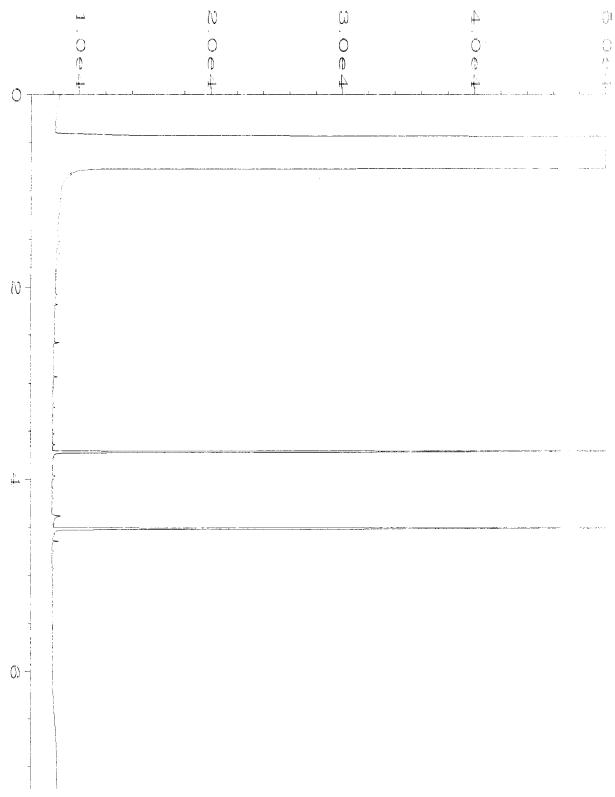
- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be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



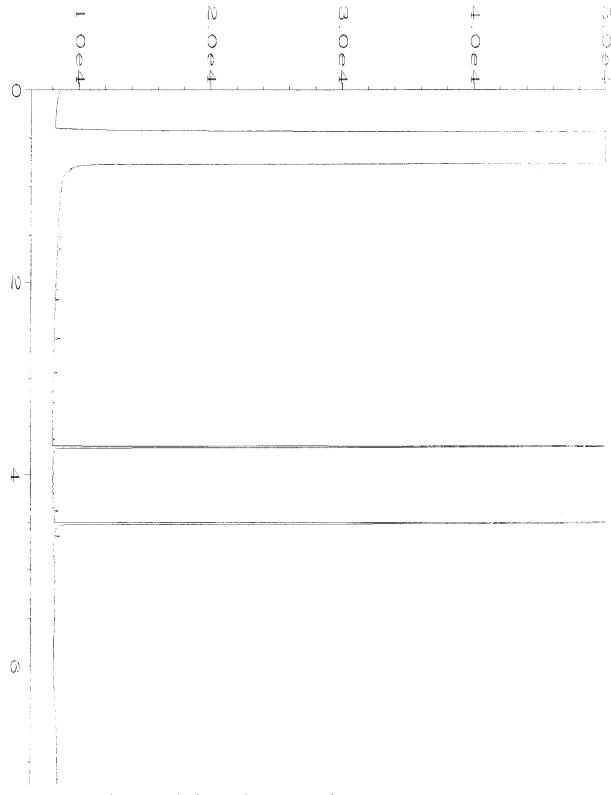
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Operator
                                               Vial Number
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Instrument
                : GC1
                                               Injection Number: 1
                : 504310-02
Sample Name
                                               Sequence Line
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 17 Apr 15 04:30 PM
Report Created on: 20 Apr 15
                            08:47 AM
                                               Analysis Method : DX.MTH
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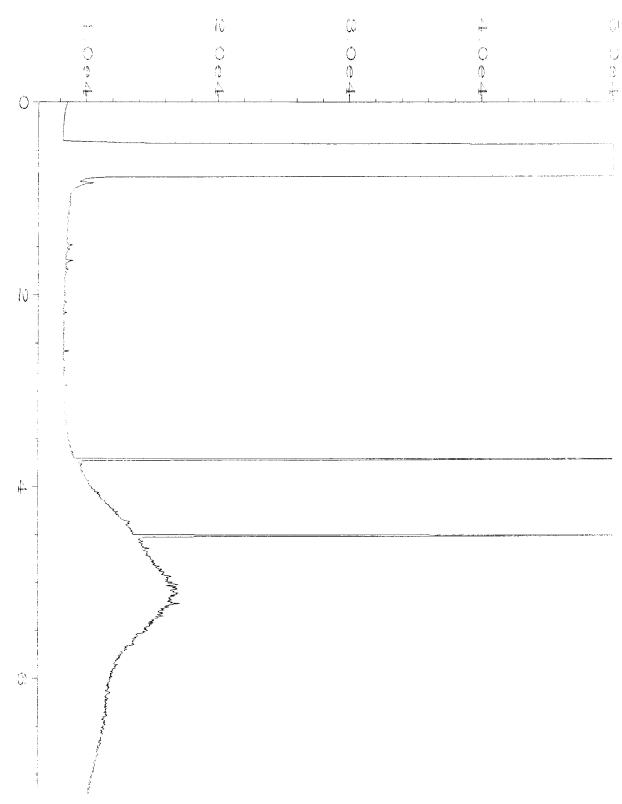
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Instrument
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Sample Name
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                                               Sequence Line : 5
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Report Created on: 20 Apr 15
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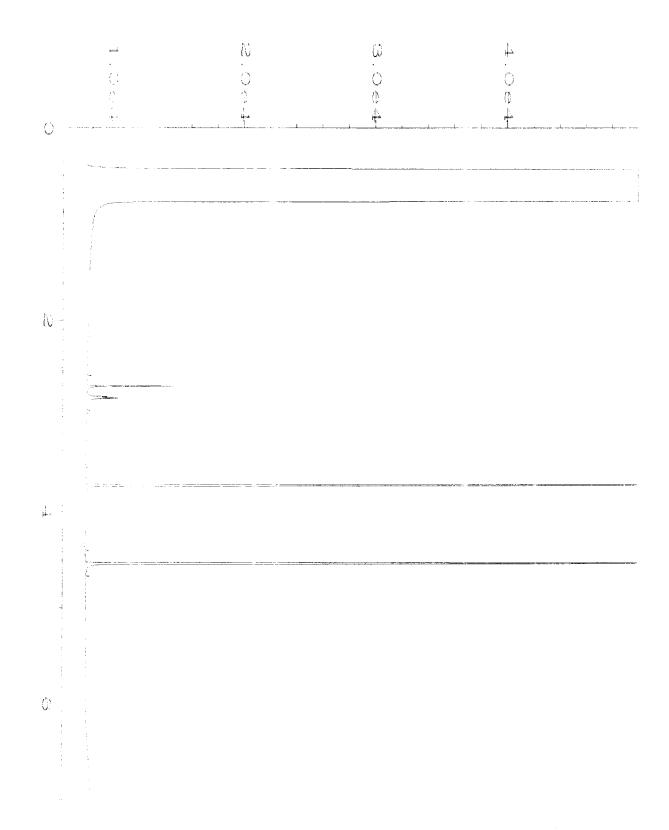
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                                             Vial Number
Instrument
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                                             Injection Number: 1
Sample Name
                                             Sequence Line : 5
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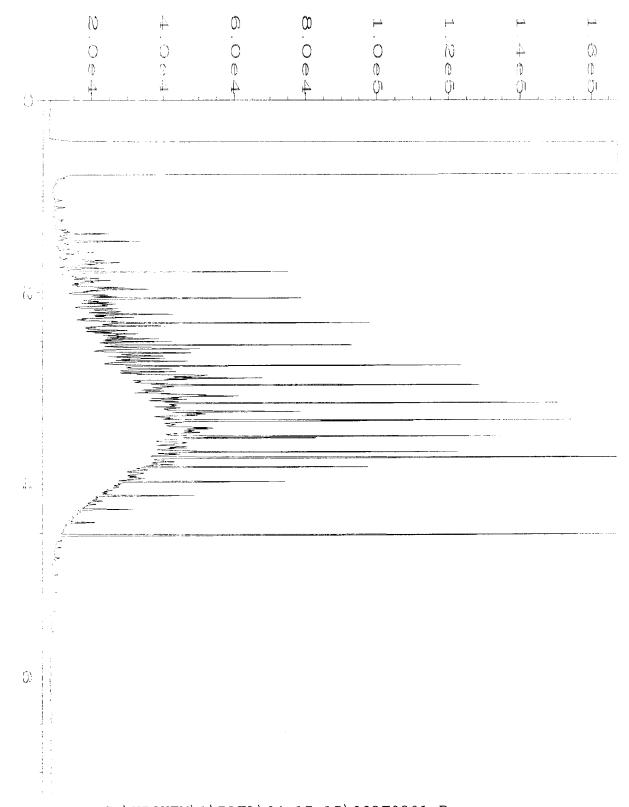
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                                             Vial Number
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Instrument
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                : 504310-05
                                             Injection Number: 1
Sample Name
                                             Sequence Line : 5
Run Time Bar Code:
                                             Instrument Method: DX.MTH
Acquired on : 17 Apr 15 05:03 PM
Report Created on: 20 Apr 15 08:48 AM
                                             Analysis Method : DX.MTH
```



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                : GC1
                : 504310-06
                                               Injection Number: 1
Sample Name
                                              Sequence Line : 5
Run Time Bar Code:
                                              Instrument Method: DX.MTH
Acquired on : 17 Apr 15 05:14 PM
Report Created on: 20 Apr 15
                            08:48 AM
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Data File Name
Operator
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                                              Vial Number
Instrument
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                                                               : 23
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Sample Name
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                                              Sequence Line : 5
Run Time Bar Code:
Acquired on : 17 Apr 15 03:48 PM
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Report Created on: 20 Apr 15
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Data File Name
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Operator
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Instrument
                                               Vial Number
                : GC1
                                               Injection Number: 1
                : 500 Dx 44-94C
Sample Name
                                               Sequence Line : 2
Run Time Bar Code:
                                               Instrument Method: DX.MTH
Acquired on : 17 Apr 15 08:56 AM
Report Created on: 20 Apr 15 08:48 AM
                                              Analysis Method : DX.MTH
```

504310

SAMPLE CHAY OF CUSTODY

SKS SHELL PROPERTY/

SAMPLERS (signature)

PROJECT NAME/NO.

ME

PO#

10914-001-12

_	Page #	of	<u>.                                    </u>
	TURNARO	OUND TIM	Œ
	≯Standard (2 W	/eeks)	
	RUSH		
	Rush charges au	thorized b	y:
L			
	SAMPLE	DISPOSA	L
- 1	Dispose after	30 davs	

Will call with instructions

Return samples

Send Report to R. Roberts; S. Stumpf; E. Forbes; J. Cyr Company_ SoundEarth Strategies, Inc. Address 2811 Fairview Avenue E, Suite 2000 City, State, ZIP Seattle, Washington 98102 Phone # 206 206 1000

0914-001-12 REMARKS * Frenze and held one you jor for facensic analysis.

Phone #	206-306-1900	rax #	206-306-1907
1			

									ANALYSES REQUESTED								
Sample ID	Sample Location	Sample Depth	Lab ID		Date mpled	Time Sampled	Matrix	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX by 8021B	PAHs by 82670SIM	VOCs by 8260C	Metals by 200.8	PCBs by Method 8082	LEAD	Notes
5-NSWD1-C1-265	CINSW	265	011	174/	16/15	1100	SOIL	6									* HOLD
USTO7-BTM01-262	USTO 7 BTM	262'	92		1	1325	SOIL	6	X	×	×					×	
USTO 7-95m21-262	USTO7 55W	262'	13			1326	SOIL	G	×	×	×					×	
USTO7-ESWOI-262	USTO F ESW	262	94			1328	SOIL	6	×	×	×					X	
USTO7-WSW01-262		I .	nt			1330	SOIL	6	×	×	×					X	
USTU7-N5W01-262	USTO 7 NSW	262'	00		L	1333	5016	(°	×	×	×					X	
				<u> </u>													
								0	11	L	116/	10.					
								118			1101	2					4
														Sec	spice 1	PCOLVE	1 at -1

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	JONATHAN LOEFFICE	SOUNDEARTH	4/11/15	
Received by:	Pat Mahony	Sound Earth	4/17/15	11:53
Relinquished by:				
Received by: Hall len	HONG NGULLEN	FBI	4/17/15	- /