SoundEarth Strategies, Inc.
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INTERIM CLEANUP ACTION REPORT

Property:
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

Ecology Facility ID: NW1584

Prepared for:
TOC Holdings Co.
2737 West Commodore Way
Seattle, Washington

Report Date:
February 6, 2014

DRAFT – ISSUED FOR CLIENT REVIEW

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4910 Leary Avenue Northwest
Seattle, Washington 98284
Ecology Facility ID: NW1584

Prepared for:

TOC Holdings Co.
2737 West Commodore Way
Seattle, Washington 98199

Project No.: 0440-041

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February 6, 2014

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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
ICAR	Interim Cleanup Action Report
cleanup level	MTCA Method A or B cleanup level
COC	chemical of concern
DRPH	diesel-range petroleum hydrocarbons
Ecology	Washington State Department of Ecology
EDB	ethylene dibromide; 1.2-dibromoethane
EDC	ethylene dichloride; 1,2-dichloroethane
EFR	enhanced fluid recovery
GeoEngineers	GeoEngineers, Inc.
GRPH	gasoline-range petroleum hydrocarbons
HASP	Health and Safety Plan
MTBE	methyl tertiary-butyl ether
MTCA	Washington State Model Toxics Control Act
ORPH	oil-range petroleum hydrocarbons
PCB	polychlorinated biphenyls
PCS	petroleum-contaminated soil
PID	photoionization detector
the Property	4910 Leary Avenue Northwest, Seattle, Washington
ROW	right-of-way
SES	Sound Environmental Strategies Corporation
the Site	the extent of petroleum-contaminated soil and groundwater associated with the historical use of the Property as a retail gasoline and automotive repair facility, including

ACRONYMS AND ABBREVIATIONS (CONTINUED)

	those impacts present beneath the Property and beneath areas to the east, south, and west of the Property
SoundEarth	SoundEarth Strategies, Inc. (formerly Sound Environmental Strategies Corporation)
SPH	separate-phase hydrocarbons
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

1.0 INTRODUCTION

SoundEarth Strategies Inc., (SoundEarth; formerly Sound Environmental Strategies Corporation [SES]) has prepared this Interim Cleanup Action Report (ICAR) on behalf of TOC Holdings Co. for TOC Holdings Co. Facility No. 01-443 Property located at 4910 Leary Avenue Northwest in Seattle, Washington (the Property; Figure 1). This ICAR was prepared for submittal to the Washington State Department of Ecology (Ecology), and it was developed to meet the general requirements of an interim cleanup action as defined by the Washington State Model Toxics Control Act (MTCA) Regulation in Chapters 173-340-400 and 173-340-410 of the Washington Administrative Code (WAC 173-340-400 and 173-340-410).

The "Site" is defined by the full lateral and vertical extent of contamination that has resulted from the former operation of a retail gasoline service station on the Property. Based on the information gathered to date, the Site has been defined to include the extent of petroleum-contaminated soil and groundwater associated with the historical use of the Property as a retail gasoline and automotive repair facility, including those impacts present beneath the Property and beneath areas to the east, south, and west of the Property.

1.1 PURPOSE

The purpose of this ICAR is to satisfy the specific requirements of the MTCA, in accordance with WAC 173-340-400 and WAC 173-340-410.

1.2 PROPERTY LOCATION AND DESCRIPTION

The following subsections present the current land use practices on the Property and surrounding parcels.

1.2.1 Property

The Property includes a single tax parcel (King County parcel number 276770-3340) that covers approximately 5,700 square feet (0.13 acres) of land. The Property is listed as 4910 Leary Avenue Northwest and is located approximately 5 miles northwest of downtown Seattle, Washington (Figure 1).

Improvements to the Property include a 1942-vintage building that is currently occupied by the Shelter Lounge. Exterior portions of the Property include an asphalt-paved parking lot and perimeter landscaping. Potable water, sewer, solid waste disposal, and recycling services are provided to the Property by the City of Seattle. Seattle City Light provides electricity to the building.

1.2.2 Adjoining and Surrounding Properties

The Property and surrounding parcels are currently zoned for industrial use. Uses of nearby parcels at the time this report was prepared are summarized below:

- **Northwest.** The adjoining property to the northwest is currently occupied by an equipment distribution facility; however, sources, such as historical maps, reverse city directories, and aerial photographs, indicate that the use of this adjoining property has been primarily occupied by automotive repair and sales facilities for much of the last 50 years.

- **West/Southwest.** Leary Avenue Northwest, a City of Seattle right-of-way (ROW), defines the southwestern Property boundary. An 18-inch-diameter sanitary sewer main, storm sewer main, and water main are located beneath the Leary Avenue Northwest ROW. The properties on the southwest side of Leary Avenue Northwest are currently occupied by warehouses and office buildings. Historically, these properties primarily operated as automotive repair facilities and warehouses.
- **East/Southeast.** The eastern Property boundary is defined by 17th Avenue Northwest, a City of Seattle ROW. A 12-inch-diameter storm sewer main, sanitary sewer main, and a natural gas line are located beneath the 17th Avenue Northwest ROW. The properties to the east of 17th Avenue Northwest currently consist of an unoccupied parcel that previously operated as an automobile repair and service station, including retail gasoline sales, a mixed-use building containing a tavern and apartments, and a retail sales building. The historical use of these nearby properties has been primarily dedicated to automotive sales and repair.

1.3 PROPERTY LAND USE HISTORY

Certified Sanborn Fire Insurance Maps, King County Assessor records, aerial photographs, and City of Seattle records were reviewed in order to provide an evaluation of historical land use practices on and surrounding the Property. The following is a summary of our observations of the information provided in historical records.

According to the Sanborn Fire Insurance Maps published in 1893, 1905, and 1917, the Property was developed with a single-family residence by 1893 (Environmental Data Resources, Inc. 2009). Archived King County Assessor records indicate that the Property was redeveloped as a retail gasoline station in 1922. The 1922-vintage building was constructed as a single-story, wood-framed building with three canopies extending to the south. The photograph enclosed with the Assessor records shows two fuel-dispensing pump islands, each equipped with three fuel dispensers, located under the main canopy. Single fuel dispensers are visible in the photograph under smaller canopies located on the west and east side of the building. A grease shed is also listed as an amenity on the record. According to archived records, the 1922-vintage building was replaced with a service station equipped with three repair bays containing a hydraulic hoist (central bay), pit area (east bay), and a canopy extending to the south with a single fuel-dispensing pump island in 1942 (Figure 2). The 1942-vintage facility was equipped with two 550-gallon underground storage tanks (USTs) and one 1,000-gallon UST. Time Oil Co. (currently TOC Holdings Co.) purchased the Property in 1957 (King County Assessor 2009a). According to reverse city directories, the Property was unoccupied by 1964, after which the facility was dedicated to automotive repair. The Station Bistro and Cocktail Lounge occupied the Property between 2006 and 2008. The Shelter Lounge opened in October 2009 and is the current tenant.

1.4 FUTURE PROPERTY LAND USE

SoundEarth is unaware of any future land use plans at the Property.

1.5 GEOLOGIC AND HYDROGEOLOGIC SETTING

Soil encountered during drilling activities conducted on the Site by SoundEarth and others consisted of loose to medium dense sand with variable gravel and local stiff, silt-rich interbeds to depths of approximately 6 to 9 feet below ground surface (bgs), much of which was interpreted to be fill material.

The fill material is underlain by very dense sand to silty sand with variable gravel that extends to the full depth explored of 35 feet bgs. The very dense underlying soils are interpreted to be Quaternary Vashon till. Groundwater is generally encountered at depths between approximately 5 and 17 feet bgs (Table 1) in monitoring wells MW01 through MW16, which are located on and off the Property. Depth-to-groundwater measurements have generally indicated a groundwater flow direction toward the southwest.

1.6 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Between 2000 and 2013, a series of subsurface investigations and interim remedial actions were conducted on the Property and within the adjacent ROWs, and are described in detail in previous reports. The locations of interim remedial actions, soil borings, monitoring wells, and other Property features are shown on Figures 2 and 3. Groundwater analytical results are shown on Figure 4. The Remedial Investigation Report, prepared by SoundEarth, should be referred to for more detailed information regarding previous environmental investigations (SES 2009).

1.6.1 Release Discovery

GeoEngineers, Inc. (GeoEngineers) conducted a site assessment on the Property in December 2000 to evaluate the environmental condition of soil and groundwater beneath the former lubrication bay located within the existing building. Soil borings HA-1 and HA-2 were advanced using a hand auger to depths of 3.5 and 4.0 feet below the base of the lubrication bay (approximately 8.5 to 9.0 feet bgs), respectively. Groundwater was encountered in both borings at an approximate depth of 6.5 feet bgs. Soil samples collected at depths of 1.5 and 3.5 feet bgs were submitted for analysis of diesel- and oil-range petroleum hydrocarbons (DRPH and ORPH, respectively). A reconnaissance groundwater sample was also collected from boring HA-1 and analyzed for DRPH; ORPH; and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Soil and groundwater samples collected from the borings did not contain concentrations of DRPH, ORPH, or BTEX constituents in excess of the applicable MTCA Method A cleanup levels (Table 2).

In March 2001, GeoEngineers oversaw the removal of a 125-gallon waste oil UST from the northeast corner of the Property and one hydraulic hoist located within the existing building. Soil beneath the UST was excavated to a depth of approximately 6 feet bgs; however, limitations due to the proximity of the UST excavation to the foundation footing prevented additional removal of petroleum-contaminated soil (PCS) from the UST excavation area. PCS was also removed from beneath the hydraulic hoist to an approximate depth of 8 feet bgs. Confirmation soil samples collected from the final limits of the UST excavation were submitted to the laboratory for the analysis of gasoline-range petroleum hydrocarbons (GRPH); DRPH; ORPH; BTEX; volatile organic compounds (VOCs) that included ethylene dichloride; 1,2-dichloroethane (EDC), polychlorinated biphenyls (PCBs); and total metals. The soil sample collected from the base of the hoist excavation was submitted for analysis of DRPH and ORPH. The results of the laboratory testing suggest that a small volume of PCS remains in the vicinity of the southern sidewall of the UST excavation at a depth of approximately 6 feet. The soil sample collected from beneath the hoist did not contain concentrations of chemicals of concern (COCs) exceeding the applicable cleanup levels.

1.6.2 2001 and 2002 Subsurface Assessment

Between June 2001 and January 2002, GeoEngineers oversaw the advancement of 11 direct-push soil borings (GP-1 through GP-11), one hollow-stem auger boring (B-1), and the installation of five groundwater monitoring wells (MW01 through MW05) in an effort to evaluate the vertical and lateral extent of petroleum-contaminated soil and groundwater beneath the Property. Soil samples collected from GP-5 through GP-8, GP-10, and GP-11 contained concentrations of GRPH and one or more BTEX constituents in excess of the applicable cleanup levels (Table 2). Concentrations of benzene that slightly exceeded the applicable cleanup level were detected in soil samples collected at 21 feet bgs from well borings MW03 and MW05, and at 31 feet bgs from well boring MW04 (Table 2). Concentrations of COCs in the groundwater samples collected from monitoring wells MW01 through MW05 were below the applicable cleanup levels and/or laboratory reporting limits (Table 1).

1.6.3 2004 UST Removal

In July and August 2004, GeoEngineers conducted a remedial excavation consisting of the removal of a 500-gallon gasoline UST, a 650-gallon gasoline UST, the associated fuel delivery systems, and approximately 1,193 tons of PCS from the Property. Prior to excavation activities, wells MW01 and MW05 were decommissioned due to their location within the proposed excavation area. In addition, a geophysical survey of the Property was conducted, the results of which indicated a magnetic anomaly beneath the 17th Avenue Northwest ROW. The magnetic signature of the anomaly appeared consistent with a UST, but could not be investigated at that time due to its location beneath the City of Seattle ROW. Two remedial excavations were conducted by GeoEngineers on the Property, including one excavation in the southern portion of the Property in order to remove the remaining UST system, and another excavation in the northern portion in order to overexcavate the remaining PCS in the vicinity of the former waste oil UST. Soil samples collected from the limits of these excavations indicated that PCS remained in place along the eastern and western boundaries of the UST system excavation as well as near the northern boundary of the waste oil UST excavation. Additional overexcavation of PCS could not be conducted without threatening the structural stability of the adjoining ROWs and building.

1.6.4 2004 Groundwater Monitoring and Monitoring Well Installation

In November and December 2004, GeoEngineers installed two monitoring wells (MW01A and MW05A) to replace those that were decommissioned during the remedial excavation and UST removal conducted in 2004. The newly installed monitoring wells were positioned within 5 feet of the original wells (MW01 and MW05). Groundwater samples collected from wells MW01A, MW02 through MW04, and MW05A in 2004 and 2005 were analyzed for GRPH, BTEX, and VOCs including EDC. Concentrations of COCs were not detected in exceedance of the applicable cleanup levels in the analyzed samples, with the exception of EDC in the groundwater samples collected from monitoring well MW03, located within the Leary Avenue Northwest ROW to the southwest of the Property.

Results of groundwater sampling events conducted between March 2002 and June 2005 indicated that EDC concentrations in groundwater collected from MW03 consistently exceeded the applicable cleanup level. Concentrations of EDC were also detected in groundwater samples collected from monitoring wells MW04 and MW05. GeoEngineers prepared an EDC assessment report in July 2006 to identify the possible sources of EDC in the vicinity of the Property. In the

report, GeoEngineers identified eight potential off-Property sources of EDC (e.g., automotive repair facilities) within a 2-block radius and over 40 potential sources within 0.5 miles of the Property. GeoEngineers concluded that the EDC detected in groundwater collected from monitoring wells MW03, MW04, and MW05 did not likely originate from the Property and may have been influenced by a leaking sewer line or utility corridor within the Leary Avenue Northwest ROW. EDC has not been detected in any soil samples collected and analyzed from the Property and evidence cited by GeoEngineers suggests that the EDC contamination is likely a regional issue and not associated with activities historically conducted at the Property.

1.6.5 2005 Subsurface Investigation

In October 2005, SoundEarth conducted a subsurface investigation to assess whether the magnetic anomaly identified beneath the 17th Avenue Northwest ROW was a UST or other source of the impacts encountered beneath the Property and adjacent ROWs. Six soil borings (P01 through P06) were advanced on the Property and adjoining ROWs during the investigation. Reconnaissance groundwater samples were collected from borings P02 through P06. Selected soil samples were analyzed for GRPH, DRPH, ORPH, BTEX, methyl tertiary-butyl ether (MTBE), ethylene dibromide (EDB), EDC, PCBs, polycyclic aromatic hydrocarbons, and/or total lead. Reconnaissance groundwater samples were analyzed for GRPH, DRPH, ORPH, BTEX, MTBE, EDB, and EDC. Soil samples collected from borings P01 through P04 contained concentrations of GRPH and/or benzene that exceeded the applicable cleanup levels. No detectable concentrations of GRPH or BTEX were present in the soil samples collected from borings P05 or P06. EDC was not detected in any of the soil samples collected.

Reconnaissance groundwater samples collected from P02 through P05 were found to contain concentrations of GRPH and/or benzene that exceeded the applicable cleanup level. A concentration of DRPH that exceeded the cleanup level was detected in the sample collected from P05. EDC was detected at a concentration exceeding the cleanup level in the reconnaissance groundwater sample collected from boring P06. Considering the absence of EDC in the soil and groundwater samples collected from the borings located on the Property and in the vicinity of the magnetic anomaly, SoundEarth concluded that the EDC concentrations detected at other locations were not the result of a release that occurred on the Property or in the vicinity of the anomaly. Considering the upgradient hydrologic location of borings P01 and P02 relative to the Property, SoundEarth also concluded that the petroleum-contaminated soil and groundwater encountered in these borings does not appear to have resulted from a release at the Property.

1.6.6 2008 Supplemental Subsurface Investigation

In May 2008, SoundEarth advanced five soil borings (B02 through B06) and completed them as monitoring wells (MW06 through MW10) in an effort to further evaluate the source and extent of GRPH, DRPH, ORPH, EDC, and BTEX in soil and groundwater beneath the adjacent Leary Avenue Northwest and 17th Avenue Northwest ROWs, as well as to investigate the cause of the magnetic anomaly observed within 17th Avenue Northwest. A concentration of GRPH in exceedance of the cleanup level was detected in the soil sample collected from boring B06 at 13.5 feet bgs; PCS was not encountered in the other borings. The magnetic anomaly within the ROW of 17th Avenue Northwest was explored by excavating an area approximately 3.5 by 3 feet wide at the ground surface that extended to a total depth of approximately 5 feet bgs. Metallic objects or other potential sources of the magnetic anomaly were not encountered in the course

of the excavation activities, and no evidence of impacts such as petroleum odors or staining were observed during the excavation.

In September of 2008, SoundEarth collected groundwater samples from each of the monitoring wells at the Site using low-flow sampling techniques. Groundwater collected from monitoring wells MW03, MW04, and MW08, which are located within the Leary Avenue Northwest ROW, contained concentrations of EDC that exceeded the cleanup level. In addition, the groundwater sample collected from monitoring well MW09 contained concentrations of GRPH, DRPH, and benzene exceeding the applicable cleanup levels; the groundwater sample collected from monitoring well MW10 contained a concentration of benzene exceeding the applicable cleanup level. None of the groundwater samples collected from monitoring wells located on or hydrologically upgradient of the Property (MW01A, MW05A, and MW02) contained concentrations of COCs in excess of the laboratory reporting limits and/or applicable cleanup levels. These findings clearly demonstrated that the EDC encountered beneath the Leary Avenue Northwest ROW resulted from a release at an off-Property location. In addition, the elevated concentrations of petroleum hydrocarbons detected in the groundwater samples collected from monitoring wells MW09 and MW10 appear to have originated from a source located to the east or southeast of the Property, possibly the retail gasoline station formerly located to the southeast of the Property at 4810 17th Avenue Northwest.

1.6.7 Regulatory Correspondence

On November 4, 2008, SoundEarth representatives met with Mr. Michael Kuntz and Mr. Nnamdi Madakor of the Ecology in order to discuss the results of previous investigations and to provide a better understanding of the criteria that will likely need to be met in order to achieve a determination of No Further Action. After reviewing the information provided by SoundEarth, Mr. Kuntz and Mr. Madakor agreed with SoundEarth's conclusion that the EDC contamination encountered in groundwater collected from monitoring wells located within the Leary Avenue Northwest ROW likely originated from an off-Property source and that it would therefore not be practical for TOC Holdings Co. to attempt to implement any remedial actions to address the EDC contamination. Mr. Kuntz and Mr. Madakor also agreed that the elevated concentrations of GRPH and/or benzene detected in monitoring wells MW09 and MW10 to the south of the Property were likely the result of a release at the gasoline station that formerly operated on the parcel located to the southeast of the Property, and they indicated that Ecology would not require TOC Holdings Co. to continue to monitor or further investigate this release.

In light of the apparent absence of groundwater contamination beneath the Property, SoundEarth advised Mr. Kuntz and Mr. Madakor that TOC Holdings Co. was interested in pursuing a Property-specific determination of No Further Action. Mr. Kuntz and Mr. Madakor advised SoundEarth that in order to achieve such a determination it would be necessary to install an additional monitoring well, positioned so as to best assess the environmental quality of groundwater immediately downgradient of the PCS that had not been excavated from the eastern (upgradient) sidewall of the UST excavation (i.e., the eastern Property boundary). Mr. Kuntz and Mr. Madakor agreed that it was not necessary to conduct additional groundwater monitoring of off-Property monitoring wells MW02 through MW04 and MW06 through MW10 in order to obtain a Property-specific determination of No Further Action.

1.6.8 Supplemental Subsurface Investigations

In January 2009, SoundEarth oversaw the advancement of one hollow-stem auger boring (B07), which was completed as a groundwater monitoring well (MW11). Select soil samples were collected from the boring and submitted for analysis of GRPH, BTEX, EDB, EDC, and MTBE. With the exception of a concentration of GRPH in the soil sample collected at 10 feet bgs, none of the COCs were detected at concentrations exceeding their respective cleanup levels. In February 2009, SoundEarth resumed quarterly groundwater monitoring activities at the Property, which included sampling monitoring well MW11. Concentrations of GRPH, DRPH, benzene, total xylenes, and naphthalene exceeded the applicable cleanup levels in the groundwater sample collected from monitoring well MW11. Concentrations of the COCs in groundwater samples collected from monitoring wells MW01A and MW05A were below the laboratory reporting limits and/or applicable MTCA Method A or B cleanup levels.

Separate-phase hydrocarbons (SPH) were unexpectedly encountered on the Property during the Third Quarter 2009 groundwater monitoring event, with a thickness of 0.54 feet. The 2010 supplemental subsurface investigation was completed to evaluate the extent of SPH in the vicinity of monitoring well MW11 and to provide additional groundwater sampling points near the eastern Property boundary to assess the quality of groundwater coming onto the Property from hydrologically upgradient locations. The 2010 supplemental subsurface investigation consisted of advancing three hollow-stem auger soil borings (B08 through B10) on the Property and two hollow-stem auger soil borings (B11 and B12) at off-Property locations; completing the borings as monitoring wells MW12 through MW16, respectively; submitting select soil samples for laboratory analysis; and conducting the Second Quarter 2010 groundwater monitoring event. Concentrations of GRPH, ethylbenzene, and total xylenes exceeded the applicable cleanup levels in the soil sample collected from boring B11 at 8 feet bgs. Concentrations of COCs were below laboratory reporting limits or the applicable cleanup levels in all other soil sample analyzed. Analytical results for the groundwater samples collected from monitoring wells MW01A, MW05A, and MW12 through MW16 indicated concentrations of GRPH and BTEX were below their respective cleanup levels or the laboratory reporting limits. The results of quarterly groundwater monitoring performed during Fourth Quarter 2009 and First and Second Quarters 2010 confirmed that the thickness of SPH in monitoring well MW11 was decreasing. SPH was not encountered in well MW11 during the monitoring event performed in October 2010. With the exception of monitoring well MW11, none of the groundwater samples collected during any of the four quarterly monitoring events performed between October 2010 and June 2011 contained concentrations of COCs that exceeded the laboratory reporting limits. During the June 2011 groundwater monitoring event, the concentrations of each of the COCs had been reduced to below their respective cleanup levels in the groundwater sample collected from monitoring well MW11.

1.6.9 Enhanced Fluid Recovery Interim Remediation Action

Between 2010 and 2013, SoundEarth conducted enhanced fluid recovery (EFR) events at the Property as part of an interim remedial action. The EFR events were intended to remove residual groundwater contamination and consisted of inserting a stinger hose into a well, sealing the wellhead and applying a vacuum to remove liquids and vapor from the well for a period of more than 6 hours. A total of approximately 110 gallons of liquid was removed from the subsurface during the two events. SoundEarth conducted three additional EFR events in July and August 2011, one EFR event in January 2012, and one EFR event in August 2013 in an effort to

further reduce petroleum hydrocarbons previously encountered in groundwater in monitoring well MW11. However, the groundwater impacts remained in the vicinity of monitoring well MW11, and SPH was encountered at that location during the groundwater monitoring events performed in March and June of 2012. Therefore, in an effort to address the SPH encountered in monitoring well MW11, SoundEarth conducted the interim cleanup action described below.

2.0 INTERIM CLEANUP ACTION

This section provides a detailed description of the pre-field and field components of the interim remedial excavation activities conducted at the Site in 2012 to remove the residual PCS and SPH beneath and proximal to the southern portion of the Property.

2.1 PRE-REMEDIAL ACTION PLAN

Prior to commencing the remedial excavation activities, SoundEarth prepared a Site-Specific Health and Safety Plan (HASP) for the remedial excavation (Appendix A).

2.1.1 Permitting

Prior to remedial activities, SoundEarth gained authorization from the City of Seattle to work under an approved utility street use permit obtained in August 2012.

2.1.2 Site Preparation and Mobilization

Prior to initiating construction activities, caution tape and delineators were erected around the perimeter of the work area. Once the controls were in place, construction equipment and supplies were mobilized to the Property and steel plates were used to temporarily cover the excavation, as needed. Warning signs, traffic cones, and delineator posts were erected along 17th Avenue Northwest by National Barricade Co., of Seattle, Washington, following an approved traffic control plan.

2.1.3 Well Decommissioning

Two monitoring wells (MW11 and MW15) that were located within the anticipated excavation footprint were decommissioned in accordance with the requirements of the Ecology Water Well Construction Act (1971), Chapter 18.104 of the Revised Code of Washington (WAC 173-160-460). The wells were decommissioned in place using bentonite clay, and the well monuments were sealed by SoundEarth Construction, LLC, of Seattle, Washington.

2.2 EXCAVATION ACTIVITIES

Remedial excavation activities were conducted between July 30 and August 7, 2012. SoundEarth provided oversight and directed the excavation activities performed by SoundEarth Construction, LLC, of Seattle, Washington.

Prior to excavation activities, three test pits, TP01 through TP03, were advanced and soil samples of the overburden were collected for soil characterization and disposal. During excavation activities, clean overburden was removed from the excavation extent to a depth of approximately 6 feet bgs (Photograph 1). The underlying PCS was excavated with a track-mounted hydraulic excavator and directly loaded onto haul trucks, then transported to the CEMEX facility in Everett, Washington, for treatment and disposal (Photographs 2 through 5). PanGEO, Inc, of Seattle, Washington, was on Site to

monitor the performance of the shoring installation, structural fill, compaction, and temporary erosion control activities (Appendix B). A soil sampling grid measuring 25 feet by 15 feet and segregated into six discrete grid cells (A01 through C02), each measuring approximately 8 feet by 8 feet, was used to direct the advancement of the excavation and provide a naming convention for collection of soil samples. Final limits of the excavation and soil sample locations are provided on Figure 5. During construction activities, three abandoned pipes within the excavation were exposed and partially removed.

Soil was excavated from the Site in approximate 100-square-foot "cells" (Photograph 6) and field screening techniques were used to direct excavation activities; however, only Ecology-approved analytical methods were used to confirm that cleanup levels were achieved. Each "cell" was sampled at the floor and at the outer extents to compare the concentrations of COCs relative to cleanup levels. Soil analytical results are summarized in Table 2 and on Figure 5. The laboratory reports are included as Appendix C.

As indicated in the soil disposal tickets provided in Appendix D, approximately 214 tons of PCS were excavated from the Site and transported to the CEMEX facility for disposal.

2.3 SITE RESTORATION

The excavation was backfilled with clean compacted fill material, both native and imported, back to ground level (Photographs 7 through 9). The excavation extent was repaved with asphalt and concrete to restore the respective parking lot and sidewalk surfaces (Photograph 10). Filled areas were adequately compacted according to observations by PanGEO, Inc., of Seattle, Washington, (Appendix B) and nuclear density tests performed by Otto Rosenau & Associates, Inc. of Seattle, Washington (Appendix B).

The temporary erosion control measures at the Site, which consisted of silt socks in an adjacent catch basin and ground protection with straw waddles, were added to protect the exposed soil.

2.4 MONITORING WELL INSTALLATION

On August 30, 2012, soil borings MW11A and MW15A were advanced on the Property using a hollow-stem auger. Cascade Drilling, L.P. of Woodinville, Washington, performed the drilling. The borings were completed as two-inch-diameter monitoring wells MW11A and MW15A to replace decommissioned monitoring wells MW11 and MW15.

Soil samples were collected continuously from 15 to 20 feet bgs to assess residual soil conditions in the excavation area. Soil samples were screened in the field for potential evidence of contamination using visual observations, notations of odor, and by conducting headspace analysis using a photoionization detector (PID) to detect the presence of volatile organic vapors. Headspace analysis was conducted by placing soil from each sample interval into a resealable plastic bag and allowing the sample to warm for a minimum of 30 seconds. The probe of the PID was then inserted into the bag, and the highest reading obtained over an approximately 30-second interval was recorded. The Unified Soil Classification System symbol, visual and olfactory notations for the samples, and PID readings were recorded on boring log forms, which are provided as Appendix E.

3.0 COMPLIANCE MONITORING

There are three types of compliance monitoring identified for interim cleanup actions performed under MTCA (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 construction and the operation and maintenance period of an interim action or interim cleanup action, as described in the HASP.
- **Performance Monitoring**—To document that the interim action or interim cleanup action has attained cleanup standards.
- **Confirmational Monitoring**—To evaluate the long-term effectiveness of the interim action or interim cleanup action once cleanup standards or other performance standards have been attained.

3.1 PROTECTION MONITORING

A Site-Specific HASP was prepared for the interim remedial action that meets the minimum requirements for such a plan identified in federal (Title 29 of the Code of Federal Regulations, Parts 1910.120 and 1926) and state (WAC 296) regulations. The HASP identifies the known physical, chemical, and biological hazards; hazard monitoring protocols; and administrative and engineering controls required to mitigate the identified hazards. Protection monitoring was performed to ensure that personnel were not subject to unsafe conditions while working on the Site; this sampling included the use of a photoionization detector to evaluate the environmental quality of ambient air at the Site. The results of the performance sampling confirmed that human health and the environment were adequately protected during the excavation activities.

3.2 PERFORMANCE MONITORING

Performance soil samples were collected in the course of prior excavations at the Site, from the southeastern confirmation samples of the 2004 excavation and from soil borings within the limits of the remedial excavation. The analytical results were used to assess when the points of compliance for soil had been achieved.

3.3 CONFIRMATIONAL MONITORING

Confirmational monitoring for soil was conducted at the final limits of the excavation to assess the concentrations of COCs in subsurface soil, to verify compliance with applicable cleanup standards, and to confirm the long-term effectiveness of the interim cleanup action. Soil samples were collected from the bottom and the sidewalls of the excavation to an approximate depth of 16 feet bgs. The locations of the soil samples were established by field screening and are shown on Figure 5.

A total of 18 confirmation soil samples were submitted to Friedman & Bruya, Inc. of Seattle, Washington, for analysis of GRPH using Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx, and BTEX using U.S. Environmental Protection Agency Method 8021B or 8260C (Table 2; Appendix C). Each sample was analyzed for GRPH and BTEX at detection limits low enough to demonstrate compliance with the cleanup levels, and the concentrations of COCs were compared to their respective

cleanup levels. Four sidewall samples, taken from the south portion of the excavation, exceeded their respective cleanup levels (Figure 5; Table 2).

Soil analytical results from remedial activities are attached to this report as Appendix C.

4.0 SUMMARY AND CONCLUSIONS

In August 2012, approximately 214 tons of PCS were excavated from the Site prior to disposal at the CEMEX facility in Everett, Washington. The results of soil sampling conducted at the final limits of the excavation confirm that a significant portion PCS has been removed from the Site as part of the interim cleanup action. Additional sampling and analysis will be necessary in order to demonstrate that the Site is compliant with regulatory criteria.

5.0 LIMITATIONS

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

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

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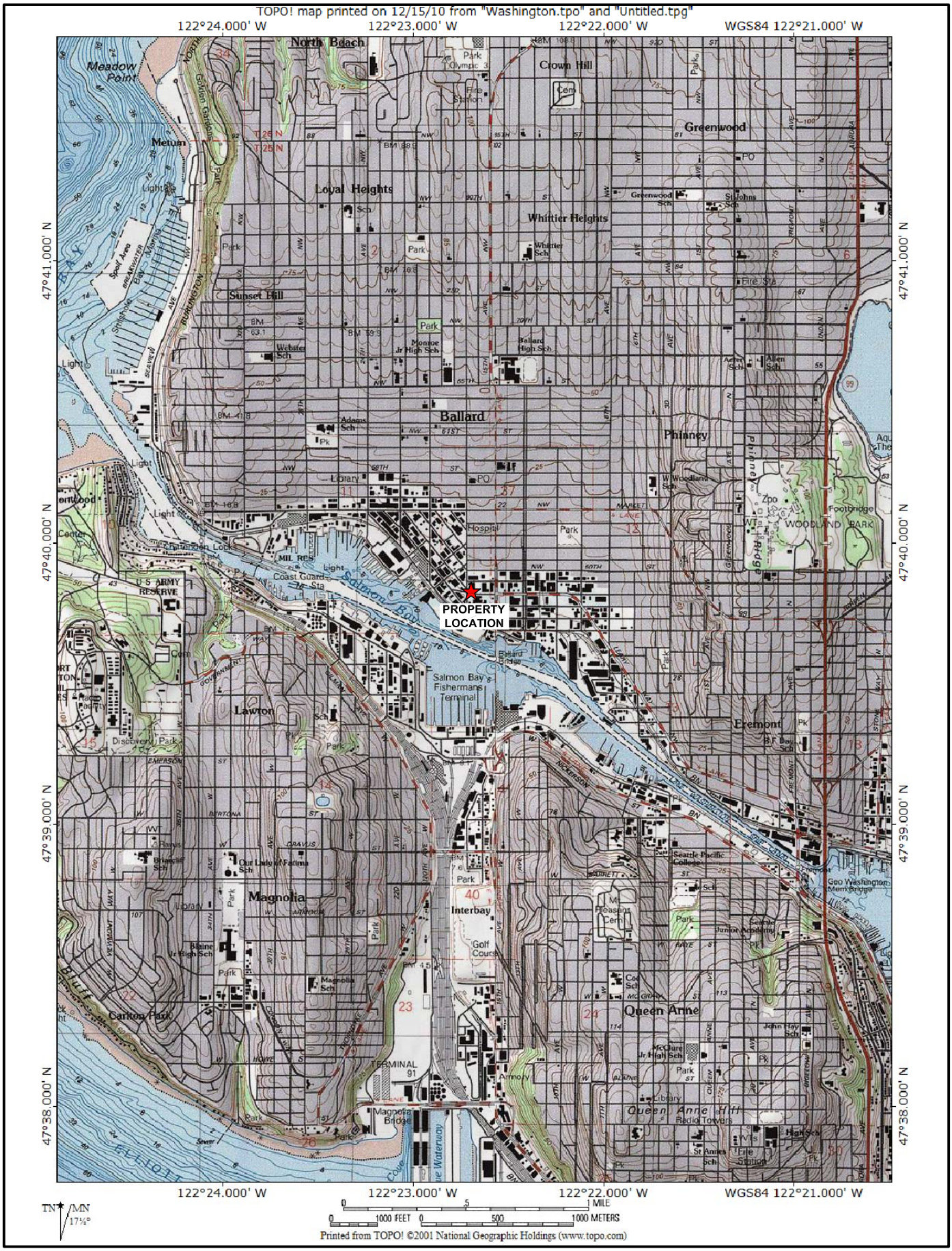
FIGURES



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CAD FILE: 01-443_Fig 1_TO

PROJECT NAME: TOC HOLDINGS CO. FACILITY NO. 01-443
PROJECT NUMBER: 0440-041
STREET ADDRESS: 4910 LEARY AVENUE NORTHWEST
CITY, STATE: SEATTLE, WASHINGTON

FIGURE 1
PROPERTY LOCATION MAP

2/7/2012
P:\0440 TOC HOLDINGS CO\01-443 BALLARD\TECHNICAL\CAD\FIGURE 1\01-443_FIG1_TO.DWG
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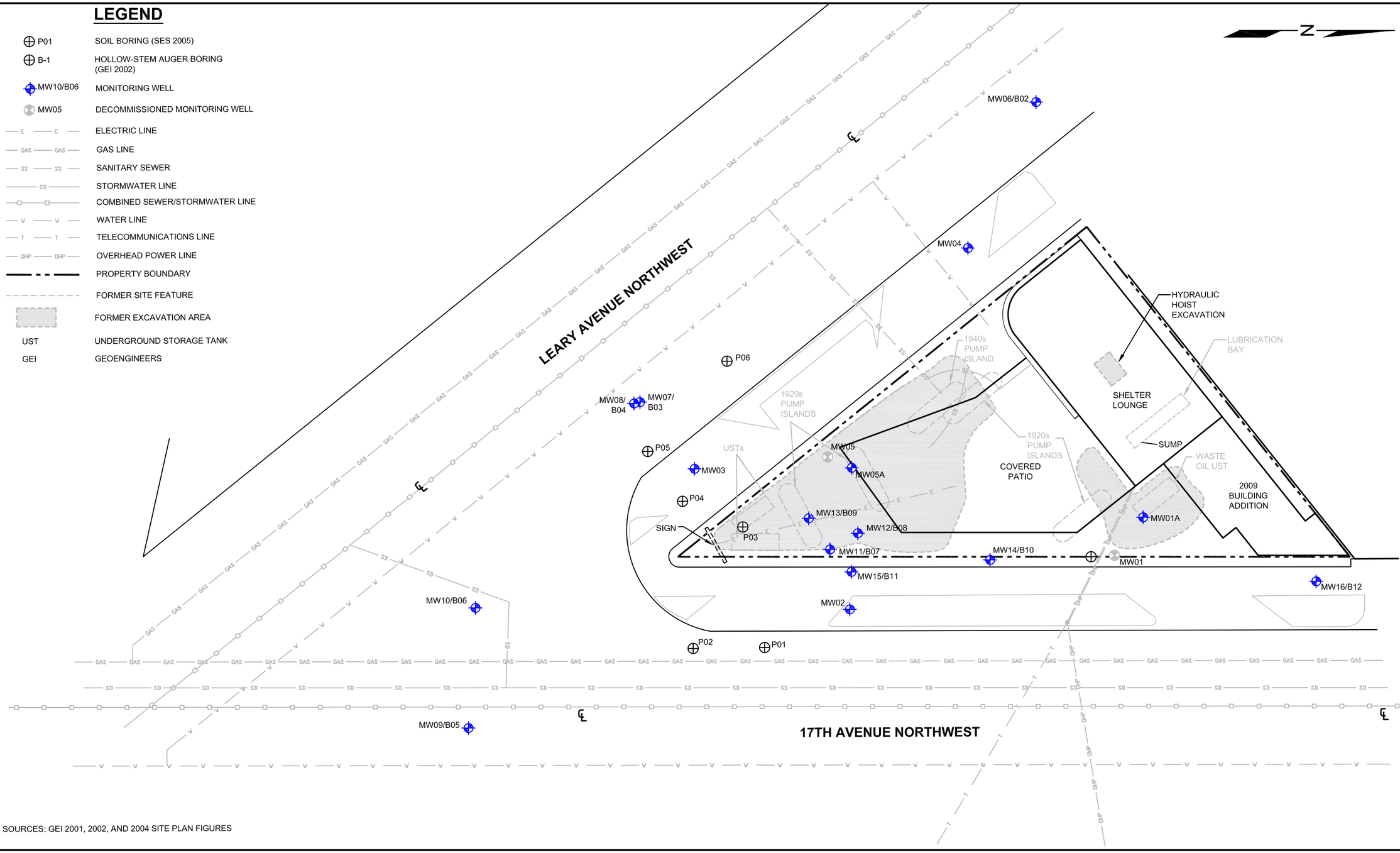
LEGEND

P01	SOIL BORING (SES 2005)
B-1	HOLLOW-STEM AUGER BORING (GEI 2002)
MW10/B06	MONITORING WELL
MW05	DECOMMISSIONED MONITORING WELL
E E	ELECTRIC LINE
GAS GAS	GAS LINE
SS SS	SANITARY SEWER
SD	STORMWATER LINE
	COMBINED SEWER/STORMWATER LINE
W W	WATER LINE
T T	TELECOMMUNICATIONS LINE
OHP OHP	OVERHEAD POWER LINE
	PROPERTY BOUNDARY
	FORMER SITE FEATURE
	FORMER EXCAVATION AREA
UST	UNDERGROUND STORAGE TANK
GEI	GEOENGINEERS



SOURCES: GEI 2001, 2002, AND 2004 SITE PLAN FIGURES

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PROJECT NAME: TOC HOLDINGS CO. FACILITY 01-443
PROJECT NUMBER: 0440-041
STREET ADDRESS: 4910 LEARY AVENUE NORTHWEST
CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 5 10 20 40
APPROXIMATE SCALE IN FEET

FIGURE 2
PRE-2012 EXCAVATION SITE PLAN

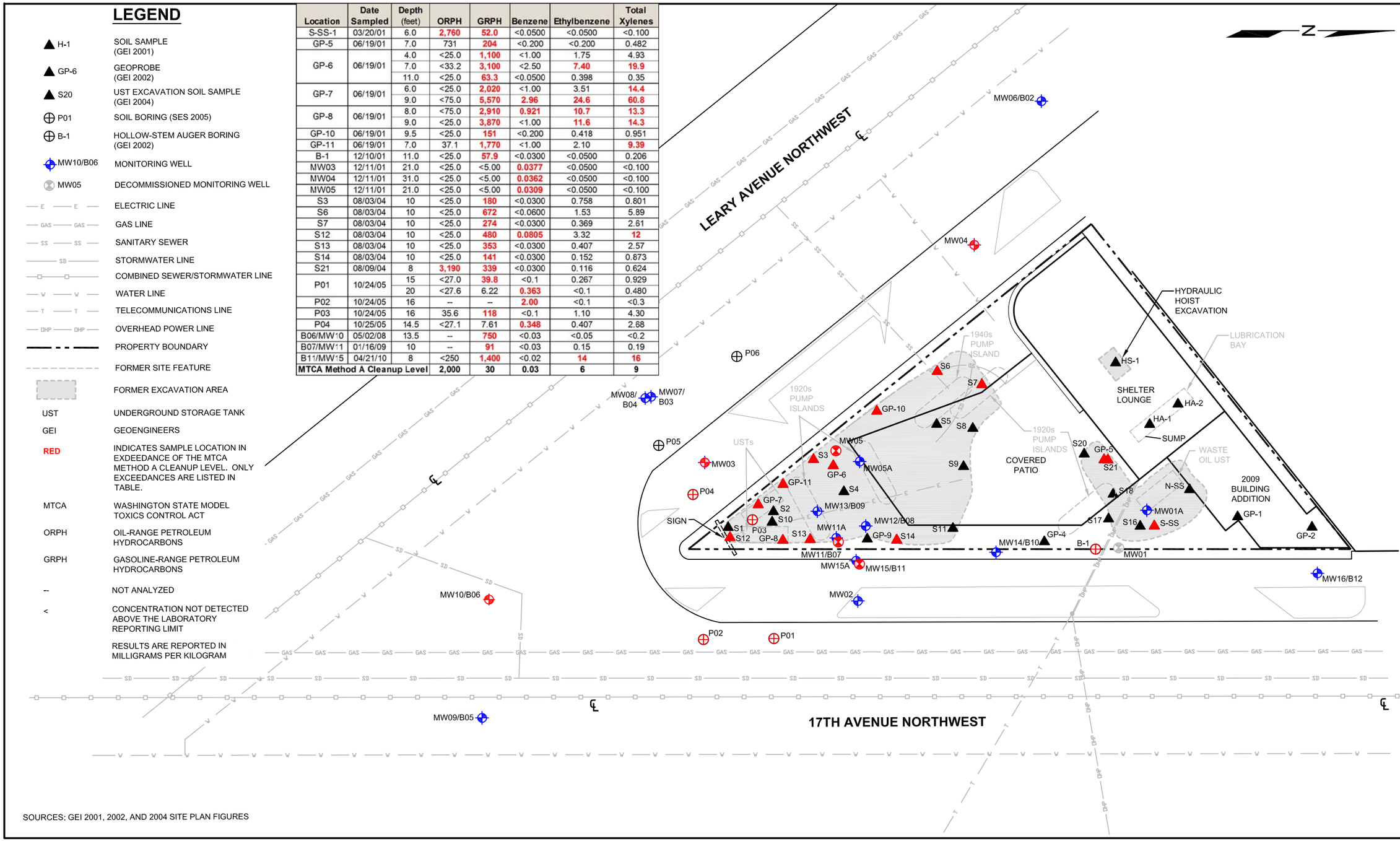
P:\0440 TOC Holdings Co\01-443 Ballard\Technical\CAD\2013ICAR\01-443_2013ICAR_PRE-EL.dwg

LEGEND

- H-1 — SOIL SAMPLE (GEI 2001)
- GP-6 — GEOPROBE (GEI 2002)
- S20 — UST EXCAVATION SOIL SAMPLE (GEI 2004)
- P01 — SOIL BORING (SES 2005)
- B-1 — HOLLOW-STEM AUGER BORING (GEI 2002)
- MW10/B06 — MONITORING WELL
- MW05 — DECOMMISSIONED MONITORING WELL
- E — ELECTRIC LINE
- GAS — GAS LINE
- SS — SANITARY SEWER
- SD — STORMWATER LINE
- COMBINED SEWER/STORMWATER LINE
- W — WATER LINE
- T — TELECOMMUNICATIONS LINE
- OHP — OVERHEAD POWER LINE
- PROPERTY BOUNDARY
- FORMER SITE FEATURE
- FORMER EXCAVATION AREA
- UST — UNDERGROUND STORAGE TANK
- GEI — GEOENGINEERS
- RED — INDICATES SAMPLE LOCATION IN EXDEEDANCE OF THE MTCA METHOD A CLEANUP LEVEL. ONLY EXCEEDANCES ARE LISTED IN TABLE.
- MTCA — WASHINGTON STATE MODEL TOXICS CONTROL ACT
- ORPH — OIL-RANGE PETROLEUM HYDROCARBONS
- GRPH — GASOLINE-RANGE PETROLEUM HYDROCARBONS
- -- — NOT ANALYZED
- < — CONCENTRATION NOT DETECTED ABOVE THE LABORATORY REPORTING LIMIT

RESULTS ARE REPORTED IN MILLIGRAMS PER KILOGRAM

Location	Date Sampled	Depth (feet)	ORPH	GRPH	Benzene	Ethylbenzene	Total Xylenes
S-SS-1	03/20/01	6.0	**2,760**	**52.0**	<0.0500	<0.0500	<0.100
GP-5	06/19/01	7.0	731	**204**	<0.200	<0.200	0.482
GP-6	06/19/01	4.0	<25.0	**1,100**	<1.00	1.75	4.93
		7.0	<33.2	**3,100**	<2.50	**7.40**	**19.9**
		11.0	<25.0	**63.3**	<0.0500	0.398	0.35
GP-7	06/19/01	6.0	<25.0	**2,020**	<1.00	3.51	**14.4**
		9.0	<75.0	**5,570**	**2.96**	**24.6**	**60.8**
GP-8	06/19/01	8.0	<75.0	**2,910**	**0.921**	**10.7**	**13.3**
		9.0	<25.0	**3,870**	<1.00	**11.6**	**14.3**
GP-10	06/19/01	9.5	<25.0	**151**	<0.200	0.418	0.951
GP-11	06/19/01	7.0	37.1	**1,770**	<1.00	2.10	**9.39**
B-1	12/10/01	11.0	<25.0	**57.9**	<0.0300	<0.0500	0.206
MW03	12/11/01	21.0	<25.0	<5.00	**0.0377**	<0.0500	<0.100
MW04	12/11/01	31.0	<25.0	<5.00	**0.0362**	<0.0500	<0.100
MW05	12/11/01	21.0	<25.0	<5.00	**0.0309**	<0.0500	<0.100
S3	08/03/04	10	<25.0	**180**	<0.0300	0.758	0.801
S6	08/03/04	10	<25.0	**672**	<0.0600	1.53	5.89
S7	08/03/04	10	<25.0	**274**	<0.0300	0.369	2.61
S12	08/03/04	10	<25.0	**480**	**0.0805**	3.32	**12**
S13	08/03/04	10	<25.0	**353**	<0.0300	0.407	2.57
S14	08/03/04	10	<25.0	**141**	<0.0300	0.152	0.873
S21	08/09/04	8	**3,190**	**339**	<0.0300	0.116	0.624
P01	10/24/05	15	<27.0	**39.8**	<0.1	0.267	0.929
		20	<27.6	6.22	**0.363**	<0.1	0.480
P02	10/24/05	16	--	--	**2.00**	<0.1	<0.3
P03	10/24/05	16	35.6	**118**	<0.1	1.10	4.30
P04	10/25/05	14.5	<27.1	7.61	**0.348**	0.407	2.68
B06/MW10	05/02/08	13.5	--	**750**	<0.03	<0.05	<0.2
B07/MW11	01/16/09	10	--	**91**	<0.03	0.15	0.19
B11/MW15	04/21/10	8	<250	**1,400**	<0.02	**14**	**16**
MTCA Method A Cleanup Level			**2,000**	**30**	**0.03**	**6**	**9**



SOURCES: GEI 2001, 2002, AND 2004 SITE PLAN FIGURES

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PROJECT NAME: TOC HOLDINGS CO. FACILITY 01-443
PROJECT NUMBER: 0440-041
STREET ADDRESS: 4910 LEARY AVENUE NORTHWEST
CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 5 10 20 40
APPROXIMATE SCALE IN FEET

FIGURE 3
PRE-2012 EXCAVATION SOIL ANALYTICAL RESULTS

P:\0440 TOC Holdings Co\01-443 Ballard\Technical\CAD\2013ICAR\01-443_2013ICAR_SD.dwg

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1/14/2014

LEGEND

MW10	BORING/MONITORING WELL
MW05	DECOMMISSIONED MONITORING WELL
	CATCH BASIN
	MANHOLE
E E	UNDERGROUND POWER LINE
GAS GAS	GAS LINE
SS SS	SANITARY SEWER
SD	STORM DRAIN
	COMBINED SEWER/STORMWATER LINE
W W	WATER LINE
T T	TELECOMMUNICATIONS LINE
OHP OHP	OVERHEAD POWER LINE
	PROPERTY BOUNDARY
	FORMER SITE FEATURE
	FORMER EXCAVATION AREA
UST	UNDERGROUND STORAGE TANK
RED	DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL
SPH	SEPARATE-PHASE HYDROCARBONS
<	NOT DETECTED AT CONCENTRATION ABOVE LABORATORY REPORTING LIMIT
GRPH	GASOLINE-RANGE PETROLEUM HYDROCARBONS
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
	GROUNDWATER FLOW DIRECTION (DECEMBER 17, 2013)

MTCA Method A Cleanup Levels				
GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
800/1,000	5	1,000	700	1,000

ALL RESULTS ARE IN MICROGRAMS PER LITER

N

LEARY AVENUE NORTHWEST

17TH AVENUE NORTHWEST

DRIVEWAY

SIDEWALK

SIGN

USTs

1920s PUMP ISLANDS

1940s PUMP ISLAND

COVERED PATIO

2009 BUILDING ADDITION

HYDRAULIC HOIST EXCAVATION

LUBRICATION BAY

WASTE OIL UST

MW01 MW01A MW02 MW03 MW04 MW05 MW05A MW06 MW07 MW08 MW09 MW10 MW11 MW11A MW12 MW13 MW14 MW15 MW15A MW16

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW05A	02/12/13	<100	<1	<1	<1	<2
	05/20/13	<100	<1	<1	<1	<2
	08/13/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW01A	02/12/13	<100	<1	<1	<1	<3
	05/21/13	<100	<1	<1	<1	<3
	08/14/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW13	02/13/13	510	<1	<1	2.7	5.0
	05/21/13	<100	<1	<1	<1	<3
	08/13/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW03	02/12/13	SPH				
	05/20/13	--	--	--	--	--
	08/13/13	--	--	--	--	--
	12/17/13	--	--	--	--	--

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW11A	02/13/13	<100	<0.35	<1	<1	<3
	05/21/13	<100	<0.35	<1	<1	<3
	08/14/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW15A	02/13/13	220	<1	<1	<1	<3
	05/21/13	<100	<1	<1	<1	<3
	08/14/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW14	02/13/13	<100	<1	<1	<1	<3
	05/21/13	<100	<1	<1	<1	<3
	08/14/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW12	02/13/13	<100	<1	<1	<1	<3
	05/21/13	<100	<1	<1	<1	<3
	08/14/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

Well ID	Sample Date	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW16	02/13/13	<100	<1	<1	<1	<3
	05/21/13	<100	<1	<1	<1	<3
	08/14/13	<100	<1	<1	<1	<3
	12/17/13	<100	<1	<1	<1	<3

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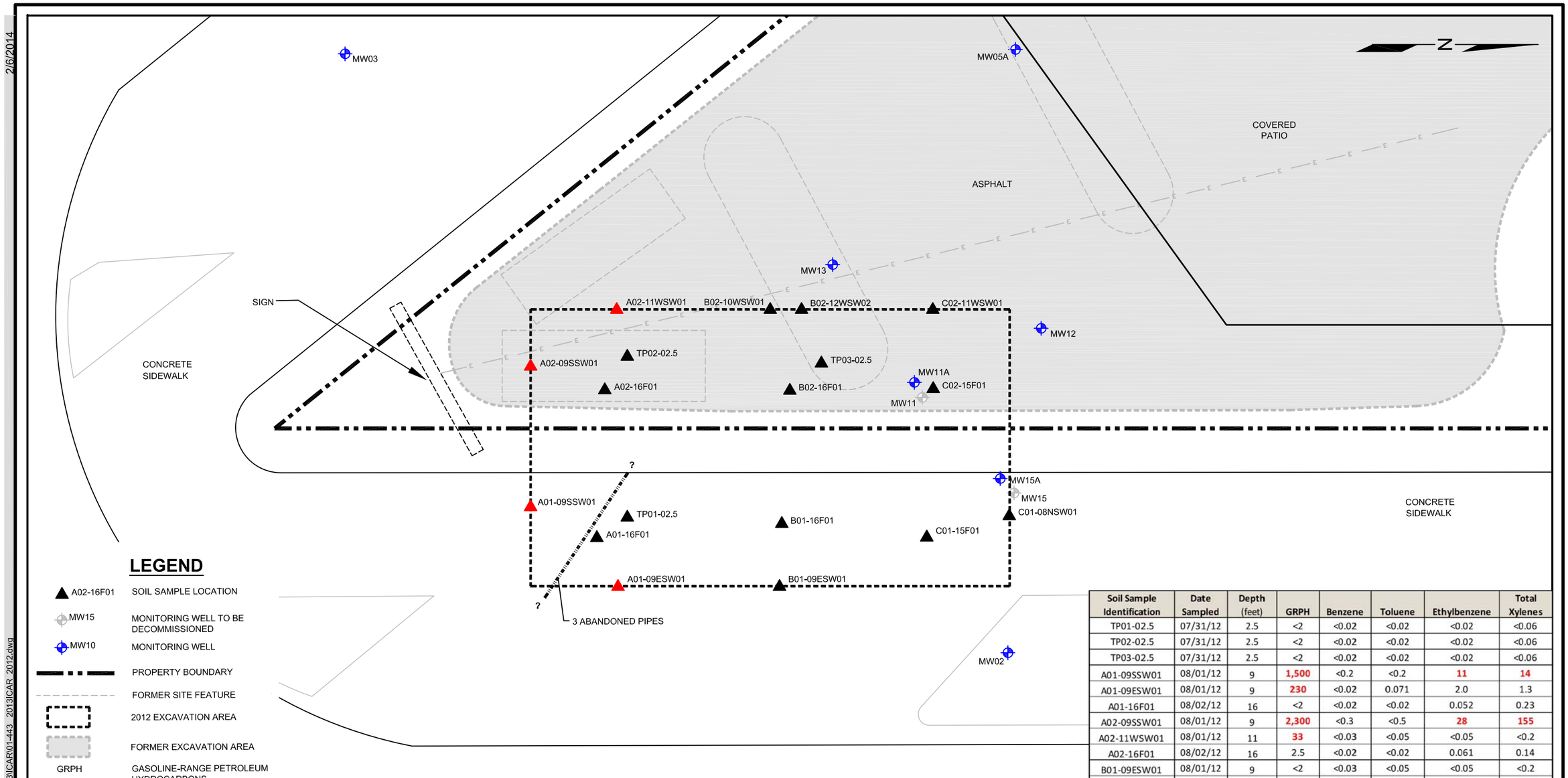
PROJECT NAME: TOC HOLDINGS CO. FACILITY 01-443
PROJECT NUMBER: 0440-041
STREET ADDRESS: 4910 LEARY AVENUE NORTHWEST
CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 5 10 20 40
APPROXIMATE SCALE IN FEET

FIGURE 4
GROUNDWATER ANALYTICAL RESULTS

P:\0440 TOC HOLDINGS CO\01-443 BALLARD\TECHNICAL\CAD\2013\ICAR\01-443_2013ICAR_GD.DWG



LEGEND

A02-16F01	SOIL SAMPLE LOCATION
MW15	MONITORING WELL TO BE DECOMMISSIONED
MW10	MONITORING WELL
	PROPERTY BOUNDARY
	FORMER SITE FEATURE
	2012 EXCAVATION AREA
	FORMER EXCAVATION AREA
GRPH	GASOLINE-RANGE PETROLEUM HYDROCARBONS
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
<	RESULT BELOW LABORATORY REPORTING LIMITS
RED	DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL
	RESULTS SHOWN IN MILLIGRAMS PER KILOGRAM

Soil Sample Identification	Date Sampled	Depth (feet)	GRPH	Benzene	Toluene	Ethylbenzene	Total Xylenes
TP01-02.5	07/31/12	2.5	<2	<0.02	<0.02	<0.02	<0.06
TP02-02.5	07/31/12	2.5	<2	<0.02	<0.02	<0.02	<0.06
TP03-02.5	07/31/12	2.5	<2	<0.02	<0.02	<0.02	<0.06
A01-09SSW01	08/01/12	9	1,500	<0.2	<0.2	11	14
A01-09ESW01	08/01/12	9	230	<0.02	0.071	2.0	1.3
A01-16F01	08/02/12	16	<2	<0.02	<0.02	0.052	0.23
A02-09SSW01	08/01/12	9	2,300	<0.3	<0.5	28	155
A02-11WSW01	08/01/12	11	33	<0.03	<0.05	<0.05	<0.2
A02-16F01	08/02/12	16	2.5	<0.02	<0.02	0.061	0.14
B01-09ESW01	08/01/12	9	<2	<0.03	<0.05	<0.05	<0.2
B01-16F01	08/02/12	16	<2	<0.02	<0.02	0.023	<0.06
B02-10WSW01	08/01/12	10	<2	<0.02	<0.02	<0.02	<0.06
B02-16F01	08/02/12	16	9.7	<0.02	<0.02	0.075	0.12
B02-12WSW02	08/02/12	12	<2	<0.03	<0.05	<0.05	<0.2
C01-08NSW01	08/03/12	8	4.3	<0.02	<0.02	<0.02	<0.06
C01-15F01	08/03/12	15	<2	<0.02	<0.02	0.023	<0.06
C02-11WSW01	08/03/12	11	<2	<0.02	<0.02	<0.02	<0.06
C02-15F01	08/03/12	15	4.7	<0.02	<0.02	0.029	<0.06
MTCA Method A Cleanup Level			100/30	0.03	7	6	9

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PROJECT NAME: TOC HOLDINGS CO. FACILITY 01-443
PROJECT NUMBER: 0440-041
STREET ADDRESS: 4910 LEARY AVENUE NORTHWEST
CITY, STATE: SEATTLE, WASHINGTON

REGION:

0 2.5 5 10
APPROXIMATE SCALE IN FEET

FIGURE 5
2012 EXCAVATION EXTENT AND SOIL ANALYTICAL RESULTS

2/6/2014
P:\0440 TOC Holdings Co\01-443 Ballard\Technical\CAD\2013ICAR\01-443_2013ICAR_2012.dwg
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TABLES

SoundEarth Strategies

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Well ID	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L) GRPH[4]	DRPH[5]	ORPH[5]	Benzene[6]	Toluene[6]	Ethylbenzene[6]	Total Xylenes[6]	EDC[6]	Naphthalene[6]
MW01	12/11/01	10.39	--	89.48	--	--	--	--	--	--	--	--	--
TOC: 99.87 feet	01/08/02	9.86	--	90.01	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--
	05/29/02	10.75	--	89.12	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--
	09/10/02	11.50	--	88.37	<50.0	--	--	<1.00	<1.00	<1.00	<2.00	<1.00	--
	12/06/02	16.63	--	83.24	<50.0	--	--	<0.200	<0.200	<0.200	<0.500	<0.200	--
	03/26/03	10.90	--	88.97	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	06/20/03	11.18	--	88.69	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	09/16/03	12.13	--	87.74	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	12/22/03	11.11	--	88.76	<50.0	--	--	1.65	<0.500	<0.500	<1.00	<0.200	--
	03/19/04	10.58	--	89.29	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	06/28/04	10.88	--	88.99	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	Monitoring Well Decommissioned in 2004												
MW01A	12/27/04	10.06	--	89.58	<50	--	--	<1	<1	<1	<3	<0.01	--
TOC: 99.64 feet	03/22/05	10.41	--	89.23	<50.0	--	--	<1	<1	<1	<3	<0.02	--
	06/29/05	11.04	--	88.60	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	03/15/07	11.03	--	88.61	<100	<50	<250	<1	<1	<1	<3	<1	--
	09/21/07	12.61	--	87.03	<100	<51	<260	<1	<1	<1	<3	<1	--
	01/15/08	11.91	--	87.73	<100	<50	<250	<1	<1	<1	<3	<1	--
	09/23/08	11.92	--	87.72	<100	<50	<250	<1	<1	<1	<3	<1	--
	02/09/09	11.21	--	88.43	<100	<50	<250	<1	<1	<1	<3	<1	<1
	05/21/09	10.37	--	89.27	<100	--	--	<1	<1	<1	<3	<1	<1
	09/17/09	12.30	--	87.34	<100	<50	<250	<1	<1	<1	<3	<1	<1
	12/23/09	10.35	--	89.29	<100	<50	<250	<1	<1	<1	<3	<1	<1
	03/18/10	10.62	--	89.02	<100	63[x]	<250	<1	<1	<1	<3	<1	--
	06/29/10	10.84	--	88.80	<100	--	--	<1	<1	<1	<3	--	--
	10/14/10	11.21	--	88.43	<100	--	--	<1	<1	<1	<3	--	--
	12/10/10	10.63	--	89.01	<100	--	--	<1	<1	<1	<3	--	--
	03/03/11	10.58	--	89.06	<100	--	--	<1	<1	<1	<3	--	--
	05/31/11	10.55	--	89.09	<100	--	--	<1	<1	<1	<3	--	--
	08/29/11	11.73	--	87.91	<100	--	--	<1	<1	<1	<3	--	--
	12/21/11	14.57	--	85.07	<100	--	--	<1	<1	<1	<3	--	--
	03/22/12	15.35	--	84.29	<100	--	--	<1	<1	<1	<3	--	--
	06/13/12	15.71	--	83.93	<100	--	--	<1	<1	<1	<3	--	--
	09/06/12	16.71	--	82.93	<100	--	--	<1	<1	<1	<3	--	--
	12/03/12	16.12	--	83.52	<100	--	--	<1	<1	<1	<3	--	--
	02/12/13	15.28	--	84.36	<100	--	--	<1	<1	<1	<3	--	--
	05/21/13	15.64	--	84.00	<100	--	--	<1	<1	<1	<3	--	--
	08/14/13	16.53	--	83.11	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	17.11	--	82.53	<100	--	--	<1	<1	<1	<3	--	--
MW02	01/08/02	9.83	--	89.12	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--
TOC: 98.95 feet	05/29/02	9.50	--	89.45	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--
	09/10/02	10.30	--	88.65	<50.0	--	--	<1.00	<1.00	<1.00	<2.00	<1.00	--
	12/06/02	11.25	--	87.70	<50.0	--	--	<0.200	<0.200	<0.200	<0.500	<0.200	--
	03/26/03	9.92	--	89.03	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	06/20/03	10.80	--	88.15	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	09/16/03	11.70	--	87.25	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	12/22/03	10.69	--	88.26	<50.0	--	--	0.628	<0.500	<0.500	<1.00	<0.200	--
	03/19/04	10.30	--	88.65	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	06/28/04	10.78	--	88.17	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	11/08/04	10.37	--	88.58	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	12/27/04	9.97	--	88.98	<50.0	--	--	<1	<1	<1	<3	<0.01	--
	03/22/05	10.38	--	88.57	<50.0	--	--	<1	<1	<1	<3	<0.02	--
	06/29/05	10.21	--	88.74	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	03/15/07	11.76	--	87.19	<100	<50	<250	<1	<1	<1	<3	<1	--
	09/21/07	11.73	--	87.22	<100	<52	<260	<1	<1	<1	<3	<1	--
	01/15/08	10.64	--	88.31	<100	<50	<250	<1	<1	<1	<3	<1	--
	09/23/08	11.62	--	87.33	<100	<50	<250	<1	<1	<1	<3	<1	--
	02/09/09	10.98	--	87.97	--	--	--	--	--	--	--	--	--
	05/21/09	10.16	--	88.79	--	--	--	--	--	--	--	--	--
	09/17/09	12.04	--	86.91	--	--	--	--	--	--	--	--	--
	12/23/09	10.55	--	88.40	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Level for Groundwater[7]					**800/1,000[8]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**5**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Well ID	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
					GRPH[4]	DRPH[5]	ORPH[5]	Benzene[6]	Toluene[6]	Ethylbenzene[6]	Total Xylenes[6]	EDC[6]	Naphthalene[6]
MW02 (continued)	03/18/10	10.40	--	88.55	--	--	--	--	--	--	--	--	--
TOC: 98.95 feet	06/29/10	10.56	--	88.39	--	--	--	--	--	--	--	--	--
	10/14/10	10.90	--	88.05	--	--	--	--	--	--	--	--	--
	12/10/10	10.30	--	88.65	--	--	--	--	--	--	--	--	--
	03/03/11	10.36	--	88.59	--	--	--	--	--	--	--	--	--
	05/31/11	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	08/29/11	11.56	--	87.39	--	--	--	--	--	--	--	--	--
	12/21/11	13.73	--	85.22	--	--	--	--	--	--	--	--	--
	03/22/12	14.28	--	84.67	--	--	--	--	--	--	--	--	--
	06/13/12	14.83	--	84.12	--	--	--	--	--	--	--	--	--
	09/06/12	16.01	--	82.94	--	--	--	--	--	--	--	--	--
	12/03/12	13.84	--	85.11	--	--	--	--	--	--	--	--	--
	02/12/13	14.12	--	84.83	--	--	--	--	--	--	--	--	--
	05/20/13	14.58	--	84.37	--	--	--	--	--	--	--	--	--
	08/13/13	15.64	--	83.31	--	--	--	--	--	--	--	--	--
	12/17/13	16.14	--	82.81	--	--	--	--	--	--	--	--	--
MW03	12/11/01	9.49	--	88.94	--	--	--	--	--	--	--	--	--
TOC: 98.43 feet	01/08/02	9.33	--	89.10	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--
	05/29/02	10.07	--	88.36	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**46.4**	--
	09/10/02	11.08	--	87.35	<50.0	--	--	<2.00	<2.00	<2.00	<4.00	**50.6**	--
	12/06/02	12.16	--	86.27	<50.0	--	--	<1.00	<1.00	<1.00	<2.00	**36.5**	--
	03/26/03	9.58	--	88.85	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**44.8**	--
	06/20/03	10.83	--	87.60	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**41.4**	--
	09/16/03	11.83	--	86.60	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**39.8**	--
	12/22/03	10.29	--	88.14	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**32.2**	--
	03/19/04	10.57	--	87.86	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**45.8**	--
	06/28/04	10.69	--	87.74	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**37.8**	--
	11/08/04	10.83	--	87.60	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	**41.8**	--
	12/27/04	9.92	--	88.51	<50.0	--	--	<1	<1	<1	<3	**41**	--
	03/22/05	10.35	--	88.08	<50.0	--	--	<1	<1	<1	<3	**44**	--
	06/29/05	10.34	--	88.09	<50.0	--	--	0.889	<0.500	<0.500	<1.00	**33.9**	--
	03/15/07	11.09	--	87.34	190	210	<250	1.5	<1	<1	<3	**30**	--
	09/21/07	11.66	--	86.77	110	180	<260	<1	<1	<1	<3	**33**	--
	01/15/08	10.71	--	87.72	<100	120	<250	<1	<1	<1	<3	**23**	--
	09/23/08	12.25	--	86.18	<100	180	<250	<1	<1	<1	<3	**24**	--
	02/09/09	10.92	--	87.51	--	--	--	--	--	--	--	--	--
	05/21/09	10.15	--	88.28	--	--	--	--	--	--	--	--	--
	09/17/09	12.07	--	86.36	--	--	--	--	--	--	--	--	--
	12/23/09	10.58	--	87.85	--	--	--	--	--	--	--	--	--
	03/18/10	10.40	--	88.03	--	--	--	--	--	--	--	--	--
	06/29/10	10.55	--	87.88	--	--	--	--	--	--	--	--	--
	10/14/10	10.99	--	87.44	--	--	--	--	--	--	--	--	--
	12/10/10	10.40	--	88.03	--	--	--	--	--	--	--	--	--
	03/03/11	10.37	--	88.06	--	--	--	--	--	--	--	--	--
	05/31/11	10.37	--	88.06	--	--	--	--	--	--	--	--	--
	08/29/11	11.66	--	86.77	--	--	--	--	--	--	--	--	--
	12/21/11	14.62	--	83.81	--	--	--	--	--	--	--	--	--
	03/23/12	15.52	--	82.91	--	--	--	--	--	--	--	--	--
	06/13/12	15.95	--	82.48	--	--	--	--	--	--	--	--	--
	09/07/12	17.14	--	81.29	**3,700**	--	--	**140**	4.6	80	64	--	--
	12/03/12	15.60	--	82.83	--	--	--	--	--	--	--	--	--
	02/12/13	15.50	0.02	82.95	**SPH**			--	--	--	--	--	--
	05/20/13	15.94	--	82.49	--	--	--	--	--	--	--	--	--
	08/13/13	16.75	--	81.68	--	--	--	--	--	--	--	--	--
	12/17/13	NM	--	--	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Level for Groundwater[7]					**800/1,000[8]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**5**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Well ID	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
					GRPH[4]	DRPH[5]	ORPH[5]	Benzene[6]	Toluene[6]	Ethylbenzene[6]	Total Xylenes[6]	EDC[6]	Naphthalene[6]
MW04	12/11/01	9.20	--	89.02	--	--	--	--	--	--	--	--	--
TOC: 98.22 feet	01/08/02	8.75	--	89.47	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--
	05/29/02	9.57	--	88.65	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	--	--
	09/10/02	10.60	--	87.62	<50.0	--	--	<1.00	<1.00	<1.00	<2.00	3.19	--
	12/06/02	10.90	--	87.32	<50.0	--	--	<0.200	<0.200	<0.200	<0.500	4.42	--
	03/26/03	8.91	--	89.31	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	06/20/03	9.95	--	88.27	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	3.73	--
	09/16/03	10.90	--	87.32	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	3.78	--
	12/22/03	9.30	--	88.92	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	<0.200	--
	03/19/04	9.58	--	88.64	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	3.01	--
	06/28/04	9.90	--	88.32	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	3.06	--
	11/08/04	9.85	--	88.37	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	3.46	--
	12/27/04	9.43	--	88.79	<50.0	--	--	<1	<1	<1	<3	4	--
	03/22/05	10.34	--	87.88	<50.0	--	--	<1	<1	<1	<3	3.5	--
	06/29/05	9.64	--	88.58	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	2.65	--
	03/15/07	9.95	--	88.27	<100	130	<250	<1	<1	<1	<3	4.8	--
	09/21/07	11.43	--	86.79	<100	82	<260	<1	<1	<1	<3	**11**	--
	01/15/08	10.71	--	87.51	<100	<50	<250	<1	<1	<1	<3	**9.7**	--
	09/23/08	11.49	--	86.73	<100	68	<250	<1	<1	<1	<3	**14**	--
	02/09/09	10.71	--	87.51	--	--	--	--	--	--	--	--	--
	05/21/09	9.85	--	88.37	--	--	--	--	--	--	--	--	--
	09/17/09	11.85	--	86.37	--	--	--	--	--	--	--	--	--
	12/23/09	10.34	--	87.88	--	--	--	--	--	--	--	--	--
	03/18/10	10.04	--	88.18	--	--	--	--	--	--	--	--	--
	06/29/10	10.27	--	87.95	--	--	--	--	--	--	--	--	--
	10/14/10	10.77	--	87.45	--	--	--	--	--	--	--	--	--
	12/10/10	10.18	--	88.04	--	--	--	--	--	--	--	--	--
	03/03/11	10.04	--	88.18	--	--	--	--	--	--	--	--	--
	05/31/11	10.02	--	88.20	--	--	--	--	--	--	--	--	--
	08/29/11	11.30	--	86.92	--	--	--	--	--	--	--	--	--
	12/21/11	14.65	--	83.57	--	--	--	--	--	--	--	--	--
	03/22/12	15.69	--	82.53	--	--	--	--	--	--	--	--	--
	06/13/12	16.17	--	82.05	--	--	--	--	--	--	--	--	--
	09/06/12	17.32	--	80.90	--	--	--	--	--	--	--	--	--
	12/03/12	16.17	--	82.05	--	--	--	--	--	--	--	--	--
	02/12/13	15.81	--	82.41	--	--	--	--	--	--	--	--	--
	05/20/13	16.14	--	82.08	--	--	--	--	--	--	--	--	--
	08/13/13	16.95	--	81.27	--	--	--	--	--	--	--	--	--
	12/17/13	17.66	--	80.56	--	--	--	--	--	--	--	--	--
MW05	12/11/01	--	--	--	--	--	--	--	--	--	--	--	--
TOC: 99.06 feet	01/08/02	9.36	--	89.70	91.4	--	--	<0.500	<0.500	<0.500	<1.00	--	--
	05/29/02	10.18	--	88.88	398	--	--	3.98	0.770	7.32	2.90	--	--
	09/10/02	11.11	--	87.95	594	--	--	**7.42**	26.0	1.94	33.01	<1.00	--
	12/06/02	11.39	--	87.67	503	--	--	2.88	<1.00	4.60	<2.00	<1.00	--
	03/26/03	9.51	--	89.55	**1,010**	--	--	**8.57**	1.79	20.3	4.08	<1.00	--
	06/20/03	10.50	--	88.56	741	--	--	**10.1**	2.41	23.8	5.92	0.460	--
	09/16/03	11.35	--	87.71	**1,340**	--	--	**13.6**	3.31	48.2	8.89	<0.200	--
	12/22/03	9.79	--	89.27	**2,090**	--	--	**23.7**	7.34	66.6	21.8	<0.200	--
	03/19/04	10.04	--	89.02	**1,550**	--	--	**15.1**	4.62	33.7	12.9	0.520	--
	06/28/04	10.40	--	88.66	**2,960**	--	--	**24.2**	9.32	91.7	27.7	<0.200	--
	Monitoring Well Decommissioned in 2004												
MW05A	12/27/04	10.13	--	88.98	<50.0	--	--	<1	<1	<1	<3	0.30	--
TOC: 99.11 feet	03/22/05	11.31	--	87.80	<50.0	--	--	<1	<1	<1	<3	0.38	--
	06/29/05	10.47	--	88.64	<50.0	--	--	3.86	<0.500	<0.500	<1.00	0.51	--
	03/15/07	10.56	--	88.55	<100	92	<250	<1	<1	<1	<3	<1	--
	09/21/07	12.03	--	87.08	<100	53	<260	<1	<1	<1	<3	<1	--
	01/15/08	11.05	--	88.06	<100	<50	<250	<1	<1	<1	<3	<1	--
	09/23/08	12.06	--	87.05	<100	58	<250	<1	<1	<1	<3	<1	--
	02/09/09	11.32	--	87.79	<100	<50	<250	<1	<1	<1	<3	<1	<1
	05/11/09	10.51	--	88.60	<100	--	--	<1	<1	<1	<3	<1	<1
	09/17/09	12.43	--	86.68	<100	71	<250	<1	<1	<1	<3	<1	<1
	12/23/09	10.92	--	88.19	<100	<50	<250	<1	<1	<1	<3	<1	<1
MTCA Method A Cleanup Level for Groundwater[7]					**800/1,000[8]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**5**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Well ID	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L) GRPH[4]	DRPH[5]	ORPH[5]	Benzene[6]	Toluene[6]	Ethylbenzene[6]	Total Xylenes[6]	EDC[6]	Naphthalene[6]
MW05A (continued)	03/18/10	10.74	--	88.37	<100	110[x]	<250	<1	<1	<1	<3	<1	--
TOC: 99.11 feet	06/29/10	10.90	--	88.21	<100	--	--	<1	<1	<1	<3	--	--
	10/14/10	11.35	--	87.76	<100	--	--	<1	<1	<1	<3	--	--
	12/10/10	10.71	--	88.40	<100	--	--	<1	<1	<1	<3	--	--
	03/03/11	10.71	--	88.40	<100	--	--	<1	<1	<1	<3	--	--
	06/01/11	10.71	--	88.40	<100	--	--	<1	<1	<1	<3	--	--
	08/29/11	11.96	--	87.15	<100	--	--	<1	<1	<1	<3	--	--
	12/21/11	14.82	--	84.29	<100	--	--	<1	<1	<1	<3	--	--
	03/22/12	15.73	--	83.38	<100	--	--	<1	<1	<1	<3	--	--
	06/13/12	16.19	--	82.92	<100	--	--	<1	<1	<1	<3	--	--
	09/06/12	17.38	--	81.73	<100	--	--	<1	<1	<1	<3	--	--
	12/03/12	15.70	--	83.41	<100	--	--	<1	<1	<1	<3	--	--
	02/12/13	13.66	--	85.45	<100	--	--	<1	<1	<1	<3	--	--
	05/20/13	16.09	--	83.02	<100	--	--	<1	<1	<1	<3	--	--
	08/13/13	17.01	--	82.10	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	17.54	--	81.57	<100	--	--	<1	<1	<1	<3	--	--
MW06	09/23/08	13.20	--	85.22	<100	420	360	<1	<1	<1	<3	<1	--
TOC: 98.42 feet	02/09/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	05/11/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	09/17/09	13.51	--	84.91	--	--	--	--	--	--	--	--	--
	Monitoring Well Removed From Sampling Program In December 2009												
MW07	09/23/08	12.30	--	85.96	<100	<50	<250	<1	<1	<1	<3	<1	--
TOC: 98.26 feet	02/09/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	05/11/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	09/17/09	12.74	--	85.52	--	--	--	--	--	--	--	--	--
	Monitoring Well Removed From Sampling Program In December 2009												
MW08	09/23/08	12.23	--	85.95	<100	72	<250	<1	<1	<1	<3	13	--
TOC: 98.18 feet	02/09/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	05/11/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	09/17/09	12.69	--	85.49	--	--	--	--	--	--	--	--	--
	Monitoring Well Removed From Sampling Program In December 2009												
MW09	09/23/08	11.85	--	86.02	8,700	2,000[x]	<250	12	96	540	381	<1	--
TOC: 97.87 feet	02/09/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	05/11/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	09/17/09	12.37	--	85.50	--	--	--	--	--	--	--	--	--
	Monitoring Well Removed From Sampling Program In December 2009												
MW10	09/23/08	12.34	--	85.60	<100	<50	<250	5.7	<1	<1	<3	1.1	--
TOC: 97.94 feet	02/09/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	05/11/09	Inaccessible	--	--	--	--	--	--	--	--	--	--	--
	09/17/09	12.91	--	85.03	--	--	--	--	--	--	--	--	--
	Monitoring Well Removed From Sampling Program In December 2009												
MW11	02/09/09	10.90	--	87.88	15,000	3,700[x]	<250	27	90	600	1,930	<1	420
TOC: 98.78 feet	05/11/09	10.37	--	88.41	14,000	--	--	13	79	740	2,350	<10	580
	09/17/09[b]	13.24	0.54	85.97	SPH								
	12/23/09[b]	10.31	0.20	88.63	SPH								
	3/18/10[b]	10.13	0.17	88.79	SPH								
	6/29/10[b]	10.02	0.11	88.85	SPH								
	10/14/10	10.29	--	88.49	4,800	--	--	1.8	11	120	470	--	--
	12/10/10	9.63	--	89.15	1,600	--	--	1.8	1.1	9.9	91	--	--
	03/03/11	9.82	--	88.96	1,900	--	--	<1	1.8	29	79	--	--
	06/01/11	9.73	--	89.05	720	--	--	<0.35	1.4	39	50	--	18
	08/29/11	11.10	--	87.68	930	--	--	0.64	2.0	12	43	--	26
	12/22/11	11.09	--	87.69	8,900	--	--	<0.35	4.6	210	575	--	340
	03/22/12	12.46	0.09	86.39	SPH								
	06/13/12	13.32	0.46	85.83	SPH								
	Monitoring Well Decommissioned in 2012												
MW11A	09/07/12	16.19	--	82.93	670	--	--	<0.35	<1	<1	<3	--	4.6
TOC: 99.12	12/03/12	9.57	--	89.55	<100	--	--	<0.35	<1	<1	<3	--	<1
	02/13/13	10.22	--	88.90	<100	--	--	<0.35	<1	<1	<3	--	<1
	05/21/13	11.43	--	87.69	<100	--	--	<0.35	<1	<1	<3	--	<1
	08/14/13	13.30	--	85.82	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	16.03	--	83.09	<100	--	--	<1	<1	<1	<3	--	--
MTCA Method A Cleanup Level for Groundwater[7]					**800/1,000[8]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**5**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Well ID	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
					GRPH[4]	DRPH[5]	ORPH[5]	Benzene[6]	Toluene[6]	Ethylbenzene[6]	Total Xylenes[6]	EDC[6]	Naphthalene[6]
MW12	06/29/10	8.57	--	90.61	<100	--	-	<1	<1	<1	<3	--	--
TOC: 99.18 feet	10/14/10	9.50	--	89.68	<100	--	--	<1	<1	<1	<3	--	--
	12/10/10	8.43	--	90.75	<100	--	--	<1	<1	<1	<3	--	--
	03/03/11	8.59	--	90.59	<100	--	--	<1	<1	<1	<3	--	--
	06/01/11	8.48	--	90.70	<100	--	--	<1	<1	<1	<3	--	--
	08/29/11	10.08	--	89.10	<100	--	--	<1	<1	<1	<3	--	--
	12/22/11	10.12	--	89.06	<100	--	--	<1	<1	<1	<3	--	--
	03/23/12	10.72	--	88.46	<100	--	--	<1	<1	<1	<3	--	--
	06/13/12	11.70	--	87.48	<100	--	--	<1	<1	<1	<3	--	--
	09/06/12	15.98	--	83.20	<100	--	--	<1	<1	<1	<3	--	--
	12/03/12	9.62	--	89.56	<100	--	--	<1	<1	<1	<3	--	--
	02/13/13	10.29	--	88.89	<100	--	--	<1	<1	<1	<3	--	--
	05/21/13	11.44	--	87.74	<100	--	--	<1	<1	<1	<3	--	--
	08/14/13	13.20	--	85.98	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	15.81	--	83.37	<100	--	--	<1	<1	<1	<3	--	--
MW13	06/29/10	8.79	--	90.32	<100	--	--	<1	<1	<1	<3	--	--
TOC: 99.11 feet	10/14/10	9.75	--	89.36	<100	--	--	<1	<1	<1	<3	--	--
	12/10/10	8.44	--	90.67	<100	--	--	<1	<1	<1	<3	--	--
	03/03/11	8.75	--	90.36	<100	--	--	<1	<1	<1	<3	--	--
	06/01/11	8.50	--	90.61	<100	--	--	<1	<1	<1	<3	--	--
	08/29/11	10.30	--	88.81	<100	--	--	<1	<1	<1	<3	--	--
	12/22/11	11.76	--	87.35	<100	--	--	<1	<1	<1	<3	--	--
	03/23/12	13.06	--	86.05	<100	--	--	<1	<1	<1	<3	--	--
	06/13/12	13.82	--	85.29	<100	--	--	<1	<1	<1	<3	--	--
	09/06/12	16.69	--	82.42	<100	--	--	<1	<1	<1	<3	--	--
	12/03/12	10.94	--	88.17	720	--	--	<1	<1	2.5	6.6	--	--
	02/13/13	16.50	--	82.61	510	--	--	<1	<1	2.7	5.0	--	--
	05/21/13	11.86	--	87.25	<100	--	--	<1	<1	<1	<3	--	--
	08/13/13	12.73	--	86.38	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	13.26	--	85.85	<100	--	--	<1	<1	<1	<3	--	--
MW14	06/29/10	9.64	--	89.94	<100	--	--	<1	<1	<1	<3	--	--
TOC: 99.58 feet	10/14/10	9.64	--	89.94	<100	--	--	<1	<1	<1	<3	--	--
	12/10/10	8.85	--	90.73	<100	--	--	<1	<1	<1	<3	--	--
	03/03/11	9.29	--	90.29	<100	--	--	<1	<1	<1	<3	--	--
	06/01/11	9.20	--	90.38	<100	--	--	<1	<1	<1	<3	--	--
	08/29/11	10.68	--	88.90	<100	--	--	<1	<1	<1	<3	--	--
	12/21/11	11.63	--	87.95	<100	--	--	<1	<1	<1	<3	--	--
	03/23/12	10.02	--	89.56	<100	--	--	<1	<1	<1	<3	--	--
	06/13/12	12.24	--	87.34	<100	--	--	<1	<1	<1	<3	--	--
	09/06/12	14.53	--	85.05	<100	--	--	<1	<1	<1	<3	--	--
	12/03/12	7.21	--	92.37	<100	--	--	<1	<1	<1	<3	--	--
	02/13/13	11.03	--	88.55	<100	--	--	<1	<1	<1	<3	--	--
	05/21/13	12.26	--	87.32	<100	--	--	<1	<1	<1	<3	--	--
	08/14/13	13.75	--	85.83	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	14.39	--	85.19	<100	--	--	<1	<1	<1	<3	--	--
MW15	06/29/10	10.56	--	88.78	740	--	--	<1	3.0	8.6	11	--	--
TOC: 99.34 feet	10/14/10	10.85	--	88.49	260	--	--	<1	<1	2.4	<3	--	--
	12/10/10	10.27	--	89.07	<100	--	--	<1	<1	<1	<3	--	--
	03/03/11	10.48	--	88.86	<100	--	--	<1	<1	<1	<3	--	--
	06/01/11	10.36	--	88.98	<100	--	--	<1	<1	<1	<3	--	--
	08/29/11	11.73	--	87.61	340	--	--	<1	<1	3.3	<3	--	--
	12/22/11	12.69	--	86.65	180	--	--	<1	<1	<1	<3	--	--
	03/23/12	13.32	--	86.02	<100	--	--	<1	<1	<1	<3	--	--
	06/13/12	14.22	--	85.12	<100	--	--	<1	<1	<1	<3	--	--
	Monitoring Well Decommissioned in 2012												
MW15A	09/07/12	15.59	--	83.46	<100	--	--	<1	<1	<1	<3	--	--
TOC: 99.05	12/03/12	11.44	--	87.61	650	--	--	<1	<1	1.7	3.4	--	--
	02/13/13	12.14	--	86.91	220	--	--	<1	<1	<1	<3	--	--
	05/21/13	13.05	--	86.00	<100	--	--	<1	<1	<1	<3	--	--
	08/14/13	14.49	--	84.56	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	15.61	--	83.44	<100	--	--	<1	<1	<1	<3	--	--
MTCA Method A Cleanup Level for Groundwater[7]					**800/1,000[8]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**5**	**160**

SoundEarth Strategies

Table 1
Summary of Groundwater Data
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Well ID	Date	Depth to Groundwater[1] (feet)	SPH Thickness[2]	Groundwater Elevation[3] (feet)	Analytical Results (µg/L)								
					GRPH[4]	DRPH[5]	ORPH[5]	Benzene[6]	Toluene[6]	Ethylbenzene[6]	Total Xylenes[6]	EDC[6]	Naphthalene[6]
MW16	06/29/10	7.10	--	93.29	<100	--	--	<1	<1	<1	<3	--	--
TOC:100.39 feet	10/14/10	6.78	--	93.61	<100	--	--	<1	<1	<1	<3	--	--
	12/10/10	5.68	--	94.71	<100	--	--	<1	<1	<1	<3	--	--
	03/03/11	6.44	--	93.95	<100	--	--	<1	<1	<1	<3	--	--
	05/31/11	6.95	--	93.44	<100	--	--	<1	<1	<1	<3	--	--
	08/29/11	7.93	--	92.46	<100	--	--	<1	<1	<1	<3	--	--
	12/21/11	8.36	--	92.03	<100	--	--	<1	<1	<1	<3	--	--
	03/22/12	6.52	--	93.87	<100	--	--	<1	<1	<1	<3	--	--
	06/13/12	7.80	--	92.59	<100	--	--	<1	<1	<1	<3	--	--
	09/06/12	11.11	--	89.28	<100	--	--	<1	<1	<1	<3	--	--
	12/03/12	6.10	--	94.29	<100	--	--	<1	<1	<1	<3	--	--
	02/13/13	7.58	--	92.81	<100	--	--	<1	<1	<1	<3	--	--
	05/21/13	8.19	--	92.20	<100	--	--	<1	<1	<1	<3	--	--
	08/14/13	9.49	--	90.90	<100	--	--	<1	<1	<1	<3	--	--
	12/17/13	10.65	--	89.74	<100	--	--	<1	<1	<1	<3	--	--
MTCA Method A Cleanup Level for Groundwater[7]					**800/1,000[8]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**	**5**	**160**

NOTES:

Red denotes concentration in excess of MTCA Method A Cleanup Level for Groundwater.

Samples collected after June 29, 2005, analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

TOC elevations were surveyed relative to an arbitrary benchmark with an assumed elevation of 100.00 feet.

[1]Measured in feet below the top of the well casing.

[2]Calculated by subtracting the depth to SPH from the depth to groundwater.

[3]Calculated by subtracting the depth to groundwater from the TOC. If SPH is present, the SPH thickness multiplied by its specific gravity relative to water (0.8) is added to the depth to water measurement.

[4]Analyzed by Method NWTPH-Gx.

[5]Analyzed by Method NWTPH-Dx.

[6]Analyzed by EPA Method 8021B, 8260B, or 8260C.

[7]MTCA Method A Cleanup Levels, Table 720-1, Section 900, Chapter 173 Title 340 of the Washington Administrative Code, revised November 2007.

[8]800 µg/L when benzene is present and 1,000 µg/L when benzene is not present.

Laboratory Note:

[x]The pattern of peaks present is not indicative of diesel.

-- = not analyzed/not measured

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

µg/L = micrograms per liter

DRPH = diesel-range petroleum hydrocarbons

EDC = 1,2-dichloroethylene (ethylene dichloride)

EPA = U.S. Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NM = not measured

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

SPH = separate-phase hydrocarbons

TOC = top of casing elevation

SoundEarth Strategies

Table 2
Summary of Soil Analytical Results
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Soil Sample Location	Soil Sample Identification	Soil Sample Description	Date Sampled	Sampled by	Depth (feet bgs)	Analytical Results (mg/kg)											
						DRPH[1]	ORPH[1]	GRPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]	MTBE[3]	EDC[3]	EDB[3]	PCBs (Total Aroclors)[4]	Total Lead[5]
HA-1	HA-1-1.5	Hand-Auger Boring	12/20/00	GeoEngineers	1.5	85.4	131	--	--	--	--	--	--	--	--	--	--
HA-2	HA-2-1.5	Hand-Auger Boring	12/20/00	GeoEngineers	1.5	34.5	46	--	--	--	--	--	--	--	--	--	--
	HA-2-3.5				3.5	<10.0	<25.0	--	--	--	--	--	--	--	--	--	--
N-SS-1	N-SS-1	North Ex-Base	03/20/01	GeoEngineers	6.0	28.2	111	<50.0	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	ND	3.68
S-SS-1	S-SS-1	South Ex-Base	03/20/01	GeoEngineers	6.0	594	**2,760**	**52.0**	<0.0500	<0.0500	<0.0500	<0.138	--	--	--	ND	3.7
TXSP-1	TXSP-1	Stockpile Sample	03/20/01	GeoEngineers	--	116	543	<50	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	ND	171
HS-1	HS-1	Hoist Ex-Base	03/20/01	GeoEngineers	8.0	<10.0	<25.0	--	--	--	--	--	--	--	--	--	--
HSP-1	HSP-1	Hoist Stockpile	03/20/01	GeoEngineers	--	368	**2,120**	<5.0	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	ND	167
GP-1	GP-1	Geoprobe Boring	06/19/01	GeoEngineers	9.0	21	11	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
GP-2	GP-2	Geoprobe Boring	06/19/01	GeoEngineers	8.5	<10.0	<25.0	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
GP-3	GP-3	Geoprobe Boring	06/19/01	GeoEngineers	8.0	<10.0	<25.0	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
	GP-3				11.0	<10.0	<25.0	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
GP-4	GP-4	Geoprobe Boring	06/19/01	GeoEngineers	8.0	11.9	<25.0	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
GP-5	GP-5	Geoprobe Boring	06/19/01	GeoEngineers	7.0	587	731	**204**	<0.200	<0.200	<0.200	0.482	--	--	--	--	--
	GP-5				9.0	11.5	<25.0	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
GP-6	GP-6	Geoprobe Boring	06/19/01	GeoEngineers	4.0	36.3	<25.0	**1,100**	<1.00	<1.00	1.75	4.93	--	--	--	--	--
	GP-6				7.0	111	<33.2	**3,100**	<2.50	<2.50	**7.40**	**19.9**	--	--	--	--	--
	GP-6				10.0	17.6	<25.0	28.2	<0.0500	<0.0500	0.200	0.188	--	--	--	--	--
	GP-6				11.0	<10.0	<25.0	**63.3**	<0.0500	0.0996	0.398	0.35	--	--	--	--	--
GP-7	GP-7	Geoprobe Boring	06/19/01	GeoEngineers	6.0	33.8	<25.0	**2,020**	<1.00	<1.00	3.51	**14.4**	--	--	--	--	--
	GP-7				9.0	286	<75.0	**5,570**	**2.96**	5.36	**24.6**	**60.8**	--	--	--	--	--
GP-8	GP-8	Geoprobe Boring	06/19/01	GeoEngineers	8.0	146	<75.0	**2,910**	**0.921**	2.40	**10.7**	**13.3**	--	--	--	--	--
	GP-8				9.0	59.3	<25.0	**3,870**	<1.00	2.43	**11.6**	**14.3**	--	--	--	--	--
GP-9	GP-9	Geoprobe Boring	06/19/01	GeoEngineers	10.0	<10.0	<25.0	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
	GP-9				11.0	<10.0	<25.0	<5.00	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
GP-10	GP-10	Geoprobe Boring	06/19/01	GeoEngineers	9.5	12.4	<25.0	**151**	<0.200	<0.200	0.418	0.951	--	--	--	--	--
GP-11	GP-11	Geoprobe Boring	06/19/01	GeoEngineers	7.0	106	37.1	**1,770**	<1.00	<1.00	2.10	**9.39**	--	--	--	--	--
	GP-11				9.5	<10.0	<25.0	10.4	<0.0500	<0.0500	<0.0500	<0.100	--	--	--	--	--
B-1	B-1-6.0	Hollow-Stem Auger Boring	12/10/01	GeoEngineers	6.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	B-1-11.0				11.0	<10.0	<25.0	**57.9**	<0.0300	<0.0500	<0.0500	0.206	--	--	--	--	--
	B-1-16.0				16.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	B-1-21.0				21.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	B-1-26.0				26.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
MW01	MW-1-31.0	Hollow-Stem Auger Boring	12/10/01	GeoEngineers	31.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-1-35.5				35.5	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
MTCA Method A Cleanup Level[4]						**2,000**	**2,000**	**100/30[6]**	**0.03**	**7**	**6**	**9**	**0.1**	**11[7]**	**0.005**	**1**	**250**

SoundEarth Strategies

Table 2
Summary of Soil Analytical Results
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Soil Sample Location	Soil Sample Identification	Soil Sample Description	Date Sampled	Sampled by	Depth (feet bgs)	Analytical Results (mg/kg)											
						DRPH[1]	ORPH[1]	GRPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]	MTBE[3]	EDC[3]	EDB[3]	PCBs (Total Aroclors)[4]	Total Lead[5]
MW02	MW-2-5.0	Hollow-Stem Auger Boring	12/10/01	GeoEngineers	5.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-2-10.5				10.5	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-2-18.5				18.5	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-2-21.0				21.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-2-26.0				26.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-2-31.0				31.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-2-36.0				36.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
MW03	MW-3-6.0	Hollow-Stem Auger Boring	12/11/01	GeoEngineers	6.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-3-13.0				13.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-3-15.5				15.5	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-3-21.0				21.0	<10.0	<25.0	<5.00	**0.0377**	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-3-25.5				25.5	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-3-31.0				31.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-3-36.0				36.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
MW04	MW-4-6.0	Hollow-Stem Auger Boring	12/11/01	GeoEngineers	6.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-4-11.0				11.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-4-16.0				16.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-4-21.0				21.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-4-26.0				26.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-4-31.0				31.0	<10.0	<25.0	<5.00	**0.0362**	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-4-36.0				36.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
MW05	MW-5-6.0	Hollow-Stem Auger Boring	12/11/01	GeoEngineers	6.0	10.2	46.9	5.01	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-5-15.0				15.0	<10.0	<25.0	9.35	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-5-21.0				21.0	<10.0	<25.0	<5.00	**0.0309**	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-5-26.0				26.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-5-31.0				31.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
	MW-5-36.0				36.0	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S3	S-3-10'	South Ex-West Sidewall	08/03/04	GeoEngineers	10	33.8	<25.0	**180**	<0.0300	<0.0500	0.758	0.801	--	<0.100	<0.100	--	--
S4	S-4-14'	South Ex-Base	08/03/04	GeoEngineers	14	<10.0	<25.0	5.81	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S5	S-5-14'	South Ex-Base	08/03/04	GeoEngineers	14	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S6	S-6-10'	South Ex-NW Sidewall	08/03/04	GeoEngineers	10	<10.0	<25.0	**672**	<0.0600	<0.100	1.53	5.89	--	--	--	--	--
S7	S-7-10'	South Ex-North Sidewall	08/03/04	GeoEngineers	10	206	<25.0	**274**	<0.0300	<0.0500	0.369	2.61	--	--	--	--	--
S8	S-8-10'	South Ex-North Sidewall	08/03/04	GeoEngineers	10	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S9	S-9-10'	South Ex-North Sidewall	08/03/04	GeoEngineers	10	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
MTCA Method A Cleanup Level[4]						**2,000**	**2,000**	**100/30[6]**	**0.03**	**7**	**6**	**9**	**0.1**	**11[7]**	**0.005**	**1**	**250**

SoundEarth Strategies

Table 2
Summary of Soil Analytical Results
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Soil Sample Location	Soil Sample Identification	Soil Sample Description	Date Sampled	Sampled by	Depth (feet bgs)	Analytical Results (mg/kg)											
						DRPH[1]	ORPH[1]	GRPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]	MTBE[3]	EDC[3]	EDB[3]	PCBs (Total Aroclors)[4]	Total Lead[5]
S10	S-10-14'	South Ex-Base	08/03/04	GeoEngineers	14	<10.0	<25.0	<5.00	<0.0300	<0.0500	0.064	<0.100	--	--	--	--	--
S11	S-11-10'	South Ex-North Sidewall	08/03/04	GeoEngineers	10	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S12	S-12-10'	South Ex-South Sidewall	08/03/04	GeoEngineers	10	<10.0	<25.0	**480**	**0.0805**	0.102	3.32	**12**	--	--	--	--	--
S13	S-13-10'	South Ex-East Sidewall	08/03/04	GeoEngineers	10	<10.0	<25.0	**353**	<0.0300	<0.0500	0.407	2.57	--	--	--	--	--
S14	S-14-10'	South Ex-East Sidewall	08/03/04	GeoEngineers	10	<10.0	<25.0	**141**	<0.0300	<0.0500	0.152	0.873	--	--	--	--	--
S16	S-16-6'	North Ex-East Sidewall	08/09/04	GeoEngineers	6	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S17	S-17-6'	North Ex-South Sidewall	08/09/04	GeoEngineers	6	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S18	S-18-10'	North Ex-Base	08/09/04	GeoEngineers	10	72.7	111	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S20	S-20-8.5'	North Ex-West Sidewall	08/09/04	GeoEngineers	8.5	<10.0	<25.0	<5.00	<0.0300	<0.0500	<0.0500	<0.100	--	--	--	--	--
S21	S-21-8'	North Ex-North Sidewall	08/09/04	GeoEngineers	8	1,870	**3,190**	**339**	<0.0300	<0.100	0.116	0.624	--	--	--	--	--
P01	P-1-7	Direct-Push Boring	10/24/05	SoundEarth	7	<11.3	<28.3	<6.86	<0.1	<0.1	<0.1	<0.3	--	<0.1	<0.1	ND	12.4
	P-1-9.5				9.5	--	--	--	<0.1	<0.1	<0.1	<0.3	--	<0.1	<0.1	--	--
	P-1-11				11	--	--	--	--	--	--	--	<0.63	--	--	--	--
	P-1-15				15	<11.7	<27.0	**39.8**	<0.1	<0.1	0.267	0.929	--	<0.1	<0.1	ND	1.83
	P-1-20				20	<11.0	<27.6	6.22	**0.363**	<0.1	<0.1	0.480	--	<0.1	<0.1	ND	1.24
P02	P-2-6	Direct-Push Boring	10/24/05	SoundEarth	6	<11.3	<28.2	<4.91	<0.1	<0.1	<0.1	<0.3	<0.47	<0.1	<0.1	--	12.9
	P-2-9				9	<10.8	<27.0	<6.08	<0.1	<0.1	<0.1	<0.3	--	<0.1	<0.1	ND	1.84
	P-2-12				12	<10.9	<27.2	<6.24	<0.1	<0.1	<0.1	<0.3	<0.61	<0.1	<0.1	--	1.39
	P-2-16				16	--	--	--	**2.00**	<0.1	<0.1	<0.3	--	<0.1	<0.1	--	--
P03	P-3-7	Direct-Push Boring	10/24/05	SoundEarth	7	<12.0	<30.1	<6.10	<0.1	<0.1	<0.1	<0.3	<0.60	<0.1	<0.1	--	2.08
	P-3-14				14	--	--	--	<0.1	<0.1	0.546	1.51	--	<0.1	<0.1	--	
	P-3-16				16	<11.2	35.6	**118**	<0.1	<0.1	1.10	4.30	<0.49	<0.1	<0.1	--	1.65
P04	P-4-8	Direct-Push Boring	10/25/05	SoundEarth	8	<10.9	<27.2	<5.89	<0.1	<0.1	<0.1	<0.3	<0.67	<0.1	<0.1	--	1.4
	P-4-10				10	<10.9	<27.2	5.91	<0.1	<0.1	<0.1	<0.3	<0.58	<0.1	<0.1	--	
	P-4-14.5				14.5	<10.8	<27.1	7.61	**0.348**	<0.1	0.407	2.68	<0.72	<0.1	<0.1	--	1.42
P05	P-5-11	Direct-Push Boring	10/25/05	SoundEarth	11	--	--	<5.94	<0.1	<0.1	<0.1	<0.3	<0.59	<0.1	<0.1	--	--
	P-5-13				13	--	--	<4.97	<0.1	<0.1	<0.1	<0.3	<0.52	<0.1	<0.1	--	--
	P-5-15.5				15.5	--	--	<5.11	<0.1	<0.1	<0.1	<0.3	<0.49	<0.1	<0.1	--	--
P06	P-6-11	Direct-Push Boring	10/25/05	SoundEarth	11	--	--	<5.26	<0.1	<0.1	<0.1	<0.3	<0.51	<0.1	<0.1	--	--
	P-6-16				16	--	--	<5.56	<0.1	<0.1	<0.1	<0.3	--	<0.1	<0.1	--	--
B02/MW06	B02-11	Hollow-Stem Auger Boring	05/01/08	SoundEarth	11	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	2.80
	B02-16				13	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	—
B03/MW07	B03-11	Hollow-Stem Auger Boring	05/01/08	SoundEarth	11	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	—
	B03-16				16	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	1.71
B04/MW08	B04-11	Hollow-Stem Auger Boring	05/02/08	SoundEarth	11	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	--
	B04-21				21	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	--
	B04-31				31	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	--
MTCA Method A Cleanup Level[4]						**2,000**	**2,000**	**100/30[6]**	**0.03**	**7**	**6**	**9**	**0.1**	**11[7]**	**0.005**	**1**	**250**

SoundEarth Strategies

Table 2
Summary of Soil Analytical Results
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Soil Sample Location	Soil Sample Identification	Soil Sample Description	Date Sampled	Sampled by	Depth (feet bgs)	Analytical Results (mg/kg)											
						DRPH[1]	ORPH[1]	GRPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]	MTBE[3]	EDC[3]	EDB[3]	PCBs (Total Aroclors)[4]	Total Lead[5]
B05/MW09	B05-08	Hollow-Stem Auger Boring	05/02/08	SoundEarth	8	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	—
	B05-11				11	<50.0	<250	3	<0.03	<0.05	0.091	<0.2	<0.05	<0.05	<0.05	--	1.68
	B05-20				20	--	--	<2	<0.03	<0.05	0.11	0.25	<0.05	<0.05	<0.05	--	—
B06/MW10	B06-11	Hollow-Stem Auger Boring	05/02/08	SoundEarth	11	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	—
	B06-13.5				13.5	--	--	750[ip]	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	1.32
	B06-20				20	--	--	<2	<0.03	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	--	—
B07/MW11	B07-05	Hollow-Stem Auger Boring	01/16/09	SoundEarth	5	--	--	<2	<0.03	<0.05	<0.05	<0.2	--	<0.05	<0.05	--	--
	B07-10				10	--	--	91[ip]	<0.03	<0.05	0.15	0.19	--	<0.05	<0.05	--	--
	B07-15				15	--	--	4	<0.03	<0.05	<0.05	0.11	--	<0.05	<0.05	--	--
B08/MW12	B08-10	Hollow-Stem Auger Boring	04/20/10	SoundEarth	10	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B08-12.5				12.5	<50	<250	3	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B08-15				15	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
B09/MW13	B09-09	Hollow-Stem Auger Boring	04/20/10	SoundEarth	9	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B09-11				11	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B09-12.5				12.5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
B10/MW14	B10-07.5	Hollow-Stem Auger Boring	04/20/10	SoundEarth	7.5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B10-12.5				12.5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
B11/MW15	B11-05	Hollow-Stem Auger Boring	04/21/10	SoundEarth	5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B11-08				8	<50	<250	1,400	<0.02	1.6	14	16	--	--	--	--	--
	B11-12.5				12.5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
B12/MW16	B12-08	Hollow-Stem Auger Boring	04/21/10	SoundEarth	8	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B12-10				10	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
TP01	TP01-02.5	Test Pit	07/31/12	SoundEarth	2.5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
TP02	TP02-02.5	Test Pit	07/31/12	SoundEarth	2.5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
TP03	TP03-02.5	Test Pit	07/31/12	SoundEarth	2.5	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
MTCA Method A Cleanup Level[8]						**2,000**	**2,000**	**100/30[6]**	**0.03**	**7**	**6**	**9**	**0.1**	**11[7]**	**0.005**	**1**	**250**

SoundEarth Strategies

Table 2
Summary of Soil Analytical Results
TOC Holdings Co. Facility No. 01-443
4910 Leary Avenue Northwest
Seattle, Washington

DRAFT

Soil Sample Location	Soil Sample Identification	Soil Sample Description	Date Sampled	Sampled by	Depth (feet bgs)	Analytical Results (mg/kg)											
						DRPH[1]	ORPH[1]	GRPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]	MTBE[3]	EDC[3]	EDB[3]	PCBs (Total Aroclors)[4]	Total Lead[5]
A01	A01-09SSW01	Grid	08/01/12	SoundEarth	9	--	--	1,500	<0.2	<0.2	11	14	<0.5	<0.5	<0.5	--	--
	A01-09ESW01		08/01/12		9	--	--	230	<0.02	0.071	2.0	1.3	--	--	--	--	--
	A01-16F01		08/02/12		16	--	--	<2	<0.02	<0.02	0.052	0.23	--	--	--	--	--
A02	A02-09SSW01	Grid	08/01/12	SoundEarth	9	--	--	2,300	<0.3	<0.5	28	154.5	<0.5	<0.5	<0.5	--	--
	A02-11WSW01		08/01/12		11	--	--	33	<0.03	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	--	--
	A02-16F01		08/02/12		16	--	--	2.5	<0.02	<0.02	0.061	0.14	--	--	--	--	--
B01	B01-09ESW01	Grid	08/01/12	SoundEarth	9	--	--	<2	<0.03	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	--	--
	B01-16F01		08/02/12		16	--	--	<2	<0.02	<0.02	0.023	<0.06	--	--	--	--	--
B02	B02-10WSW01	Grid	08/01/12	SoundEarth	10	--	--	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	B02-16F01		08/02/12		16	--	--	9.7	<0.02	<0.02	0.075	0.12	--	--	--	--	--
	B02-12WSW02		08/02/12		12	--	--	<2	<0.03	<0.05	<0.05	<0.15	<0.05	<0.05	<0.05	--	--
C01	C01-08NSW01	Grid	08/03/12	SoundEarth	8	--	--	4.3	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	C01-15F01		08/03/12		15	--	--	<2	<0.02	<0.02	0.023	<0.06	--	--	--	--	--
C02	C02-11WSW01	Grid	08/03/12	SoundEarth	11	--	--	<2	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--
	C02-15F01		08/03/12		15	--	--	4.7	<0.02	<0.02	0.029	<0.06	--	--	--	--	--
MTCA Method A Cleanup Level[8]						**2,000**	**2,000**	**100/30[6]**	**0.03**	**7**	**6**	**9**	**0.1**	**11[7]**	**0.005**	**1**	**250**

NOTES:

Samples collected after October 24, 2005, analyzed by North Creek Analytical, Inc. of Bothell, Washington, or Friedman & Bruya, Inc. of Seattle, Washington.

Red denotes concentration in excess of MTCA Method A Cleanup Level for Soil.

[1]Analyzed by Method NWTPH-Dx.

[2]Analyzed by Method NWTPH-Gx.

[3]Analyzed by EPA Method 8021B or 8260B.

[4]Analyzed by EPA Method 8082.

[5]Analyzed by EPA 6000/7000 Series Methods.

[6]100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.

[7]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Carcinogen, Standard Formula Value, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

[8]MTCA Method A Cleanup Levels, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

Laboratory Note:

[ip]Exceeds verification standard. Reported result is an estimate.

-- = not analyzed/not measured
< = not detected at a concentration above the laboratory reporting limit
bgs = below ground surface
CLARC = Cleanup Levels and Risk Calculations
DRPH = diesel-range petroleum hydrocarbons
EDB = ethylene dibromide
EDC = ethylene dichloride
EPA = U.S. Environmental Protection Agency
Ex = excavation
GeoEngineers = GeoEngineers, 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
PBC = polychlorinated biphenyl
SoundEarth = SoundEarth Strategies, Inc.
WAC = Washington Administrative Code

PROPERTY PHOTOGRAPHS

Photograph 1. Removing clean overburden.

Photograph 2. Exposed abandoned pipes.

Photograph 3. Trench-box installed as an added safety measure.

Photograph 4. Covering an open excavation with steel plates at the end of the day.

Photograph 5. Direct loading of soil for off-Site removal.

Photograph 6. Excavation of an approximate 100-square-foot "cell."

SoundEarth Strategies	Project No.: 0440-041 Date: 1/14/14 Drawn By: LMS Chk By: RKB File ID: 01-443_2012ICAR_Photolog_F	**PROPERTY PHOTOGRAPHS** TOC Holdings Co. Facility No. 01-443 4910 Leary Avenue Northwest Seattle, Washington

Photograph 7. Clean fill imported to Site.

Photograph 8. Hydraulic tamping of backfilled portion of excavation.

Photograph 9. Backfilled excavation extent.

Photograph 10. Restoring sidewalk and parking lot surfaces.

SoundEarth Strategies	Project No.: 0440-041 Date: 1/14/14 Drawn By: LMS Chk By: RKB File ID: 01-443_2012ICAR_Photolog_F	**PROPERTY PHOTOGRAPHS** TOC Holdings Co. Facility No. 01-443 4910 Leary Avenue Northwest Seattle, Washington

APPENDIX A
SITE-SPECIFIC HEALTH AND SAFETY PLAN

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

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Property:
TOC Holdings Co. Facility No. 01-443
4910 Leary Way
Seattle, Washington

Prepared for:
TOC Holdings Co.
2737 West Commodore Way
Seattle, Washington

Report Date:
July 25, 2013

SITE-SPECIFIC HEALTH AND SAFETY PLAN

Prepared for:

TOC Holdings Co.
2737 West Commodore Way
Seattle, Washington

TOC Holdings Co. Facility No. 01-443
4910 Leary Way
Seattle, Washington

Project No.: 0440-041

Prepared by:

Krista Garrett
Staff Geologist

Reviewed by:

Ryan Bixby, LG #1691
Environmental Division President

Initiation Date: June 3, 2013
Expiration Date: June 3, 2014

HAZARD SUMMARY

SoundEarth Strategies, Inc. (SoundEarth) has prepared this Site-Specific Health and Safety Plan (HASP) for TOC Holdings Co. Facility No. 01-443, located at 4910 Leary Way in Seattle, Washington (hereinafter referred to as the Property). The HASP was written in general accordance with the Washington State Model Toxics Control Act (MTCA) as promulgated in Chapter 173-340-350 of the Washington Administrative Code (WAC).

SITE DESCRIPTION

The Property is occupied by The Shelter Lounge, a 1942-vintage, single-story building with an associated asphalt-paved parking lot and perimeter landscaping. The Property was first developed with a single-family residence sometime before 1893 and appeared to have been used for residential purposes until 1922, when the residence was demolished and a Mobil-brand retail gasoline station and automotive repair facility was constructed in its place. This facility was equipped with three fuel-dispensing pump islands, a hydraulic hoist, and grease shed. No information regarding the associated underground storage tanks was observed in the available public record. In 1942, the 1922-vintage facility was upgraded and the existing building was constructed.

The 1942-vintage facility was reportedly equipped with a single pump island; a hydraulic hoist; and as many as four underground storage tanks (USTs) with capacities of 125, 500, 650, and 1,000 gallons. The Property operated as a gasoline service station until at least 1954. TOC Holdings Co. (formerly Time Oil Co.) purchased the Property in 1957. The dispenser island was removed from the Property between 1954 and 1967. Between 1959 and 2006, automotive repair or tire sales facilities operated on the Property. In 2001, the 125-gallon waste oil UST, hydraulic hoist, and approximately 35 tons of petroleum-contaminated soil (PCS) were removed from the Site. In 2004, the 500-gallon and 650-gallon USTs, the associated product delivery piping, and approximately 1,193 tons of PCS were removed from the Site. No information regarding the removal of the 1,000-gallon UST was observed.

As established in Section 200 of Chapter 173-340 of the WAC, the “Site” is defined by the full lateral and vertical extent of contamination that resulted from the former underground storage tank system on the property. Subsurface investigations conducted on the Site since 2000 have confirmed that the historical use of the Property as a retail gasoline station and automotive repair facility has resulted in adverse environmental impacts to soil and groundwater. Available information indicates that petroleum-contaminated soil and groundwater is present beneath the southern portion of the Property, extending a short distance beyond the eastern and southwestern boundaries of the Property.

Laboratory analytical data indicate that concentrations of gasoline-range petroleum hydrocarbons (GRPH); diesel-range petroleum hydrocarbons (DRPH), oil-range petroleum hydrocarbons (ORPH), benzene, toluene, ethylbenzene, xylenes, naphthalene have been detected in soil and/or groundwater beneath the Site. Concentrations of 1,2,-dichloroethane, associated with a separate release off-Property, have also been detected in groundwater farther east, south, and southwest of the Property. In an effort to mitigate the residual groundwater contamination beneath the Site, an in situ chemical oxidation injection event using Klozur Cr was conducted at the Site in 2011. In 2012, remedial excavation activities were conducted. The results of soil sampling conducted at the final limits of the excavation confirm that a significant portion of petroleum contaminated soil has been removed from the Site.

HAZARD SUMMARY (CONTINUED)

SITE HAZARDS

Hazards present at the Site include the following:

Chemical

- Benzene in soil and groundwater
- 1,2-dichloroethane (EDC) in groundwater
- Ethylbenzene in groundwater
- Naphthalene in soil and groundwater
- DRPH in soil and groundwater
- GRPH in soil and groundwater
- ORPH in soil
- Xylenes in soil and groundwater.
- Sodium persulfate in the Klozur Cr injectate and groundwater. Klozur® CR is a chemical injectate used for the chemical oxidation and aerobic bioremediation of petroleum and partially halogenated hydrocarbons. The manufacturer is withholding the chemical identity of the proprietary mixture under provision of the Occupational Safety and Health Administration (OSHA) Hazard Communication Rule Trade Secrets (1910.1200(i)(1). However, analytical testing of the injectate indicates that Klozur® CR may contain concentrations of arsenic, chromium and selenium in addition to sodium persulfate. As such, a Material Safety Data Sheet for Klozur® CR is included in Appendix D.

Physical

- Ergonomic hazards
- Slips, trips, and falls
- Temperature extremes
- Traffic and moving equipment

Field Activities

- Quarterly groundwater sampling

The following hazard controls, based on the tasks identified in the Fieldwork Activities above, are required for employees of SoundEarth while performing work on the Site:

- Level D personal protective equipment (PPE), which includes hard hats, steel-toed boots, safety glasses, nitrile gloves, and a reflective safety vest.
- Traffic control including delineators, lighting, and vehicle barricades, as necessary.

This hazard summary is presented solely for introductory purposes, and the information contained in this section should be used only in conjunction with the full text of this report. A complete description of

the project, site conditions, investigation methods, and investigation results can be found in previous reports referenced in Section 5.1.1, Reports that Provide Chemical Data.

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FIGURES

ATTACHMENTS

1.0 INTRODUCTION

This Site-Specific HASP was written for the use of SoundEarth and its employees. The health and safety and emergency response protocols outlined in this plan are designed to ensure compliance with state and federal regulations governing worker safety on hazardous waste sites. The Department of Labor has published final rules (Part 1910.120 of Title 29 of the Code of Federal Regulations, March 6, 1990) that amend the existing OSHA standards for hazardous waste operations and emergency response. Within the State of Washington, these requirements are addressed in Chapter 296-843 of the Washington Administrative Code, Hazardous Waste Operations. These regulations apply to the activities to be performed at this Site as a site remediation, or cleanup, under the Federal Resource Conservation and Recovery Act of 1976 and/or the MTCA.

Subcontractors to SoundEarth are required to prepare and effectively implement their own HASP based on their unique scope of work and professional expertise. Each subcontractor's HASP must comply with all applicable federal, state, and local regulations. The subcontractor's HASP should employ appropriate best practices to protect all personnel working on the Site, as well as the public, and to prevent negative impacts to the project or site.

The responsibilities of SoundEarth for safety on this Site are limited to:

- **Implementation** of the provisions of this HASP for the protection of its employees and visitors on the Site to the extent that the Site and its hazards are under the control of SoundEarth.
- **Protection of the Site**, other personnel, and the public from damage, injury, or illness as a result of the activities of SoundEarth and its employees while on the Site.
- **Provision** of additional safety-related advice and/or management as contractually determined between the parties.

This plan is active for this Site until 1 year from the date of the HASP or until SoundEarth implements a scope of work change not covered by this HASP, whichever comes first, after which time it must be reviewed and extended.

NOTE: Reference identifications (08-01, Project Responsibilities through 08-23, Work Near Water) incorporated into this Site-Specific HASP refer to the *HASP Reference Manual*, prepared by SoundEarth and dated January 2011, which is a stand-alone document that compiles detailed information and instructions for protecting SoundEarth employees from chemical and physical hazards applicable to this Site-Specific HASP. The *HASP Reference Manual* and this Site-Specific HASP **MUST** be present at the Site during field activities.

2.0 PROPERTY INFORMATION

Property Name: TOC Holdings Co. Facility No. 01-443
Property Address: 4910 Leary Way Seattle, Washington
Property Owner: Old Ballard LLC
Property Tenant: Shelter Lounge
Nature of Activities at the Property: Current: The Shelter Lounge Past: retail gasoline station
Figures 1 and 2 show the Property location and features.

3.0 PROJECT RESPONSIBILITIES

Site personnel shall acknowledge that they have reviewed a copy of the HASP for this project, that they understand it, and that they agree to comply with all of its provisions by signing and dating the Acknowledgement and Agreement form found in Attachment A.

A daily health and safety tailgate meeting shall take place at the start of every day in the field. Persons attending this meeting are to print and sign their name on the attached Daily Health and Safety Briefing Log, found in Attachment B. (Reference 08-01, Project Responsibilities, provides more information.)

Project Manager: Beau Johnson
Site Manager/Health and Safety Officer: Larry Namba
Principal in Charge: Ryan K. Bixby
Corporate Health and Safety Administrators: Chris Carter, John Funderburk

4.0 EMERGENCY INFORMATION

For a critical emergency, 911 should be called. (The definition of critical emergency can be found in Reference 08-02, Emergency Response Plan.)

Note: A SoundEarth employee MAY NOT transport a non-SoundEarth employee off of the Site for medical attention.

Local Emergency Numbers		
Institution/Department	**Name/Address**	**Phone Number**
Hospital	Swedish Hospital—Ballard Branch 5300 Tallman Avenue NW Seattle, Washington	911 or (206) 782-2700
Ambulance		911
Police/Sheriff	Seattle Police Department 10049 College Way North Seattle, Washington	911
Fire	Seattle Fire Department 301 Second Avenue South Seattle, Washington	911
Fatality or Multiple Injury Reporting (within 8 hours)		1-800-4BE-SAFE or 800-423-7233

Project Emergency Numbers		
Title	**Name**	**Phone Number**
Project Manager	Beau Johnson	O: (206)306-1900 C: (206)779-9389
Site Manager/Health and Safety Officer	Larry Namba	O: (206)306-1900 C: (206)618-0753
Principal-in-Charge	Ryan Bixby	O: (206)306-1900 C: (206) 818-0669
Corporate Health and Safety Representative	John Funderburk	O: (206) 306-1900 C: (425) 922-9922
Certified Industrial Hygienist working for SoundEarth	Michelle Copeland	O: (206) 612-6355

Attachment C, Hospital Route, provides the location and driving directions. The route must be posted at the Site.

5.0 GENERAL SITE HAZARD ANALYSIS

This section is used to determine the project's potential health and safety hazards specifically as they relate to the Site where the work will occur. Task-related hazards are analyzed in Section 6.0, Task-Related Site Hazard Analysis.

5.1 GENERAL SITE HAZARD ANALYSIS—CHEMICAL

This section describes and identifies potential and known chemical hazards that may be encountered at the Site (summarized in Table 1). Reference 08-03, Chemical Hazards Analysis, provides more information.

5.1.1 Reports that Provide Chemical Data

- *Groundwater Monitoring Report, First Quarter 2013*, TOC Holdings Co. Facility No. 01-443, prepared by SoundEarth, dated May 29, 2013.
- *Remedial Investigation Report, TOC Holdings Co. Facility No. 01-443*, prepared by Sound Environmental Strategies, dated July 14, 2009 (2009 RI).

5.1.2 Summary of Potential Chemical Hazards

- Benzene in soil and groundwater
- EDC in groundwater
- Ethylbenzene in groundwater
- Naphthalene in soil and groundwater
- DRPH in soil and groundwater
- GRPH in soil and groundwater
- ORPH in soil
- Xylenes in soil and groundwater
- Xylenes in soil and groundwater
- Sodium persulfate in the Klozur Cr injectate and groundwater. Klozur® CR is a chemical injectate used for the chemical oxidation and aerobic bioremediation of petroleum and partially halogenated hydrocarbons. The manufacturer is withholding the chemical identity of the proprietary mixture under provision of the OSHA Hazard Communication Rule Trade Secrets (1910.1200(i)(1). However, analytical testing of the injectate indicates that Klozur® CR may contain concentrations of arsenic, chromium and selenium in addition to sodium persulfate. As such, a Material Safety Data Sheet for Klozur® CR is included in Appendix D.

5.1.3 Past Opportunities for Chemical Contamination

The Property once operated as a retail gasoline station, resulting in a release of petroleum hydrocarbons in soil and groundwater beneath the Site.

5.1.4 Opportunities for Unknown or Unidentified Chemical Contamination

Based on the location of the Property within the Ballard Interbay Northend Manufacturing and Industrial Center area, surrounding historical property uses, utility corridors in the rights-of-way adjacent to the Property, and the results of previous investigations conducted by SoundEarth and others, the EDC impacts that have historically been detected in soil and/or groundwater at on-Property and off-Property locations do not appear to be the result of a release that occurred on the Site. The EDC detected in groundwater collected from locations to the west/southwest of the Site appears to be the result of release(s) from off-Property locations such as the sewer line that runs beneath Leary Avenue Northwest.

5.1.5 Existing Controls in Place

The Site is capped by asphalt and concrete, preventing direct contact with contaminated soil and/or groundwater.

5.1.6 Chemical Analytical Results

- Soil Analytical Results, Table 1 of the 2009 RI.
- Summary of Groundwater Data, Table 1 of the First Quarter 2013 Groundwater Report.

TABLE 1 CHEMICAL HAZARDS

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure / Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE / Respiratory Protection	Recommended Monitoring/ Sampling Method
Arsenic	DOSH PEL 10 µg/m^3 TWA DOSH AL 5 µg/m^3 TWA	NIOSH REL 2 µg/m^3 15 min IDLH 5 mg/m^3 Carcinogen	Inhalation, ingestion, skin or eye contact _____ Odorless dust – poor warning properties	Dermatitis, gastrointestinal disturbances, respiratory irritation, increased pigmentation of skin	Liver, kidneys, skin, lungs, lymphatic system	▪ Impermeable, disposable clothing ▪ Nitrile or Neoprene gloves _____ If PEL is exceeded, min ▪ Min ½ Mask AP/HEPA ▪ Higher APF if per air monitoring	▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ Particulate Monitoring ▪ Mini Ram

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure / Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE / Respiratory Protection	Recommended Monitoring/ Sampling Method
Benzene (component of gasoline)	DOSH PEL: 1 ppm TWA 5 ppm STEL DOSH AL: 0.5 ppm TWA	NIOSH REL: 0.1 ppm TWA 1 ppm STEL IDLH: 500 ppm FP: 12°F LEL: 1.2%	Inhalation, ingestion, skin absorption, eye contact Aromatic odor	Irritation of eyes, skin, nose, respiratory system; dizziness; headache; nausea (Carcinogen)	Eyes, skin, respiratory system, blood, central nervous system, bone marrow	▪ Impermeable, disposable clothing ▪ Nitrile or Neoprene gloves ▪ Min ½ Mask AP/HEPA If PEL is exceeded, min full-face SA respirator in positive pressure/ pressure demand mode. ▪ Higher APF if per air monitoring	If potential for exposure exists: ▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ Detector Tube ▪ 10.2 or 10.6 eV PID

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE Respiratory Protection	Recommended Monitoring/ Sampling Method
Chromium III	DOSH PEL 0.5 µg/m^3 TWA	IDLH 25 mg/m^3	Inhalation, ingestion, skin or eye contact _____ Appearance and odor vary depending on the compound	Irritation of the eyes and sensitization dermatitis	Eyes, skin	▪ Impermeable, disposable clothing ▪ Nitrile or Neoprene gloves If PEL is exceeded, min ▪ Min ½ Mask AP/HEPA ▪ Higher APF if per air monitoring	▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ Particulate Monitoring ▪ Mini Ram

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE Respiratory Protection	Recommended Monitoring/ Sampling Method
EDC (1,2 Dichloroethane or ethylene dichloride)	DOSH PEL: 1 ppm TWA 2 ppm STEL OSHA PEL: 50 ppm TWA 100 ppm C	NIOSH REL: 1 ppm TWA 2 ppm STEL IDLH: 50 ppm FP: 56°F LEL: 6.2%	Inhalation, ingestion, skin absorption, eye contact Pleasant chloroform-like odor	Eye irritation, central nervous system depression, nausea, vomiting, inflammation of skin	Eyes, skin, kidneys, liver, central nervous system, cardiovascular system	▪ Impermeable, chemical resistant disposable clothing ▪ Silver Shield/ composite glove If PEL is exceeded, min full-face SA respirator in positive pressure/ pressure demand mode	If potential for exposure exists: ▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ Detector Tube ▪ 11.7 eV PID

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure / Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE / Respiratory Protection	Recommended Monitoring/ Sampling Method
Ethylbenzene	DOSH PEL: 100 ppm TWA 125 ppm STEL	NIOSH REL: 50 ppm TWA 100 ppm STEL IDLH: 700 ppm FP: 55° F LEL: 0.8%	Inhalation, ingestion, skin or eye contact Sweet, floral odor	Irritation of eyes, skin, nose, respiratory system; dizziness; headache; drowsiness; unsteady gait; defatting; inflammation of skin; possible liver injury; reproductive effects	Eyes, skin, central nervous system, liver, respiratory system, reproductive system	▪ Impermeable, chemical resistant disposable clothing ▪ Silver Shield/ composite glove If PEL is exceeded, min ½ Mask AP with OV cartridge	If potential for exposure exists: ▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ 10.2 or 10.6 eV PID

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure / Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE / Respiratory Protection	Recommended Monitoring/ Sampling Method
Naphthalene	DOSH PEL: 10 ppm TWA 15 ppm STEL	NIOSH REL: 10 ppm TWA 15 ppm STEL IDLH: 250 ppm LEL: 0.9%	Inhalation, ingestion, skin absorption, eye contact Odor of mothballs	Eye irritation, headache, confusion, excitement, malaise, nausea, vomiting, abdominal pain, irritable bladder, profuse sweating, jaundice, blood in urine, renal shutdown, inflammation of skin	Eyes, skin, blood, liver, kidneys, central nervous system	▪ Impermeable, disposable clothing ▪ Silver Shield/ composite gloves •If needed, Min ½ Mask If needed, Min ½ Mask AP w/ combination OV and HEPA cartridges	If potential for exposure exists: ▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ 10.2 or 10.6 eV PID
Selenium	OSHA PEL 0.2 mg/m^3 TWA	NIOSH REL 0.2 mg/m^3 TWA IDLH: 1 mg/m^3 Combustible solid	Inhalation, ingestion, skin or eye contact Amorphous or crystalline, red or gray solid.	Irritation of eyes, skin, nose, throat; visual disturbance; headache; chills, fever; breathing difficulty; bronchitis; metallic taste, garlic breath, gastrointestinal disturbance; dermatitis; eye, skin burns; anemia; liver necrosis, cirrhosis; kidney, spleen damage	Eyes, skin, respiratory system, liver, kidneys, blood, spleen Eye: Irrigate immediately Skin: Soap wash immediately Breathing: Respiratory support Swallow: Medical attention immediately	▪ Impermeable, chemical resistant disposable clothing ▪ Nitrile gloves If IDLH is exceeded, min quarter mask air-purifying respirator equipped with an N95, N100, R95, R100, P95, P100 filter	If potential for exposure exists: Initial personal air sampling Additional sampling if necessary based on initial results Verify method with laboratory prior to ordering media and equipment

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure / Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE / Respiratory Protection	Recommended Monitoring/ Sampling Method
Sodium Persulfate (Klozur Injectate)	DOSH PEL: None OSHA PEL: NONE	AGCIH: 0.1 mg/m^3 TWA Oxidizer	Inhalation, ingestion, skin or eye contact None	Irritation of eyes, skin respiratory system; dermatitis, asthma	Skin, eyes, respiratory system	▪ Impermeable chemical-resistant disposable clothing ▪ Nitrile gloves ▪ Face shield and safety glasses while handling/injecting the Klozur CR solution ▪ Dust Mask (for Klozur Cr powder) required ▪ Combination dust and vapor respirator is recommended	Visible white, odorless crystals. Avoid contact with chemical.
TPH as Diesel (petroleum distillates as a surrogate)	DOSH PEL: 100 ppm TWA 150 ppm STEL OSHA PEL: 500 ppm TWA	NIOSH REL: 86 ppm TWA 444 ppm STEL IDLH: 1,100 ppm FP: -40 to -86°F LEL: 1.1%	Inhalation, ingestion, skin or eye contact Gasoline or kerosene-like odor	Irritation of eyes, nose, throat; dizziness; drowsiness; headache; nausea; dry cracked skin; inflammation of lungs	Eyes, skin, respiratory system, central nervous system	▪ Impermeable, chemical-resistant, disposable clothing ▪ Nitrile or Neoprene gloves If PEL is exceeded, any SA respirator	If potential for exposure exists: ▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ 10.2 or 10.6 eV PID

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure / Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE / Respiratory Protection	Recommended Monitoring/ Sampling Method
TPH as Gasoline	DOSH PEL: 300 ppm TWA 500 ppm STEL OSHA PEL: None	FP: -45°F LEL: 1.4%	Inhalation, ingestion, skin absorption, skin or eye contact Characteristic odor	Irritation of eyes, skin, and mucous membranes; inflammation of skin and lungs; headache; weakness; exhaustion; blurred vision; dizziness, slurred speech; confusion; convulsions; possible liver and kidney damage; (potential occupational carcinogen)	Eyes, skin, respiratory system, central nervous system, liver, kidneys	▪ Impermeable, chemical-resistant, disposable clothing ▪ Nitrile gloves If PEL is exceeded, any SA respirator in positive pressure/ pressure demand mode	If potential for exposure exists: ▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ 10.2 or 10.6 eV PID

Chemical (or Class)	DOSH PEL/AL (OSHA PEL if different)	Other Pertinent Limits	Routes of Exposure / Warning Properties	Exposure Symptoms	Target Organs	Recommended PPE / Respiratory Protection	Recommended Monitoring/ Sampling Method
Xylenes	DOSH PEL: 100 ppm TWA 150 ppm STEL	NIOSH REL: 100 ppm TWA 150 ppm STEL IDLH: 900 ppm FP: 81-90°F LEL: 0.9-1.1%	Inhalation, ingestion, skin absorption, skin or eye contact _____ Aromatic odor	Irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal cell debris; anorexia, nausea, vomiting, abdominal pain; inflammation of skin	Eyes, skin, respiratory system, central nervous system, gastrointestinal tract, blood, liver, kidneys	▪ Impermeable, chemical-resistant, disposable clothing ▪ Nitrile gloves If PEL is exceeded, min ½ Mask AP with OV cartridge	If potential for exposure exists: ▪ Initial personal air sampling ▪ Additional sampling if necessary based on initial results ▪ Verify method with laboratory prior to ordering media and equipment Real Time: ▪ 10.2 or 10.6 eV PID

NOTES:
The NIOSH Pocket Guide provides more information for the chemical in question or for a chemical not listed.
Attachment D, Site-Specific Chemical Material Safety Data Sheets, provides information on each chemical listed above.

µg/m^3 = micrograms per cubic meter
ACGIH = American Conference of Governmental Industrial Hygienists
AL = action limit
AP = air purifying respirator
APF = assigned protection factor
C = ceiling exposure limit
DOSH = Washington State Department of Labor and Industries, Division of Occupational Safety and Health (formerly the Washington Industrial Safety and Health Act)
eV = electron volt
^{o}F = degrees Fahrenheit
FP = flash point
HEPA = high efficiency particulate air cartridge
IDLH = immediately dangerous to life and health
IP = ionization potential
LEL = lower explosive limit
mg/m^3 = milligrams per cubic meter
min = minimum
N/A = not applicable
NIOSH = National Institute of Safety and Health
OSHA = Occupational Safety and Health Administration
OV = organic vapor cartridge
PAPR = powered air purifying respirator
PEL = permissible exposure limit
PID = photoionization detector
PPE = personal protective equipment
ppm = parts per million
REL = recommended exposure limit
SA = supplied air respirator
STEL = short-term exposure limit, 15 minutes, unless otherwise noted
TLV = threshold limit value
TPH = total petroleum hydrocarbon
TWA = time-weighted average

5.2 GENERAL SITE HAZARD ANALYSIS—PHYSICAL

This section addresses known and potential physical hazards specific to the Site. Reference 08-04, Physical Hazards Analysis, provides more information. Site documents provided by the client/owner/tenant can be helpful to identify Site specific hazards (non-SoundEarth HASPs, Traffic Control Plans, Operation and Management Plans, and others documents).

5.2.1 General Site Specific Physical Hazards

Described below are physical hazards that may be encountered while on the Site.

- Ergonomic hazards
- Slips, trips, and falls
- Temperature extremes
- Traffic and moving equipment

5.2.2 Utility Hazards

Described below are utility hazards that may be present at the Site. In order to locate utilities, the Northwest Utility Notification Center should be called at 800-424-5555, a private locate should be scheduled (as appropriate), side sewer cards should be reviewed, owner/tenant documents should be reviewed, and the site should be visually inspected.

5.2.2.1 Underground Utilities (Reference 08-19, Underground Services Location and Protection.)

- Power lines
- Gas lines
- Sanitary sewer lines
- Storm drain lines
- Combined sewer/stormwater lines
- Water lines
- Telecommunication lines

5.2.2.2 Overhead Utilities (Reference 08-10, Electrical Safety)

- Overhead utility lines may be present on the Site. Sufficient distance from utility lines should be maintained during any work that may interfere with overhead lines. Reference 08-10, Electrical Safety, provides additional detail.

6.0 TASK-RELATED SITE HAZARD ANALYSIS

This section outlines the health and safety hazards that may be present on the Site as a result of the tasks to be performed by SoundEarth or subcontractors as they relate to the chemical and physical hazards identified in Sections 5.1 and 5.2, above. References noted in Table 2 for the controls and any PPE required should be reviewed. Reference identifications (08-01, Project Responsibilities through 08-23, Work Near Water) incorporated into Table 2 refer to the *HASP Reference Manual,* dated January

2011, which is a stand-alone document that compiles detailed information and instructions for protecting SoundEarth employees from chemical and physical hazards applicable to this Site-Specific HASP. A summary of the controls specific to the Site is presented in Section 7.0, Task-Related Site Hazard Controls Summary.

7.0 TASK-RELATED SITE HAZARD CONTROLS SUMMARY

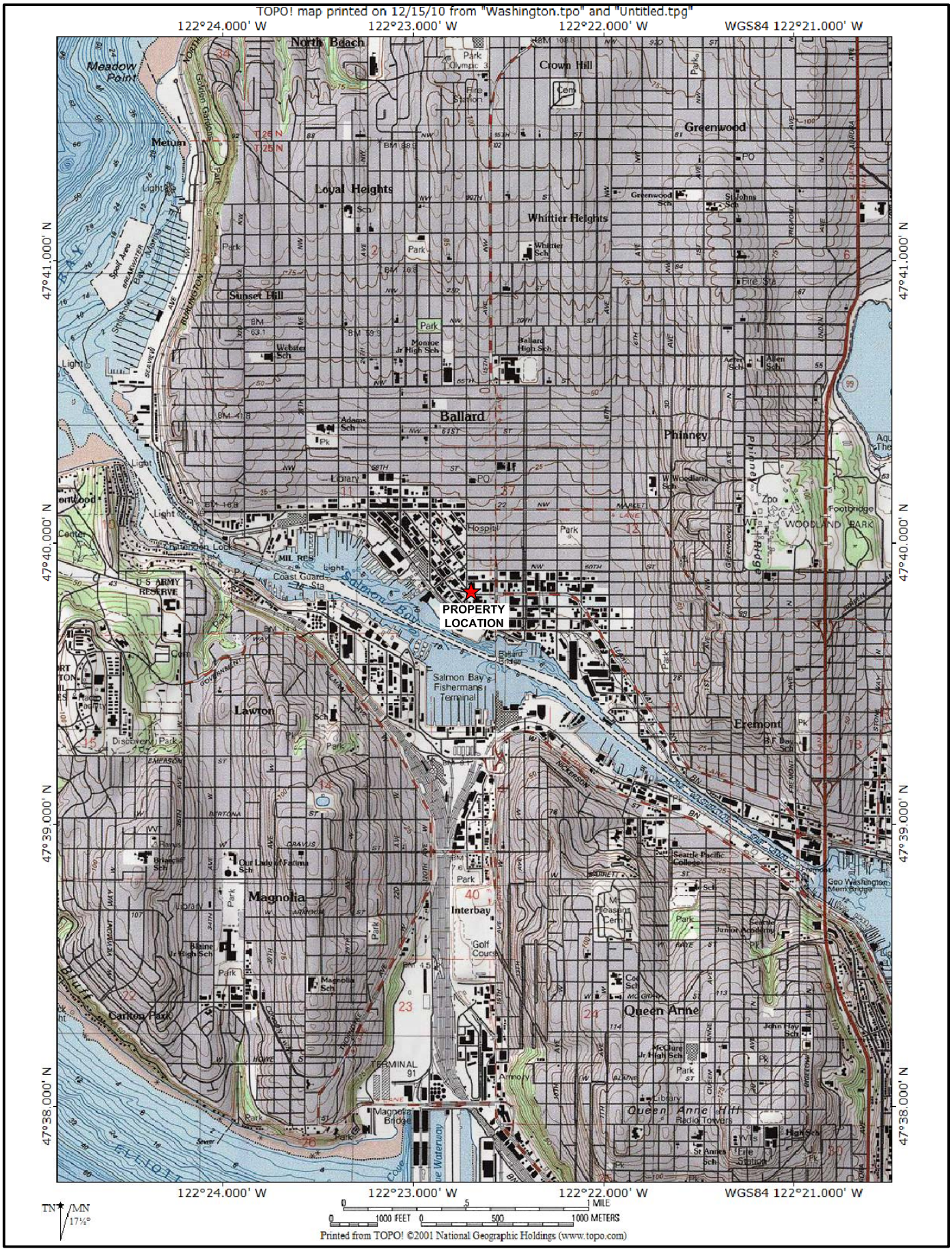
The following controls are required for SoundEarth employees while performing work on the Site:

- Level D PPE, which includes hard hats, steel-toed boots, safety glasses, nitrile gloves, and a reflective safety vest.
- Traffic control including delineators, lighting, and vehicle barricades, as necessary.

TABLE 2 SITE-SPECIFIC TASK-RELATED HAZARDS

Tasks	Role	Hazard	References
Sampling – Environmental	Task performed by SoundEarth	Chemicals	Table 1, Chemical Hazards 08-17, Sample Collection
		Confined space	08-09, Confined Space Awareness
		Emergency	08-02, Emergency Response Plan
		Heat stress/hypothermia	08-13, Temperature Extremes
		Ladders or heights	08-22, Work at Heights
		PPE, meetings, inspections	08-07, General Site Safety Requirements
		Process hazards	08-21, Work Around Hazardous Processes
		Traffic/mobile equipment	08-18, Traffic and Moving Equipment Hazards
		Unstable ground	08-20, Unstable Ground
		Water hazards	08-23, Work Near Water

FIGURES



SoundEarth Strategies
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DATE: 02/07/12
DRAWN BY: JQC
CHECKED BY: RKB
CAD FILE: 01-443_Fig 1_TO

PROJECT NAME: TOC HOLDINGS CO. FACILITY NO. 01-443
PROJECT NUMBER: 0440-041
STREET ADDRESS: 4910 LEARY AVENUE NORTHWEST
CITY, STATE: SEATTLE, WASHINGTON

FIGURE 1
PROPERTY LOCATION MAP

2/7/2012
P:\0440 TOC HOLDINGS CO\01-443 BALLARD\TECHNICAL\CAD\FIGURE 1\01-443_FIG1_TO.DWG
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LEGEND

- H-1 — SOIL SAMPLE (GEI 2001)
- GP-6 — GEOPROBE (GEI 2002)
- S20 — UST EXCAVATION SOIL SAMPLE (GEI 2004)
- P01 — SOIL BORING (SES 2005)
- B-1 — HOLLOW-STEM AUGER BORING (GEI 2002)
- MW10/B06 — MONITORING WELL
- MW05 — DECOMMISSIONED MONITORING WELL
- E — ELECTRIC LINE
- GAS — GAS LINE
- SS — SANITARY SEWER
- SD — STORMWATER LINE
- COMBINED SEWER/STORMWATER LINE
- W — WATER LINE
- T — TELECOMMUNICATIONS LINE
- OHP — OVERHEAD POWER LINE
- PROPERTY BOUNDARY
- FORMER SITE FEATURE
- FORMER EXCAVATION AREA
- UST — UNDERGROUND STORAGE TANK
- GEI — GEOENGINEERS

N

LEARY AVENUE NORTHWEST

MW06/B02
MW04
P06
MW08/B04
MW07/B03
P05
MW03
P04
SIGN
P03
MW10/B06
MW09/B05
P02
P01
MW11/B07
MW12/B08
MW13/B09
MW05
MW05A
GP-10
GP-11
GP-7
GP-6
GP-9
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
1920s PUMP ISLANDS
1940s PUMP ISLAND
USTs
COVERED PATIO
1920s PUMP ISLANDS
HYDRAULIC HOIST EXCAVATION
LUBRICATION BAY
HS-1
SHELTER LOUNGE
H2
H1
SUMP
WASTE OIL UST
S20
GP-5
S21
S18
N-SS
MW01A
S17
S16
S-SS
GP-1
GP-2
GP-4
MW14/B10
B-1
MW01
MW15/B11
MW02
MW16/B12

17TH AVENUE NORTHWEST

SOURCES: GEI 2001, 2002, AND 2004 SITE PLAN FIGURES

P:\0440 TOC Holdings Co\01-443 Ballard\Technical\CAD\2012\HASP\01-443_2012HASP_EL.dwg

SoundEarth Strategies
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DATE:	12/28/11
DRAWN BY:	NAC
CHECKED BY:	RKB
CAD FILE:	01-443_ 2012HASP_EL

PROJECT NAME:	TOC HOLDINGS CO. FACILITY 01-443
PROJECT NUMBER:	0440-041
STREET ADDRESS:	4910 LEARY AVENUE NORTHWEST
CITY, STATE:	SEATTLE, WASHINGTON

REGION:

0 5 10 20 40
APPROXIMATE SCALE IN FEET

FIGURE 2
EXPLORATION LOCATION PLAN

SOUNDEARTHINC.COM

ATTACHMENT A

ACKNOWLEDGEMENT AND AGREEMENT FORM

ACKNOWLEDGEMENT AND AGREEMENT FORM

I acknowledge that I have reviewed a copy of the Health and Safety Plan for this project, that I understand it, and that I agree to comply with all of its provisions. I also understand that I could be prohibited by the Site Manager/Health and Safety Officer or other SoundEarth personnel from working on this project if I fail to comply with any aspect of this Health and Safety Plan:

Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*
Name	*Signature*	*Company*	*Date*

ATTACHMENT B

DAILY HEALTH AND SAFETY BRIEFING LOG

DAILY HEALTH AND SAFETY BRIEFING LOG

Date: _____ **Start Time:** _____

Property/Site Discussed: _____

_____

_____

_____

Subjects Discussed: _____

_____

_____

_____

_____

ATTENDEES

Print Name	Signature

Meeting Conducted by _____ **Date Signed**_____

ATTACHMENT C

HOSPITAL ROUTE

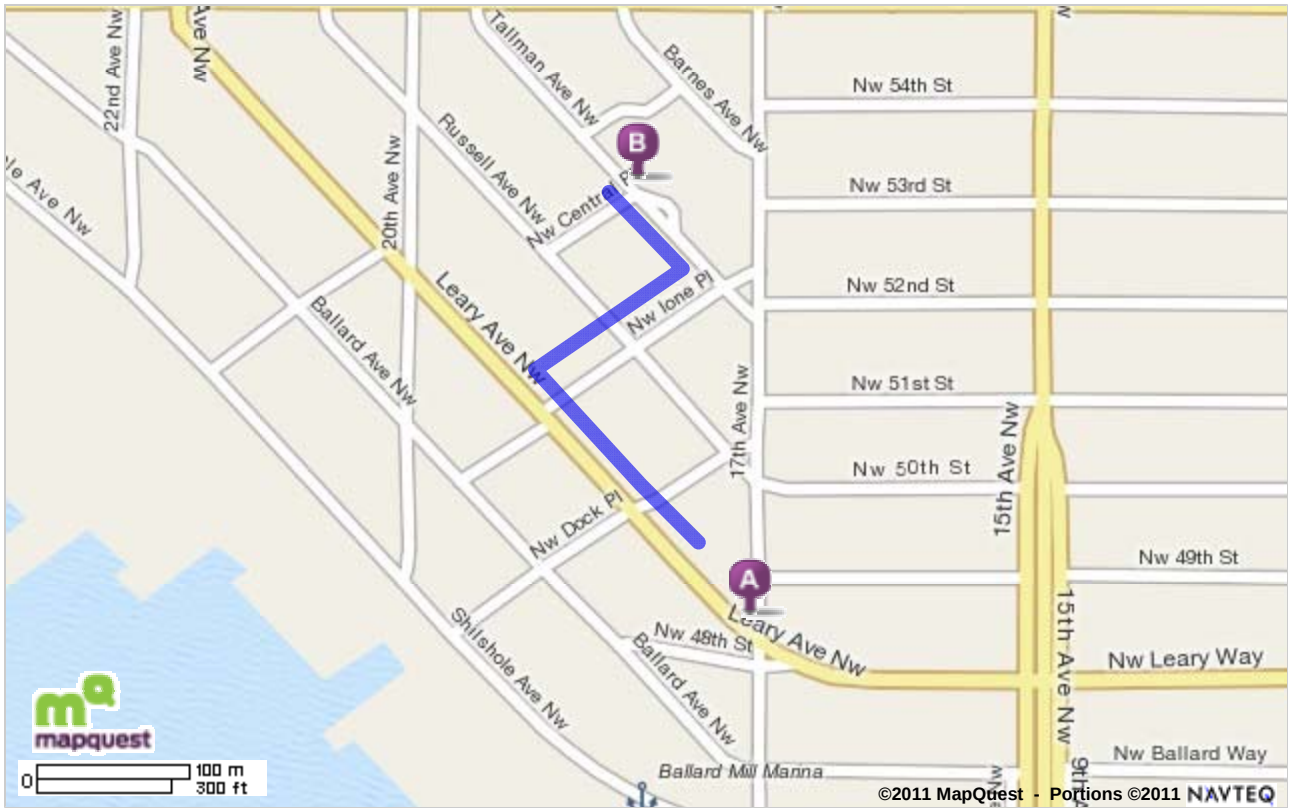
mapquest

Notes

Trip to:
Swedish Medical Ctr-Ballard
5300 Tallman Ave NW
Seattle, WA 98107
(206) 782-2700
0.31 miles
1 minute

		Miles Per Section	Miles Driven
A	**4910 Leary Ave NW** Seattle, WA 98107-4815		
●	1. Start out going NORTHWEST on LEARY AVE NW toward NW DOCK PL.	**Go 0.1 Mi**	0.1 mi
↱	2. Take the 2nd RIGHT onto NW IONE PL. *If you reach 20TH AVE NW you've gone a little too far*	**Go 0.1 Mi**	0.2 mi
↰	3. Take the 2nd LEFT onto TALLMAN AVE NW. *If you reach 17TH AVE NW you've gone a little too far*	**Go 0.06 Mi**	0.3 mi
●	4. 5300 TALLMAN AVE NW is on the RIGHT. *Your destination is just past NW CENTRAL PL* *If you reach NW MARKET ST you've gone about 0.1 miles too far*	**Go 0.01 Mi**	0.3 mi
B	**Swedish Medical Ctr-Ballard** 5300 Tallman Ave NW, Seattle, WA 98107 (206) 782-2700	**0.3 mi**	**0.3 mi**

Total Travel Estimate: **0.31 miles - about 1 minute**



ATTACHMENT D

MATERIAL SAFETY DATA SHEET FOR KLOZUR CR

MATERIAL SAFETY DATA SHEET

Klozür™

MSDS Ref. No.: 7775-27-1-12
Date Approved: 02/22/2005
Revision No.: 1

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200; the Canada's Workplace Hazardous Materials Information System (WHMIS) and, the EC Directive, 2001/58/EC.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	Klozür™
SYNONYMS:	Sodium Persulfate, Sodium Peroxydisulfate; Disodium Peroxydisulfate
GENERAL USE:	In situ and ex situ chemical oxidation of contaminants and compounds of concern for environmental remediation applications.

MANUFACTURER

FMC CORPORATION
Active Oxidants Division
1735 Market Street
Philadelphia, PA 19103
(215) 299-6000 (General Information)

EMERGENCY TELEPHONE NUMBERS

(800) 424-9300 (CHEMTREC - U.S.)
(303) 595-9048 (Medical - Call Collect)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- White, odorless, crystals
- Oxidizer.
- Decomposes in storage under conditions of moisture (water/water vapor) and/or excessive heat causing release of oxides of sulfur and oxygen that supports combustion. Decomposition could form a high temperature melt. See Section 10 ("Stability and Reactivity").

POTENTIAL HEALTH EFFECTS: Airborne persulfate dust may be irritating to eyes, nose, lungs, throat and skin upon contact. Exposure to high levels of persulfate dust may cause difficulty in breathing in sensitive persons.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt.%	EC No.	EC Class
Sodium Persulfate	7775-27-1	>99	231-892-1	Not classified as hazardous

4. FIRST AID MEASURES

EYES: Flush with plenty of water. Get medical attention if irritation occurs and persists.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

NOTES TO MEDICAL DOCTOR: This product has low oral toxicity and is not irritating to the eyes and skin. Flooding of exposed areas with water is suggested, but gastric lavage or emesis induction for ingestions must consider possible aggravation of esophageal injury and the expected absence of system effects. Treatment is controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Deluge with water.

FIRE / EXPLOSION HAZARDS: Product is non-combustible. On decomposition releases oxygen which may intensify fire. Presence of water accelerates decomposition.

FIRE FIGHTING PROCEDURES: Do not use carbon dioxide or other gas filled fire extinguishers; they will have no effect on decomposing persulfates. Wear full protective clothing and self-contained breathing apparatus.

FLAMMABLE LIMITS: Non-combustible

SENSITIVITY TO IMPACT: No data available

SENSITIVITY TO STATIC DISCHARGE: Not available

6. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: Spilled material should be collected and put in approved DOT container and isolated for disposal. Isolated material should be monitored for signs of decomposition (fuming/smoking). If spilled material is wet, dissolve with large quantity of water and dispose as a hazardous waste. All disposals should be carried out according to regulatory agencies procedures.

7. HANDLING AND STORAGE

HANDLING: Use adequate ventilation when transferring product from bags or drums. Wear respiratory protection if ventilation is inadequate or not available. Use eye and skin protection. Use clean plastic or stainless steel scoops only.

STORAGE: Store (unopened) in a cool, clean, dry place away from point sources of heat, e.g. radiant heaters or steam pipes. Use first in, first out storage system. Avoid contamination of opened product. In case of fire or decomposition (fuming/smoking) deluge with plenty of water to control decomposition. For storage, refer to NFPA Bulletin 430 on storage of liquid and solid oxidizing materials.

COMMENTS: VENTILATION: Provide mechanical general and/or local exhaust ventilation to prevent release of dust into work environment. Spills should be collected into suitable containers to prevent dispersion into the air.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	ACGIH	OSHA	Supplier
Sodium Persulfate	0.1 mg/m^3 (TWA)		

ENGINEERING CONTROLS: Provide mechanical local general room ventilation to prevent release of dust into the work environment. Remove contaminated clothing immediately and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Use cup type chemical goggles. Full face shield may be used.

RESPIRATORY: Use approved dust respirator when airborne dust is expected.

PROTECTIVE CLOTHING: Normal work clothes. Rubber or neoprene footwear.

GLOVES: Rubber or neoprene gloves. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	None
APPEARANCE:	White crystals
AUTOIGNITION TEMPERATURE:	Not applicable. No evidence of combustion up to 800°C. Decomposition will occur upon heating.
BOILING POINT:	Not applicable
COEFFICIENT OF OIL / WATER:	Not applicable
DENSITY / WEIGHT PER VOLUME:	Not available
EVAPORATION RATE:	Not applicable (Butyl Acetate = 1)
FLASH POINT:	Non-combustible
MELTING POINT:	Decomposes
ODOR THRESHOLD:	Not applicable
OXIDIZING PROPERTIES:	Oxidizer
PERCENT VOLATILE:	Not applicable
pH:	typically 5.0 - 7.0 @ 25 °C (1% solution)
SOLUBILITY IN WATER:	73 % @ 25 °C (by wt.)
SPECIFIC GRAVITY:	2.6 (H_2O=1)
VAPOR DENSITY:	Not applicable (Air = 1)
VAPOR PRESSURE:	Not applicable

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Heat, moisture and contamination.
STABILITY:	Stable (becomes unstable in presence of heat, moisture and/or contamination).
POLYMERIZATION:	Will not occur
INCOMPATIBLE MATERIALS:	Acids, alkalis, halides (fluorides, chlorides, bromides and iodides), combustible materials, most metals and heavy metals, oxidizable materials, other oxidizers, reducing agents, cleaners, and organic or carbon containing compounds. Contact

with incompatible materials can result in a material decomposition or other uncontrolled reactions.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxygen that supports combustion and oxides of sulfur.

COMMENTS: PRECAUTIONARY STATEMENT: Pumping and transport of Klozür persulfate requires appropriate precautions and design considerations for pressure and thermal relief.

Decomposing persulfates will evolve large volumes of gas and/or vapor, can accelerate exponentially with heat generation, and create significant and hazardous pressures if contained and not properly controlled or mitigated.

Use with alcohols in the presence of water has been demonstrated to generate conditions that require rigorous adherence to process safety methods and standards to prevent escalation to an uncontrolled reaction.

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11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Non-irritating (rabbit) [FMC Study Number: ICG/T-79.029]

SKIN EFFECTS: Non-irritating (rabbit) [FMC Study Number: ICG/T-79.029]

DERMAL LD_{50}: > 10 g/kg [FMC Study Number: ICG/T-79.029]

ORAL LD_{50}: 895 mg/kg (rat) [FMC Study Number: ICG/T-79.029]

INHALATION LC_{50}: 5.1 mg/l (rat) [FMC I95-2017]

SENSITIZATION: May be sensitizing to allergic persons. [FMC Study Number: ICG/T-79.029]

TARGET ORGANS: Eyes, skin, respiratory passages

ACUTE EFFECTS FROM OVEREXPOSURE: Dust may be harmful and irritating. May be harmful if swallowed.

CHRONIC EFFECTS FROM OVEREXPOSURE: Sensitive persons may develop dermatitis and asthma [Respiration 38:144, 1979]. Groups of male and female rats were fed 0, 300 or 3000 ppm sodium persulfate in the diet for 13 weeks, followed by 5000 ppm for 5 weeks. Microscopic examination of tissues revealed some injury to the gastrointestinal tract at the high dose (3000 ppm) only. This effect is not unexpected for an oxidizer at high concentrations. [Ref. FMC I90-1151, Toxicologist 1:149, 1981].

CARCINOGENICITY:

NTP:	Not listed
IARC:	Not listed
OSHA:	Not listed
OTHER:	ACGIH: Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

Bluegill sunfish, 96-hour LC_{50} = 771 mg/L [FMC Study I92-1250]
Rainbow trout, 96-hour LC_{50} = 163 mg/L [FMC Study I92-1251]
Daphnia, 48-hour LC_{50} = 133 mg/L [FMC Study I92-1252]
Grass shrimp, 96-hour LC_{50} = 519 mg/L [FMC Study I92-1253]

CHEMICAL FATE INFORMATION: Biodegradability does not apply to inorganic substances.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose as a hazardous waste in accordance with local, state and federal regulatory agencies.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME:	Sodium Persulfate
PRIMARY HAZARD CLASS / DIVISION:	5.1 (Oxidizer)
UN/NA NUMBER:	UN 1505
PACKING GROUP:	III
LABEL(S):	5.1 (Oxidizer)
PLACARD(S):	5.1 (Oxidizer)
MARKING(S):	Sodium Persulfate, UN 1505
ADDITIONAL INFORMATION:	Hazardous Substance/RQ: Not applicable

49 STCC Number: 4918733

This material is shipped in 225 lb. fiber drums, 55 lb. poly bags and 1000 - 2200 lb. IBC's (supersacks).

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

PROPER SHIPPING NAME: Sodium Persulfate

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) / INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

PROPER SHIPPING NAME: Sodium Persulfate

OTHER INFORMATION:

Protect from physical damage. Do not store near acids, moisture or heat.

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15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):
Not applicable

SECTION 311 HAZARD CATEGORIES (40 CFR 370):
Fire Hazard, Immediate (Acute) Health Hazard

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):
The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:
None

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):
Not listed

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):
Unlisted, RQ = 100 lbs., Ignitability

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA INVENTORY STATUS (40 CFR 710):

Listed

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)
RCRA IDENTIFICATION OF HAZARDOUS WASTE (40 CFR 261):
Waste Number: D001

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):

Product Identification Number: 1505
Hazard Classification / Division: Class C (Oxidizer), Class D, Div. 2, Subdiv. B. (Toxic)
Ingredient Disclosure List: Listed

INTERNATIONAL LISTINGS

Sodium persulfate:
Australia (AICS): Listed
China: Listed
Japan (ENCS): (1)-1131
Korea: KE-12369
Philippines (PICCS): Listed

HAZARD, RISK AND SAFETY PHRASE DESCRIPTIONS:

EC Symbols: (Not classified as hazardous)

EC Risk Phrases: (Not classified as hazardous)

EC Safety Phrases: (Not classified as hazardous)

16. OTHER INFORMATION

HMIS

Health	1
Flammability	0
Physical Hazard	1
Personal Protection (PPE)	J

Protection = J (Safety goggles, gloves, apron & combination dust & vapor respirator)

HMIS = Hazardous Materials Identification System

Degree of Hazard Code:
4 = Severe

3 = Serious
2 = Moderate
1 = Slight
0 = Minimal

NFPA

Health	1
Flammability	0
Reactivity	1
Special	OX

SPECIAL = OX (Oxidizer)

NFPA = National Fire Protection Association

Degree of Hazard Code:
4 = Extreme
3 = High
2 = Moderate
1 = Slight
0 = Insignificant

REVISION SUMMARY:
New MSDS

Klozür and FMC Logo - FMC Trademarks

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APPENDIX B
GEOTECH REPORTS

PanGEO, Inc. #12-047

PanGEO INCORPORATED
Geotechnical & Earthquake Engineering Consultants

August 20, 2012
File No. 12-047

Ms. Elsa Tibbits
Sound Earth Strategies Construction, LLC
2811 Fairview Ave East, Suite 2000
Seattle, WA 98102

Subject: Final Report - Geotechnical Construction Observations
Temporary Excavation
4910 – Leary Ave NW, Seattle, Washington
DPD Permit No. 6267406

Dear Ms. Tibbits,

PanGEO, Inc. has completed geotechnical construction support services for the subject project as required by the City of Seattle Department of Planning and Development (DPD). This final report summarizes our observations and was prepared to assist you in closing the permit.

The scope of the construction support services performed was in accordance with the geotechnical inspection items outlined in DPD's letter dated July 27, 2012. Our construction support services were performed on an on-call basis between July 26, 2012, and August 7, 2012. Observations from our site visits were documented in four daily field reports which were transmitted to you, Seattle DOT, and Seattle DPD. Based on our observations, the geotechnical elements of the project were constructed in general accordance with our recommendations and the approved project plans, as discussed in this letter.

OBSERVATIONS AND CONCLUSIONS

The following items were identified in the DPD permit as requiring geotechnical inspection. Details of our observations are contained in our daily field reports. The following summarizes our observations:

1. **Shoring Installation and Performance Monitoring** – PanGEO personnel provided observation of the installation of the temporary shoring system. The temporary shoring system consisted of steel trench boxes placed inside of the excavation. The trench boxes

were advanced as the excavation became deeper, and the boxes were generally kept tight against the side walls of the excavation. In some instances, when the box was not tight to the sidewalls, the contractor backfilled the voids to prevent sloughing. Based on our observations, the shoring was installed in general accordance with the project plans.

The performance of the shoring system was monitored visually by PanGEO personnel during our site visits. Throughout the course of the project we did not observe evidence of movement of the surrounding pavement, or observe significant caving of the excavation. In addition, PanGEO was provided with survey data for the monitoring points set along the curbline and centerline of 17th Avenue NW, adjacent to the excavation. Based on our review of the survey data, as well as our observations on site, the temporary shoring system performed adequately, and in our opinion the excavation did not negatively impact the adjacent pavement areas or SDOT right of way. At this time, the excavation has been backfilled, and the temporary shoring has been removed.

2. **Verify Structural Fill & Compaction** – As described in our field reports, throughout construction PanGEO monitored the placement and compaction of structural fill used to backfill the excavation. Structural fill material generally consisted of imported granular soils (Seattle Type 17), and was compacted in appropriately sized lifts with a hoe-pac mounted on an excavator. Nuclear density tests were performed by Otto Rosenau on portions of the compacted backfill. Based on our observations as described in our field reports, and our review of the compaction test results, in our opinion the structural fill was adequately compacted.

3. **Observe and Monitor Excavation** – The excavation exposed medium dense fill and dense glacial soils (till). Temporary shoring, as described in item #1 above, was used to stabilize the excavation. Based on our observations, as described in our field reports, the excavation remained stable. At this time, the temporary excavation has been backfilled.

4. **Erosion Control, Temporary** – The temporary erosion control measures at the site, which consisted of silt socks in an adjacent catch basin and ground protection with straw waddles, were adequate, in our opinion, and no evidence of off-site erosion was observed during our visits. In addition, no soil stockpiles were created at the site, and all excavated material was loaded directly into a waiting dump truck.

5. **Other Geotechnical – Pre-construction meeting:** PanGEO attended the preconstruction meeting held at the site on July 26, 2012. Also attending the meeting were representatives from the City of Seattle DPD, SDOT, and the general contractor.

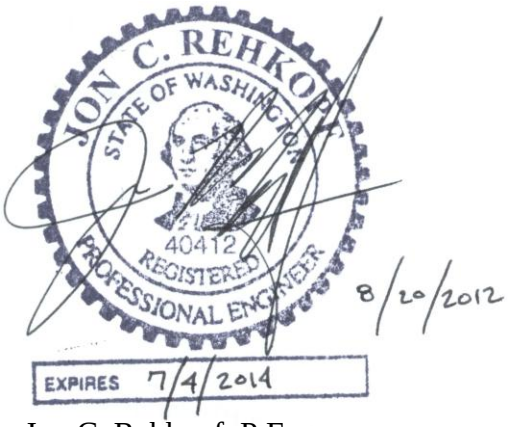
In summary, the above-discussed geotechnical elements of the project have been accomplished in general accordance with the DPD approved plans for the project, and our recommendations.

LIMITATIONS

The geotechnical observation services were performed in accordance with generally accepted standards of the profession in this geographic area. PanGEO personnel were on site on an as-needed basis, and were not present at the site on a full-time basis during construction. Our conclusions and opinions as to whether the work essentially complies with the project requirements are based on our observations and experience. The conclusions contained herein apply only to our observations at the time of our site visits. We cannot provide advice, opinions, or conclusions relative to site work that we have not observed.

We appreciate the opportunity to be of service.

Sincerely,



Nels E. Reese, L.G.
Staff Geologist

Jon C. Rehkopf, P.E.
Senior Project Geotechnical Engineer

cc: City of Seattle DPD (email)

PanGEO INCORPORATED
Geotechnical and Earthquake Engineering Consultants

3213 Eastlake Avenue East, Suite B
Seattle, WA 98102
Tel: (206) 262-0370 Fax: (206) 262-0374

	Project No. 12-047.200	**Page No.** 1 of 1
	Report No. 1	**Dates** July 26, 2012
Project Name Temporary Shoring – 4910 Leary Way	**Location or Address** 4910 – Leary Way, Seattle, WA	
Owner/Owner's Representative Sound Earth Strategies	**DPD Permit No.** 6267406 **SDOT Permit No.** 178491	**Weather** Sunny, 70's
Client Sound Earth Strategies	**Contractor** Sound Earth Strategies	**PanGEO Field Reps.** Nels Reese

Pre-Construction Meeting

As requested, PanGEO attended a pre-construction meeting onsite on July 26th, 2012. Also in attendance were representatives from DPD, SDOT, and the general and excavation contractor, Sound Earth Strategies.

The DPD List of Geotechnical Inspections is as follows:

1. Observe and Monitor Temporary Shoring
2. Verify Fill and Compaction
3. Observe and Monitor Excavation
4. Erosion Control- Temporary
5. Other- Pre-Construction Meeting

At this time, baseline survey points have been established. Per our conversation with Mike from SDOT, only a final survey of the points will be required after the excavation has been backfilled.

It is our understanding that work will proceed on Monday, July 30. At that time, PanGEO will return as requested to observe earthwork activity.

Signed: Nels Reese Reviewed:

Copies to:

City of Seattle DPD (dpdgeo@seattle.gov)
SDOT (mike.houlihan@seattle.gov)
Sound Earth Strategies - Elsa Tibbits (etibbits@soundearthinc.com)

PanGEO INCORPORATED
Geotechnical and Earthquake Engineering Consultants

3213 Eastlake Avenue East, Suite B
Seattle, WA 98102
Tel: (206) 262-0370 Fax: (206) 262-0374

	Project No. 12-047.200	**Page No.** 1 of 2
	Report No. 2	**Dates** August 1 & 2, 2012 / Wednesday & Thursday
Project Name Temporary Shoring – 4910 Leary Way	**Location or Address** 4910 – Leary Way, Seattle, WA	
Owner/Owner's Representative Sound Earth Strategies	**DPD Permit No.** 6267406 **SDOT Permit No.** 178491	**Weather** Sunny, 70's
Client Sound Earth Strategies	**Contractor** Sound Earth Strategies	**PanGEO Field Reps.** Nels Reese & Jon Rehkopf

As requested, PanGEO was onsite on August 1st from 11:15 am to 12:45 pm and from 2:15 to 3:15 pm, and again on August 2nd from about 1:00 pm to 3:00 pm to observe the excavation, temporary shoring, and compaction of backfill material.

Observe and Monitor Temporary Shoring: During our site visit on August 1, we observed the contractor excavate and remove contaminated soils from the southern approximately one-half to two-thirds of the proposed removal area. The excavation measured approximately 14 feet wide by 13 feet long, and was around 13 feet in depth. Soils observed generally consisted of 5 to 8 feet of fill over dense to very dense glacial soils. The contractor placed a 13-foot by 12-foot by 6-foot high trench box into the excavation once the excavation had reached a depth of around 5 feet. The upper photo to the right shows the soil conditions exposed in the top 4 to 5 feet of the excavation.

During our site visit on August 2 we observed the contractor start to excavate the northern approximately one-half of the removal area. At a depth of about 4 to 5 feet, the trench box was installed. The trench box will be pushed down as the excavation becomes deeper. A second trench box was on-site, and may be used, as needed. We observed the box to be tight to the sidewalls of the excavation, and in our opinion the temporary shoring system was functioning adequately. No evidence of disturbance from the excavation was observed in the surrounding pavement The contractor indicated that the excavation will be completed tomorrow. The photo to the right shows the installed trench box on August 2nd.

Observe and Monitor Excavation: During our site visits, in general, the excavation was observed to be stable, and we did not observed signs of sloughing or ground loss around the perimeter of the excavation.

FIELD REPORT

One exception was a relatively minor slough along the east side of the north end of the excavation. The approximately 5-foot long sloughed area undermined the existing concrete driveway apron by about 1-foot. After backfilling and compacting as much as possible with Type 17, we recommended that the void under the slab be filled with CDF or concrete. Below the fill material, the dense glacial soils appeared stable, and no sloughing was observed.

Backfill and Compaction: During our site visit on August 2, we observed the contractor backfilling the southern approximately half of the excavation. Based on our observations, and discussion with the contractor, the Type 17 backfilled was compacted in approximately 18 to 24 inch thick lifts with a large hoe-pack mounted to the excavator. Based on our observations of the backfill material and compaction methods, in our opinion the backfill was being adequately compacted. While onsite, a representative from Otto Rosenau performed nuclear density tests on the compacted backfill. Utilizing an assumed maximum dry density for the Type 17 material (current proctor test results are pending), the representative indicated that a compaction level of about 95% of maximum dry density was achieved. We understand the actual results will be available early next week.

Temporary Erosion Control: During our site visits we did not observe evidence of off-site sediment transport. All soil removed from the excavation was placed directly into trucks, and no soil stockpiles were made at the site. Any small amount of soil that spilled from the bucket of the excavator while loading trucks was swept into the excavation. Trucks were loaded while on 17th Ave NW, and therefore tracking of soils was not an issue. Additional temporary erosion control measures consisted of socks in adjacent catch basins. Filter fabric and straw waddles were also on-site ready to be used, as needed. In our opinion, the temporary erosion control measures were adequate for site conditions.

PanGEO will return to the site tomorrow to observe continued earthwork activity.

Signed: Nels Reese

Reviewed:

Copies to:
City of Seattle DPD (dpdgeo@seattle.gov)
SDOT (mike.houlihan@seattle.gov)
Sound Earth Strategies - Elsa Tibbits (etibbits@soundearthinc.com)

PanGEO INCORPORATED
Geotechnical and Earthquake Engineering Consultants

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Seattle, WA 98102
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	Project No. 12-047.200	**Page No.** 1 of 2
	Report No. 3	**Dates** August 3 & 6, 2012 / Friday & Monday
Project Name Temporary Shoring – 4910 Leary Way	**Location or Address** 4910 – Leary Way, Seattle, WA	
Owner/Owner's Representative Sound Earth Strategies	**DPD Permit No.** 6267406 **SDOT Permit No.** 178491	**Weather** Sunny to Partly Sunny, 70's
Client Sound Earth Strategies	**Contractor** Sound Earth Strategies	**PanGEO Field Reps.** Nels Reese & Jon Rehkopf

PanGEO visited the site Friday morning around 9:15 am, and then returned to the site Monday between about 10:30 am and 2:15 pm to observe the excavation, temporary shoring, and compaction of backfill material.

Observe and Monitor Temporary Shoring: During our site visit on August 3, we observed that the contractor had excavated to within about a foot of the bottom of the proposed excavation, or about 15 feet below grade. We observed that the trench box installed yesterday had been pushed down so that the top of the box was flush with the ground surface, and the bottom of the box was within about a foot of the underlying dense native soil. We noted that the contractor had backfilled any void spaces on the outside of the box to help limit sloughing. The contractor indicated that they were waiting for one more truck to haul out the last load of impacted soil from the bottom of the excavation. We observed the box to be tight to the sidewalls of the excavation, and in our opinion the temporary shoring system was functioning adequately. No evidence of disturbance from the excavation was observed in the surrounding pavement.

Observe and Monitor Excavation: During our site visits the excavation was generally observed to be stable, and we did not observe significant signs of sloughing or ground loss around the perimeter of the excavation during removal of the impacted soils. During backfill placement on August 6, however, minor sloughing was observed in the upper fill material along the north and east perimeters of the excavation, generally occurring during compaction of the backfill. Below the approximately 6 feet of fill material, the dense glacial till appeared stable, and no sloughing was observed. No groundwater seepage was noted in the excavation.

Backfill and Compaction: During our site visit on August 6th, we observed the contractor backfilling the northern approximately half of the excavation. Upon our arrival we observed that several lifts of imported soil had been placed in the excavation at the end of the day on Friday. Based on our observations on the 6th, and discussion with the contractor, the imported Type 17 backfilled was compacted in approximately 18 to 24 inch thick lifts with a

large hoe-pack mounted to the excavator, as shown in the photo. Based on our observations of the backfill material and compaction methods, in our opinion the backfill was being adequately compacted. While onsite, a representative from Otto Rosenau performed nuclear density tests on the compacted backfill. According to the Otto Rosenau representative, based on a modified proctor test, the maximum dry density for the Type 17 material was 132 lbs/ft^3, and the representative indicated that a compaction level of about 97% to 98% of maximum dry density was achieved. We will review the density test results when they are available from Otto Rosenau.

At the time of our site visit on August 6, Type-17 backfill had been placed to within approximately 2 feet of the previous asphalt subgrade. Some minor sloughing had been observed in the upper fill material after the trench box was removed during the backfill process. A small area of the existing asphalt parking area and one additional panel of existing concrete sidewalk are planned to be removed by the contractor and replaced after backfill is completed. However, the sloughing was not observed to adversely impact the concrete apron to the east of the excavation in the SDOT right-of-way.

It is our understanding that the contractor plans to use 5/8-inch minus crushed rock to complete the upper portion of the backfill. It was recommended that the crushed rock be placed using the same means and methods as previously observed onsite.

Temporary Erosion Control Measures: During our site visits we did not observe evidence of off-site sediment transport. All soil removed from the excavation was placed directly into trucks, and no soil stockpiles were made at the site. Any small amount of soil that spilled from the bucket of the excavator while loading trucks was swept into the excavation. Trucks were loaded while on 17th Ave NW, and therefore tracking of soils was not an issue. Additional temporary erosion control measures consisted of socks in adjacent catch basins. Filter fabric and straw waddles were also on-site ready to be used, as needed. In our opinion, the temporary erosion control measures were adequate for site conditions.

PanGEO will return to the site tomorrow to observe continued earthwork activity.

Signed: Nels Reese

Reviewed:

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City of Seattle DPD (dpdgeo@seattle.gov)
SDOT (mike.houlihan@seattle.gov)
Sound Earth Strategies - Elsa Tibbits (etibbits@soundearthinc.com)

Otto Rosenau Associates, Inc. #12-0426

OTTO ROSENAU ASSOCIATES, INC.

IN-PLACE DENSITY AND WATER CONTENT OF SOIL AND SOIL-AGGREGATE BY NUCLEAR METHOD REPORT (ASTM D6938, WSDOT T310)

Job No.: 12-0426	**Report No.:** 124433	**Permit No.:** 6267406

Project: Bill's Tires	**Client:** Soundearth Strategies Construction, LLC
Address: 4910 Leary Avenue NW, Seattle	**Address:** 2811 Fairview Avenue East - Suite 2000, Seattle, WA 98102
Date: 8/6/2012	**Inspector:** Craig Bechtold

Type of Monitoring: ☐ Full Time ☑ Periodic ☐ None

Soils I.D.	Soil Description	Lab Maximum Dry Densities – Corrected: Dry Density	Corrected: Optimum Moisture	Corrected: ASTM Method	Uncorrected: Dry Density	Uncorrected: Optimum Moisture	Uncorrected: Oversize % Rock
5535	Gray Type 17	132.3	9.5%	D1557	127.1	10.1%	17.0

Testing Equipment: ☐ CPN ☑ Troxler
ID: F
Wet/DS: 653
Xi: -0.60%
H_2O/MS: 2262
Xi: 0.50%

Monitored Placement & Compaction: Yes ☑ No ☐ **Percent Compaction Required:** 95%

Test	Location / Station	Test Method	Source Rod Depth	+/- From Finish Grade	Depth of Fill	Soil ID	Wet Density	Moisture %	Dry Density	Max. Dry Density	% Comp.	Conforms
1	Over excavated backfill	DT	-12"	-4.5	10.5	5535	133.8	4.8	127.7	132.3	97%	Yes
2	Over excavated backfill	DT	-12"	-3.5	11.5	5535	139.6	4.5	133.6	132.3	100%	Yes

Compaction Methods & Equipment:

BS = Backscatter | *DT = Direct Transmission*

All Density values are in PCF unless noted otherwise

WSDOT jobs only: Did each test location represent two readings (initial & 90° reading) that were within 3lbs/cf of each other? If no please see below. Yes ☐ No ☐

WSDOT jobs only: If the two readings (initial & 90° reading) were not within 3lbs/cf of each other, are retests indicated above? Yes ☐ No ☐

Comments: Test taken for backfill placed in parking lot sidewalk area after removal of contaminated soils.

ORA Test Equipment: CPN Model #MC3 Serial Numbers: ID: A M300805837; ID: B M320706693; ID: C M39068932; ID: D M39089013 ID: E M350402593; ID G: M320906739

ORA Test Equipment: Troxler Model #3440 Serial Numbers: ID: F 28933; ID: H 36053

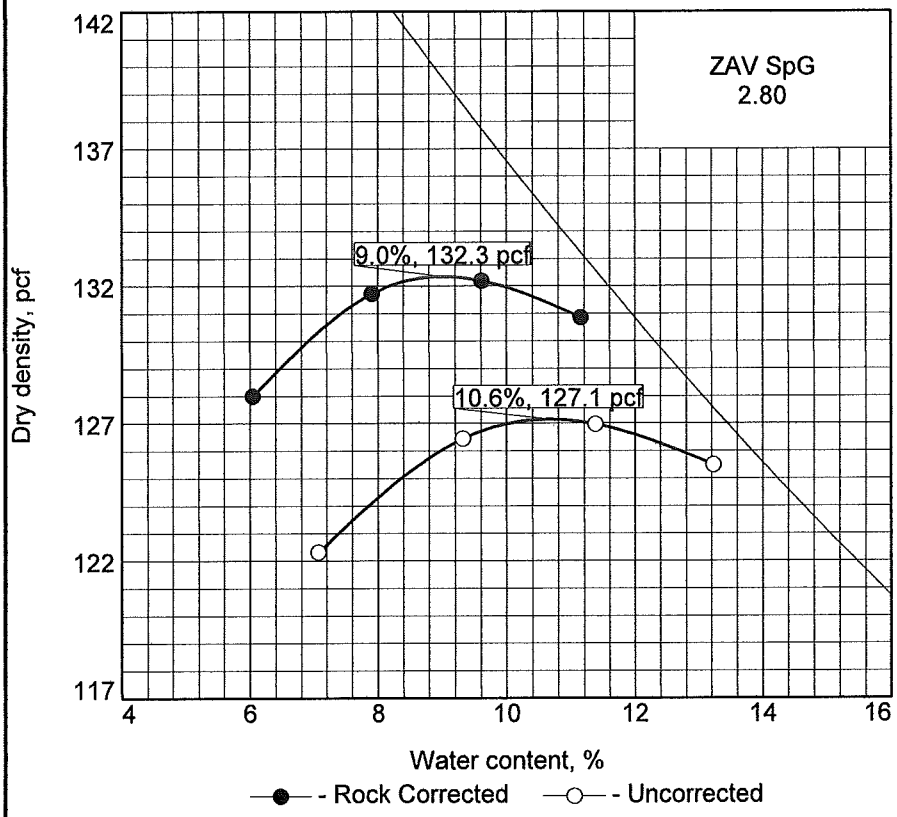
Technical Responsibility: Anthony Coyne

Anthony Coyne, Senior Engineer

REPORT DISTRIBUTION:
☑ Client ☐ Engineer ☐ Contractor
☐ Owner ☐ Architect ☐ Building Dept. ☐ Other

6 747 M.L. King Way S., Seattle, WA 98118 ~ Phone (206) 725-4600 ~ Fax (206) 723-2221

MOISTURE DENSITY TEST REPORT



Curve No.
5535

Test Specification:
ASTM D 1557-09 Method C Modified
ASTM D 4718-87 Oversize Corr. Applied to Each Test Point

Preparation Method Wet
Hammer Wt. 10 lb.
Hammer Drop 18 in.
Number of Layers five
Blows per Layer 56
Mold Size 0.075 cu. ft.

Test Performed on Material Passing 3/4 in. **Sieve**

NM 0.4 **LL** **PI**
Sp.G. (ASTM D 854) Estimate
%>3/4 in. 17.0 **%<No.200** 1.9
USCS SW **AASHTO** A-1-a
Date Sampled 8/2/2012
Date Tested 8/6/2012
Tested By A. Duong

TESTING DATA

	1	2	3	4	5	6
WM + WS	9934.0	10181.0	10289.0	10312.0		
WM	5481.0	5481.0	5481.0	5481.0		
WW + T #1	557.4	655.6	641.4	571.8		
WD + T #1	520.6	599.7	575.9	505.0		
TARE #1	0.0	0.0	0.0	0.0		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	6.0	7.9	9.6	11.1		
DRY DENSITY	128.0	131.7	132.2	130.9		

ROCK CORRECTED TEST RESULTS	UNCORRECTED
Maximum dry density = 132.3 pcf	127.1 pcf
Optimum moisture = 9.0 %	10.6 %

Material Description
Sample #5535: Gray type 17

Remarks:
Test Equipment ID: 4

Project No. 12-0426 **Client:** Soundearth Strategies
Project: Bill's Tire
4910 Leary Avenue NW, Seattle
○ **Source of Sample:** CalPortland **Sample Number:** 5535

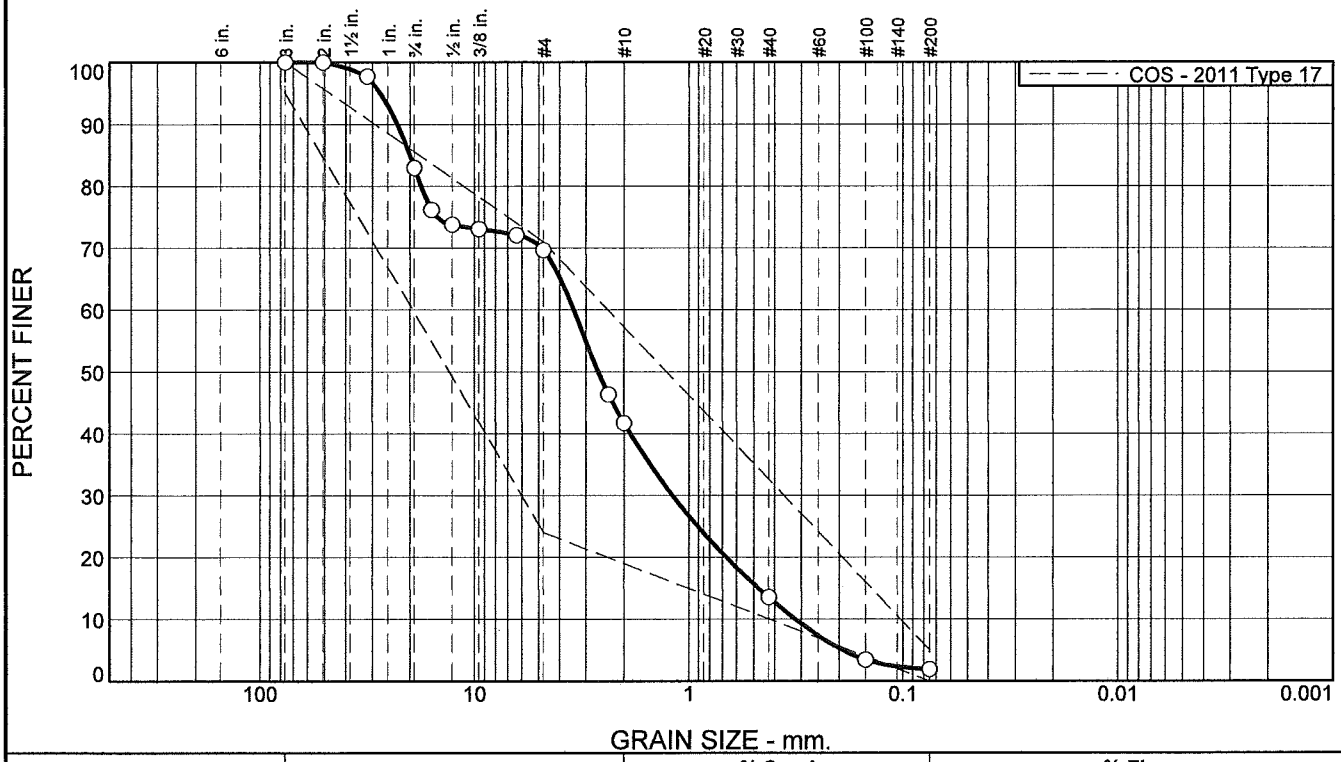
Checked by: A. Coyne
Title: Professional Engineer

OTTO ROSENAU & ASSOCIATES, INC.

Figure 5535

Classification: ASTM D2487 Natural Moisture: ASTM D2216

Particle Size Distribution Report (AASHTO T88/ASTM D422)



% +3"	% Gravel	% Sand		% Fines	
		Coarse	Fine	Silt	Clay
0.0	58.3	28.2	11.6	1.9	

Test Results (ASTM D 422 & ASTM D 1140)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100.0	95.0 - 100.0	
2	100.0		
1.25	97.7		
.75	83.0		
.625	76.1		
.50	73.8		
.375	73.0		
.25	72.1		
#4	69.6	24.0 - 71.0	
#8	46.3		
#10	41.7		
#40	13.5		
#100	3.5		
#200	1.9	0.0 - 5.0	

* COS - 2011 Type 17

Material Description

Sample #5535: Gray type 17

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= SW AASHTO (M 145)= A-1-a

Coefficients

D_{90}= 23.0294 D_{85}= 20.0412 D_{60}= 3.4296
D_{50}= 2.6344 D_{30}= 1.1890 D_{15}= 0.4742
D_{10}= 0.3193 C_u= 10.74 C_c= 1.29

Remarks

Test Equipment ID: 5
Was sample soaked?: Not required

Date Received: 8/2/2012 **Date Tested:** 8/6/2012

Tested By: A. Duong

Checked By: A. Coyne

Title: Professional Engineer

Source of Sample: CalPortland **Date Sampled:** 8/2/2012

Sample Number: 5535

Classification: ASTM D2487 Natural Moisture: ASTM D2216

OTTO ROSENAU & ASSOCIATES, INC.

Client: Soundearth Strategies

Project: Bill's Tire
4910 Leary Avenue NW, Seattle

Project No: 12-0426 **Figure** 5535

APPENDIX C
LABORATORY ANALYTICAL REPORTS

Friedman & Bruya, Inc. #207440

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

August 2, 2012

Ryan Bixby, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Bixby:

Included are the results from the testing of material submitted on July 31, 2012 from the TOC_01-443_20120731 WORFDB6, F&BI 207440 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: Audrey Hackett, Beau Johnson, Sheri Bozic, Chris Cass
SOU0802R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-443_20120731 WORFDB6, F&BI 207440 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
207440-01	TP01-02.5
207440-02	TP02-02.5
207440-03	TP03-02.5

All quality control requirements were acceptable.

Date of Report: 08/02/12
Date Received: 07/31/12
Project: TOC_01-443_20120731 WORFDB6, F&BI 207440
Date Extracted: 07/31/12
Date Analyzed: 07/31/12

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
TP01-02.5 207440-01	<0.02	<0.02	<0.02	<0.06	<2	79
TP02-02.5 207440-02	<0.02	<0.02	<0.02	<0.06	<2	79
TP03-02.5 207440-03	<0.02	<0.02	<0.02	<0.06	<2	78
Method Blank 02-1343 MB	<0.02	<0.02	<0.02	<0.06	<2	82

Date of Report: 08/02/12
Date Received: 07/31/12
Project: TOC_01-443_20120731 WORFDB6, F&BI 207440
Date Extracted: 07/31/12
Date Analyzed: 07/31/12

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
TP01-02.5 207440-01	<50	<250	113
TP02-02.5 207440-02	<50	<250	112
TP03-02.5 207440-03	<50	<250	102
Method Blank 02-1349 MB	<50	<250	122

Date of Report: 08/02/12
Date Received: 07/31/12
Project: TOC_01-443_20120731 WORFDB6, F&BI 207440

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: 207390-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	86	66-121
Toluene	mg/kg (ppm)	0.5	87	72-128
Ethylbenzene	mg/kg (ppm)	0.5	89	69-132
Xylenes	mg/kg (ppm)	1.5	86	69-131
Gasoline	mg/kg (ppm)	20	95	61-153

Date of Report: 08/02/12
Date Received: 07/31/12
Project: TOC_01-443_20120731 WORFDB6, F&BI 207440

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

Laboratory Code: 207440-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	114	112	63-146	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	109	79-144

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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

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

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

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

j – The result is below normal reporting limits. The value reported is an estimate.

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

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

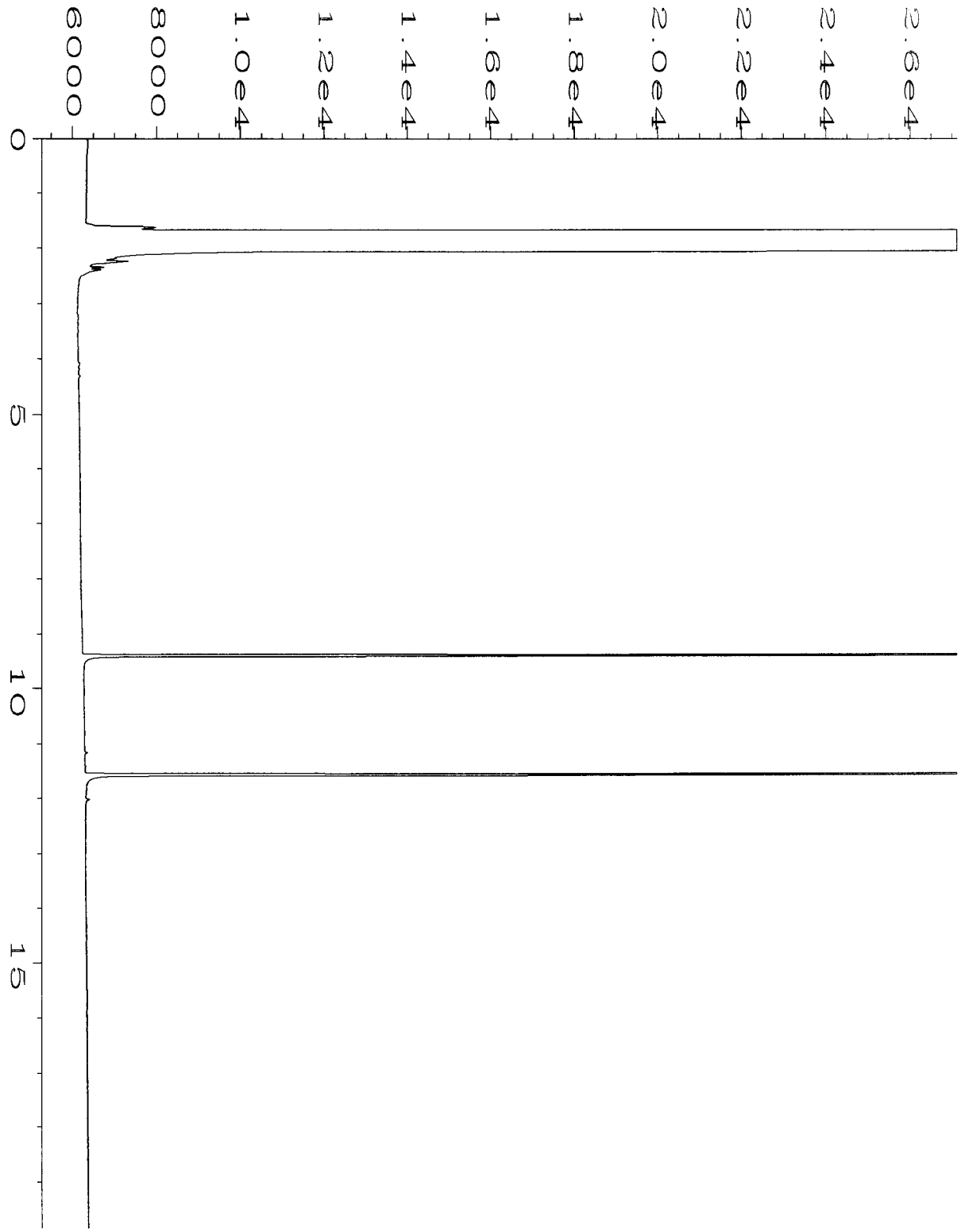
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

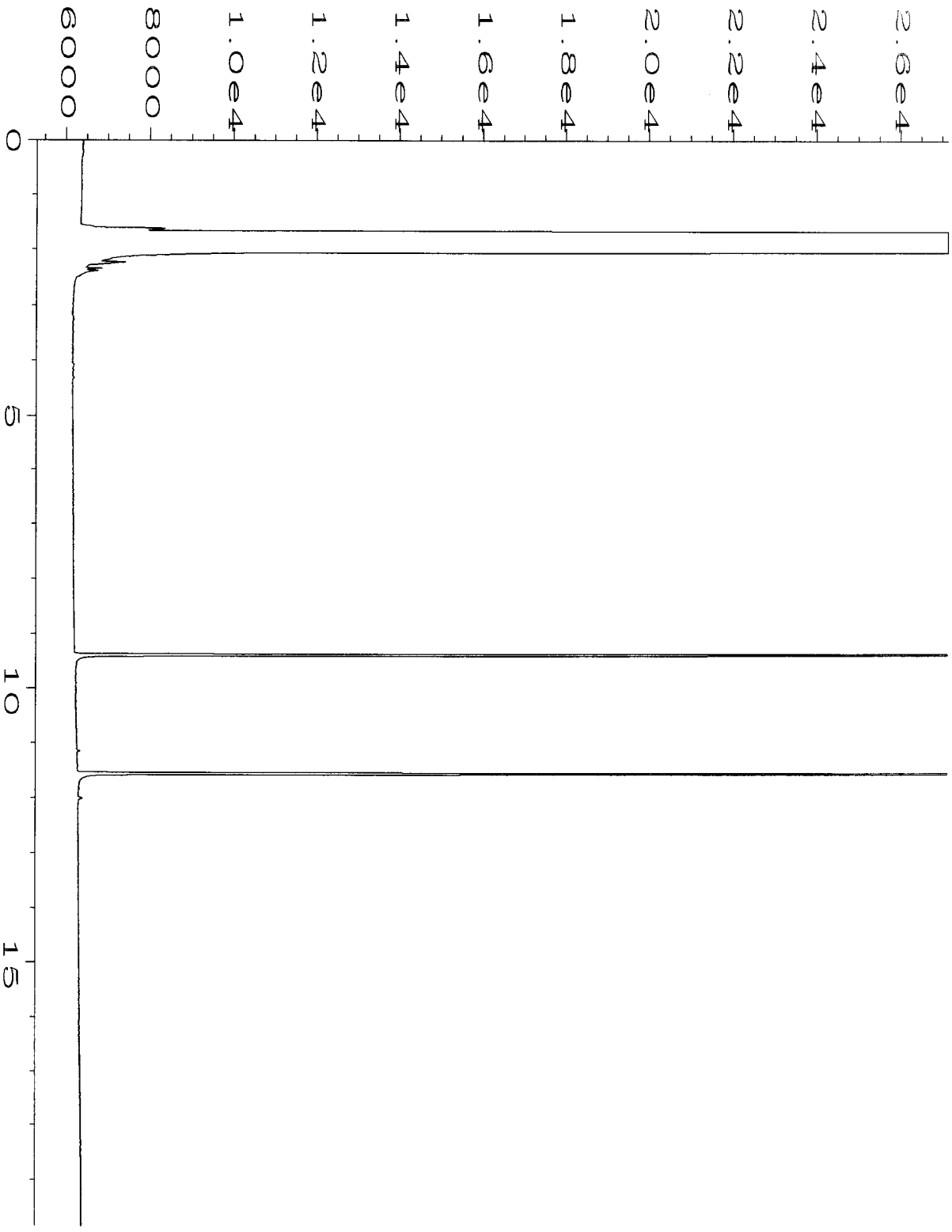
vo - The value reported fell outside the control limits established for this analyte.

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



Data File Name : C:\HPCHEM\1\DATA\07-31-12\081F0401.D
Operator : ML
Instrument : GC1
Sample Name : 207440-01
Run Time Bar Code:
Acquired on : 31 Jul 12 10:27 AM
Report Created on: 01 Aug 12 11:01 AM

Page Number : 1
Vial Number : 81
Injection Number : 1
Sequence Line : 4
Instrument Method: TPHD.MTH
Analysis Method : END.MTH



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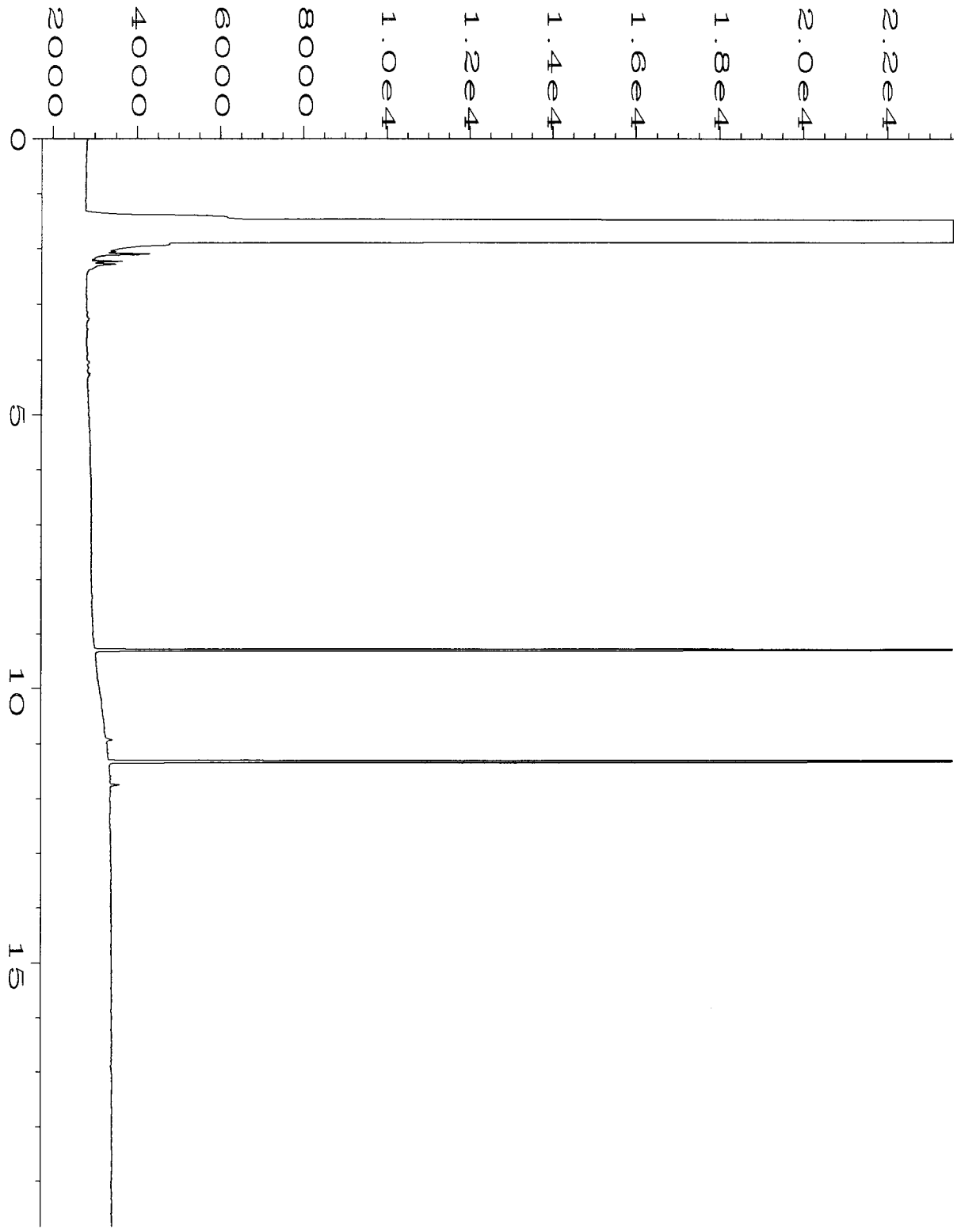
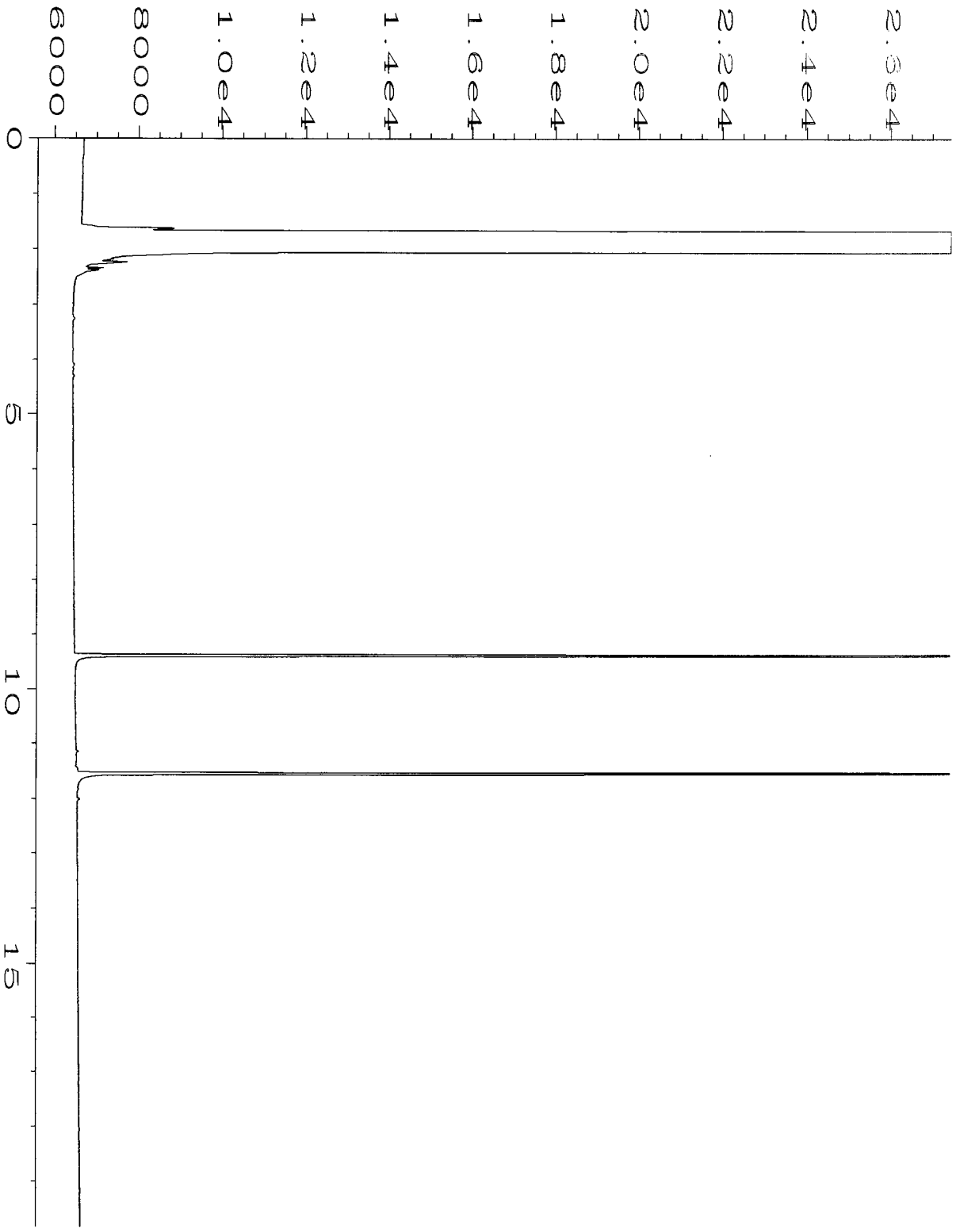
Operator : ML
Instrument : GC1
Sample Name : 207440-02
Run Time Bar Code:
Acquired on : 31 Jul 12 10:48 AM
Report Created on: 01 Aug 12 11:01 AM

Page Number : 1
Vial Number : 82
Injection Number : 1
Sequence Line : 4
Instrument Method: TPHD.MTH
Analysis Method : END.MTH



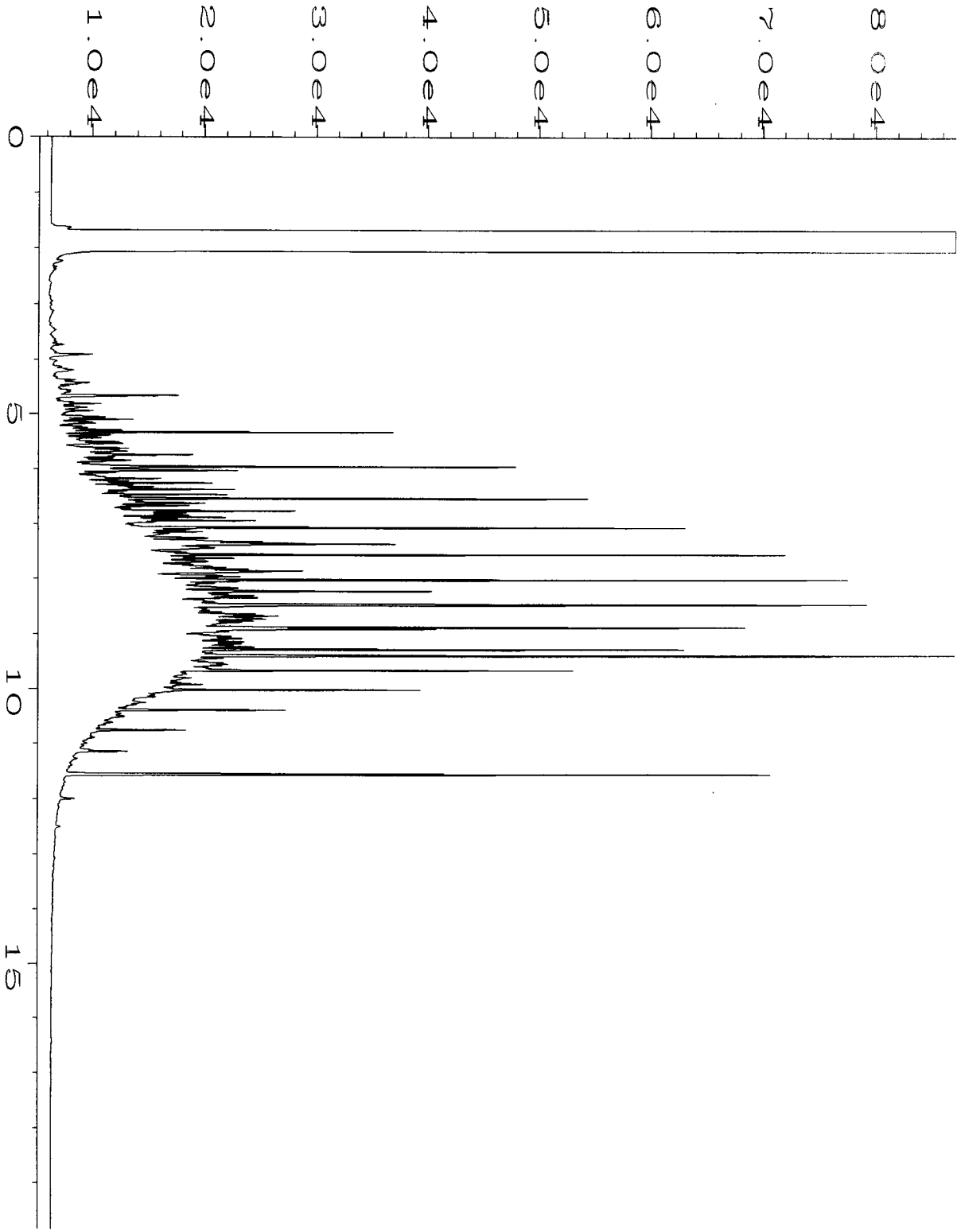
Data File Name : C:\HPCHEM\4\DATA\07-31-12\081F0401.D
Operator : ML
Instrument : GC#4
Sample Name : 207440-03
Run Time Bar Code:
Acquired on : 31 Jul 12 10:24 AM
Report Created on: 01 Aug 12 09:45 AM

Page Number : 1
Vial Number : 81
Injection Number : 1
Sequence Line : 4
Instrument Method: TPHD.MTH
Analysis Method : END.MTH



Data File Name : C:\HPCHEM\1\DATA\07-31-12\014F0501.D
Operator : ML
Instrument : GC1
Sample Name : 02-1349 mb
Run Time Bar Code:
Acquired on : 31 Jul 12 03:45 PM
Report Created on: 01 Aug 12 11:00 AM

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHD.MTH
Analysis Method : END.MTH



Data File Name	: C:\HPCHEM\1\DATA\07-31-12\003F0201.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 3
Sample Name	: 500 WADF 38-103C	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 31 Jul 12 09:17 AM	Instrument Method	: TPHD.MTH
Report Created on	: 01 Aug 12 11:00 AM	Analysis Method	: END.MTH

) 207440

SAMPLE CHAIN OF CUSTODY

ME 07-31-12

) VSI / CTI

Page # 1 of 1

Send Report to: Sheri Bozic / Beau Johnson ;
cc Chris Cass

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, WA 98102

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

SAMPLERS *(signature)*

PROJECT NAME/NO.
TOC Facility No. 01-443

PO #
0440-041-11

REMARKS

TURNAROUND TIME
Standard (2 Weeks)
RUSH by 1330
Rush charges authorized by:
Beau Johnson

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED: NWTPH-Gx and BTEX (8021B)	NWTPH-Dx	VOCs (8260C)	EPH/VPH					Notes
TP01-02.5	TP01	02.5	01 A-E	7-31-12	0835	Soil		X	X							
TP02-02.5	TP02	02.5	02 A-E	"	0845	"		X	X							
TP03-02.5	TP03	02.5	03 A-E	"	0900	"		X	X							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Travis Zandi		Sound Earth	07/31/2012	0909
Received by:	Nhan Phan	FedEx	7/31/12	V
Relinquished by:				
Received by:		Samples received at 17 °C		

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

Friedman & Bruya, Inc. #208022

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

August 17, 2012

Ryan Bixby, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Bixby:

Included are the results from the testing of material submitted on August 1, 2012 from the TOC_01-443_20120801 WORFDB6, F&BI 208022 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: Audrey Hackett, Beau Johnson
SOU0817R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 1, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-443_20120801 WORFDB6, F&BI 208022 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
208022-01	A01-09SSW01
208022-02	A02-09SSW01
208022-03	A01-09ESW01
208022-04	B01-09ESW01
208022-05	A02-11WSW01
208022-06	B02-10WSW01

Samples A01-09ESW01 and B01-09ESW01 were sent to Fremont for EPH/VPH analysis. Review of the enclosed report indicates that all quality assurance were acceptable.

The 8260C laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 08/17/12
Date Received: 08/01/12
Project: TOC_01-443_20120801 WORFDB6, F&BI 208022
Date Extracted: 08/02/12
Date Analyzed: 08/02/12

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

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
A02-09SSW01 208022-02 1/20	2,300	ip
B01-09ESW01 208022-04	<2	81
A02-11WSW01 208022-05 1/5	33	91
Method Blank 02-1359 MB	<2	83

Date of Report: 08/17/12
Date Received: 08/01/12
Project: TOC_01-443_20120801 WORFDB6, F&BI 208022
Date Extracted: 08/02/12
Date Analyzed: 08/02/12

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
A01-09SSW01 208022-01 1/10	<0.2	<0.2	11	14	1,500	119
A01-09ESW01 208022-03	<0.02	0.071	2.0	1.3	230	139
B02-10WSW01 208022-06	<0.02	<0.02	<0.02	<0.06	<2	77
Method Blank 02-1359 MB	<0.02	<0.02	<0.02	<0.06	<2	79

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	A02-09SSW01	Client:	SoundEarth Strategies
Date Received:	08/01/12	Project:	TOC_01-443_20120801 WORFDB6
Date Extracted:	08/02/12	Lab ID:	208022-02 1/10
Date Analyzed:	08/02/12	Data File:	080225.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	104	55	145
4-Bromofluorobenzene	105	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<5	1,3-Dichloropropane	<0.5
Chloromethane	<5	Tetrachloroethene	<0.25
Vinyl chloride	<0.5	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<0.5
Chloroethane	<5	Chlorobenzene	<0.5
Trichlorofluoromethane	<5	Ethylbenzene	28
Acetone	<5	1,1,1,2-Tetrachloroethane	<0.5
1,1-Dichloroethene	<0.5	m,p-Xylene	140 ve
Methylene chloride	<5	o-Xylene	4.5
Methyl t-butyl ether (MTBE)	<0.5	Styrene	<0.5
trans-1,2-Dichloroethene	<0.5	Isopropylbenzene	6.4
1,1-Dichloroethane	<0.5	Bromoform	<0.5
2,2-Dichloropropane	<0.5	n-Propylbenzene	15
cis-1,2-Dichloroethene	<0.5	Bromobenzene	<0.5
Chloroform	<0.5	1,3,5-Trimethylbenzene	38
2-Butanone (MEK)	<5	1,1,2,2-Tetrachloroethane	<0.5
1,2-Dichloroethane (EDC)	<0.5	1,2,3-Trichloropropane	<0.5
1,1,1-Trichloroethane	<0.5	2-Chlorotoluene	<0.5
1,1-Dichloropropene	<0.5	4-Chlorotoluene	<0.5
Carbon tetrachloride	<0.5	tert-Butylbenzene	<0.5
Benzene	<0.3	1,2,4-Trimethylbenzene	92 ve
Trichloroethene	<0.3	sec-Butylbenzene	2.1
1,2-Dichloropropane	<0.5	p-Isopropyltoluene	2.0
Bromodichloromethane	<0.5	1,3-Dichlorobenzene	<0.5
Dibromomethane	<0.5	1,4-Dichlorobenzene	<0.5
4-Methyl-2-pentanone	<5	1,2-Dichlorobenzene	<0.5
cis-1,3-Dichloropropene	<0.5	1,2-Dibromo-3-chloropropane	<5
Toluene	<0.5	1,2,4-Trichlorobenzene	<2.5
trans-1,3-Dichloropropene	<0.5	Hexachlorobutadiene	<2.5
1,1,2-Trichloroethane	<0.5	Naphthalene	6.0
2-Hexanone	<5	1,2,3-Trichlorobenzene	<2.5

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	A02-09SSW01	Client:	SoundEarth Strategies
Date Received:	08/01/12	Project:	TOC_01-443_20120801 WORFDB6
Date Extracted:	08/03/12	Lab ID:	208022-02 1/50
Date Analyzed:	08/02/12	Data File:	080224.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<25	1,3-Dichloropropane	<2.5
Chloromethane	<25	Tetrachloroethene	<1.2
Vinyl chloride	<2.5	Dibromochloromethane	<2.5
Bromomethane	<25	1,2-Dibromoethane (EDB)	<2.5
Chloroethane	<25	Chlorobenzene	<2.5
Trichlorofluoromethane	<25	Ethylbenzene	29
Acetone	<25	1,1,1,2-Tetrachloroethane	<2.5
1,1-Dichloroethene	<2.5	m,p-Xylene	150
Methylene chloride	<25	o-Xylene	4.5
Methyl t-butyl ether (MTBE)	<2.5	Styrene	<2.5
trans-1,2-Dichloroethene	<2.5	Isopropylbenzene	6.2
1,1-Dichloroethane	<2.5	Bromoform	<2.5
2,2-Dichloropropane	<2.5	n-Propylbenzene	15
cis-1,2-Dichloroethene	<2.5	Bromobenzene	<2.5
Chloroform	<2.5	1,3,5-Trimethylbenzene	39
2-Butanone (MEK)	<25	1,1,2,2-Tetrachloroethane	<2.5
1,2-Dichloroethane (EDC)	<2.5	1,2,3-Trichloropropane	<2.5
1,1,1-Trichloroethane	<2.5	2-Chlorotoluene	<2.5
1,1-Dichloropropene	<2.5	4-Chlorotoluene	<2.5
Carbon tetrachloride	<2.5	tert-Butylbenzene	<2.5
Benzene	<1.5	1,2,4-Trimethylbenzene	98
Trichloroethene	<1.5	sec-Butylbenzene	<2.5
1,2-Dichloropropane	<2.5	p-Isopropyltoluene	<2.5
Bromodichloromethane	<2.5	1,3-Dichlorobenzene	<2.5
Dibromomethane	<2.5	1,4-Dichlorobenzene	<2.5
4-Methyl-2-pentanone	<25	1,2-Dichlorobenzene	<2.5
cis-1,3-Dichloropropene	<2.5	1,2-Dibromo-3-chloropropane	<25
Toluene	<2.5	1,2,4-Trichlorobenzene	<12
trans-1,3-Dichloropropene	<2.5	Hexachlorobutadiene	<12
1,1,2-Trichloroethane	<2.5	Naphthalene	6.2
2-Hexanone	<25	1,2,3-Trichlorobenzene	<12

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B01-09ESW01	Client:	SoundEarth Strategies
Date Received:	08/01/12	Project:	TOC_01-443_20120801 WORFDB6
Date Extracted:	08/02/12	Lab ID:	208022-04
Date Analyzed:	08/02/12	Data File:	080222.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	A02-11WSW01	Client:	SoundEarth Strategies
Date Received:	08/01/12	Project:	TOC_01-443_20120801 WORFDB6
Date Extracted:	08/02/12	Lab ID:	208022-05
Date Analyzed:	08/02/12	Data File:	080223.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-443_20120801 WORFDB6
Date Extracted:	08/02/12	Lab ID:	02-1330 mb
Date Analyzed:	08/02/12	Data File:	080220.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 08/17/12
Date Received: 08/01/12
Project: TOC_01-443_20120801 WORFDB6, F&BI 208022

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: 208010-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	81	69-120
Toluene	mg/kg (ppm)	0.5	81	70-117
Ethylbenzene	mg/kg (ppm)	0.5	82	65-123
Xylenes	mg/kg (ppm)	1.5	80	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 08/17/12
Date Received: 08/01/12
Project: TOC_01-443_20120801 WORFDB6, F&BI 208022

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

Laboratory Code: 208022-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	15	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	39	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	38	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	57	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	64	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	76	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	120	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	58	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	65	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	72	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	65	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	68	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	79	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	72	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	74	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	79	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	76	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	76	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	69	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	81	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	71	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	73	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	73	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	80	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	78	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	80	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	76	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	75	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	80	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	78	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	95	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	78	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	75	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	83	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	79	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	76	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	77	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	79	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	79	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	78	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	80	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	78	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	84	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	78	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	78	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	78	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	70	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	77	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	77	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	78	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	78	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	78	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	77	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	80	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	78	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	77	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	77	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	69	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	70	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	75	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	73	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	71	20-144

Date of Report: 08/17/12
Date Received: 08/01/12
Project: TOC_01-443_20120801 WORFDB6, F&BI 208022

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	55	43	10-146	24 vo
Chloromethane	mg/kg (ppm)	2.5	68	55	27-133	21 vo
Vinyl chloride	mg/kg (ppm)	2.5	74	61	22-139	19
Bromomethane	mg/kg (ppm)	2.5	85	74	38-114	14
Chloroethane	mg/kg (ppm)	2.5	92	79	20-153	15
Trichlorofluoromethane	mg/kg (ppm)	2.5	91	93	10-196	2
Acetone	mg/kg (ppm)	12.5	84	74	52-141	13
1,1-Dichloroethene	mg/kg (ppm)	2.5	86	73	47-128	16
Methylene chloride	mg/kg (ppm)	2.5	81	70	42-132	15
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	93	83	60-123	11
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	88	75	67-127	16
1,1-Dichloroethane	mg/kg (ppm)	2.5	95	83	68-115	13
2,2-Dichloropropane	mg/kg (ppm)	2.5	127	107	57-133	17
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	97	85	72-113	13
Chloroform	mg/kg (ppm)	2.5	97	85	66-120	13
2-Butanone (MEK)	mg/kg (ppm)	12.5	114	103	57-123	10
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	97	87	56-135	11
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	107	93	62-131	14
1,1-Dichloropropene	mg/kg (ppm)	2.5	99	86	69-128	14
Carbon tetrachloride	mg/kg (ppm)	2.5	112	99	60-139	12
Benzene	mg/kg (ppm)	2.5	95	83	68-114	13
Trichloroethene	mg/kg (ppm)	2.5	88	79	68-114	11
1,2-Dichloropropane	mg/kg (ppm)	2.5	96	85	72-127	12
Bromodichloromethane	mg/kg (ppm)	2.5	102	90	72-130	12
Dibromomethane	mg/kg (ppm)	2.5	99	88	70-120	12
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	97	88	45-145	10
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	105	92	75-136	13
Toluene	mg/kg (ppm)	2.5	99	86	66-126	14
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	105	92	72-132	13
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	98	87	75-113	12
2-Hexanone	mg/kg (ppm)	12.5	92	84	33-152	9
1,3-Dichloropropane	mg/kg (ppm)	2.5	98	88	72-130	11
Tetrachloroethene	mg/kg (ppm)	2.5	102	89	72-114	14
Dibromochloromethane	mg/kg (ppm)	2.5	104	93	74-125	11
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	101	89	74-132	13
Chlorobenzene	mg/kg (ppm)	2.5	98	87	76-111	12
Ethylbenzene	mg/kg (ppm)	2.5	101	89	64-123	13
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	101	88	69-135	14
m,p-Xylene	mg/kg (ppm)	5	102	88	78-122	15
o-Xylene	mg/kg (ppm)	2.5	102	91	77-124	11
Styrene	mg/kg (ppm)	2.5	103	91	74-126	12
Isopropylbenzene	mg/kg (ppm)	2.5	101	89	76-127	13
Bromoform	mg/kg (ppm)	2.5	105	94	56-132	11
n-Propylbenzene	mg/kg (ppm)	2.5	102	91	74-124	11
Bromobenzene	mg/kg (ppm)	2.5	102	91	72-122	11
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	101	89	76-126	13
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	100	88	56-143	13
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	95	87	61-137	9
2-Chlorotoluene	mg/kg (ppm)	2.5	101	90	74-121	12
4-Chlorotoluene	mg/kg (ppm)	2.5	101	90	75-122	12
tert-Butylbenzene	mg/kg (ppm)	2.5	101	88	73-130	14
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	100	89	76-125	12
sec-Butylbenzene	mg/kg (ppm)	2.5	100	88	71-130	13
p-Isopropyltoluene	mg/kg (ppm)	2.5	103	91	70-132	12
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	99	88	75-121	12
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	98	87	74-117	12
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	87	76-121	11
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	82	75	61-136	9
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	88	77	70-129	13
Hexachlorobutadiene	mg/kg (ppm)	2.5	92	82	50-153	11
Naphthalene	mg/kg (ppm)	2.5	89	81	60-125	9
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	90	79	62-130	13

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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

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

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

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

j – The result is below normal reporting limits. The value reported is an estimate.

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

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

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

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

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

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Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, Washington 98119

RE: 208022
Lab ID: 1208016

August 16, 2012

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 8/3/2012 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Volatile Petroleum Hydrocarbons by NWVPH

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,

Michael Dee
Sr. Chemist / Principal

Date: *08/16/2012*

CLIENT: Friedman & Bruya
Project: 208022
Lab Order: 1208016

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1208016-001	A01-09ESW-01	08/01/2012 3:20 PM	08/03/2012 9:30 AM
1208016-002	B01-09ESW01	08/01/2012 3:30 PM	08/03/2012 9:30 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1208016**
Date: **8/16/2012**

CLIENT: Friedman & Bruya
Project: 208022

I. SAMPLE RECEIPT:
All samples were received intact.

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Analytical Report

WO#: **1208016**
Date Reported: **8/16/2012**

Client: Friedman & Bruya
Collection Date: 8/1/2012 3:20:00 PM
Project: 208022
Lab ID: 1208016-001
Matrix: Soil
Client Sample ID: A01-09ESW-01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 2950		Analyst: SG
Aliphatic Hydrocarbon (C8-C10)	ND	4.42		mg/Kg-dry	1	8/14/2012 10:15:00 PM
Aliphatic Hydrocarbon (C10-C12)	9.70	4.42		mg/Kg-dry	1	8/14/2012 10:15:00 PM
Aliphatic Hydrocarbon (C12-C16)	7.99	4.42		mg/Kg-dry	1	8/14/2012 10:15:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	4.42		mg/Kg-dry	1	8/14/2012 10:15:00 PM
Aliphatic Hydrocarbon (C21-C34)	ND	4.42		mg/Kg-dry	1	8/14/2012 10:15:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	4.42		mg/Kg-dry	1	8/15/2012 7:54:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	4.42		mg/Kg-dry	1	8/15/2012 7:54:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	4.42		mg/Kg-dry	1	8/15/2012 7:54:00 AM
Aromatic Hydrocarbon (C16-C21)	ND	4.42		mg/Kg-dry	1	8/15/2012 7:54:00 AM
Aromatic Hydrocarbon (C21-C34)	ND	4.42		mg/Kg-dry	1	8/15/2012 7:54:00 AM
Surr: 1-Chlorooctadecane	100	65-140		%REC	1	8/14/2012 10:15:00 PM
Surr: o-Terphenyl	84.4	65-140		%REC	1	8/15/2012 7:54:00 AM
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 2920		Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Aliphatic Hydrocarbon (C6-C8)	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Aliphatic Hydrocarbon (C8-C10)	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Aliphatic Hydrocarbon (C10-C12)	0.619	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Aromatic Hydrocarbon (C8-C10)	0.457	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Aromatic Hydrocarbon (C12-C13)	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Benzene	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Toluene	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Ethylbenzene	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
m,p-Xylene	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
o-Xylene	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Naphthalene	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.265		mg/Kg-dry	1	8/7/2012 1:05:00 AM
Surr: Bromofluorobenzene	95.4	65-140		%REC	1	8/7/2012 1:05:00 AM
Surr: Trifluorotoluene	71.0	65-140		%REC	1	8/7/2012 1:05:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R5182		Analyst: SC
Percent Moisture	10.1			wt%	1	8/3/2012 11:36:00 AM

Qualifiers:

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
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1208016**
Date Reported: **8/16/2012**

Client: Friedman & Bruya
Collection Date: 8/1/2012 3:30:00 PM
Project: 208022
Lab ID: 1208016-002
Matrix: Soil
Client Sample ID: B01-09ESW01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 2950		Analyst: SG
Aliphatic Hydrocarbon (C8-C10)	ND	4.56		mg/Kg-dry	1	8/14/2012 11:02:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	4.56		mg/Kg-dry	1	8/14/2012 11:02:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	4.56		mg/Kg-dry	1	8/14/2012 11:02:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	4.56		mg/Kg-dry	1	8/14/2012 11:02:00 PM
Aliphatic Hydrocarbon (C21-C34)	ND	4.56		mg/Kg-dry	1	8/14/2012 11:02:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	4.56		mg/Kg-dry	1	8/15/2012 8:39:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	4.56		mg/Kg-dry	1	8/15/2012 8:39:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	4.56		mg/Kg-dry	1	8/15/2012 8:39:00 AM
Aromatic Hydrocarbon (C16-C21)	ND	4.56		mg/Kg-dry	1	8/15/2012 8:39:00 AM
Aromatic Hydrocarbon (C21-C34)	ND	4.56		mg/Kg-dry	1	8/15/2012 8:39:00 AM
Surr: 1-Chlorooctadecane	82.0	65-140		%REC	1	8/14/2012 11:02:00 PM
Surr: o-Terphenyl	77.6	65-140		%REC	1	8/15/2012 8:39:00 AM
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 2920		Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Aliphatic Hydrocarbon (C6-C8)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Aliphatic Hydrocarbon (C8-C10)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Aliphatic Hydrocarbon (C10-C12)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Aromatic Hydrocarbon (C12-C13)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Benzene	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Toluene	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Ethylbenzene	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
m,p-Xylene	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
o-Xylene	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Naphthalene	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.273		mg/Kg-dry	1	8/7/2012 4:59:00 AM
Surr: Bromofluorobenzene	126	65-140		%REC	1	8/7/2012 4:59:00 AM
Surr: Trifluorotoluene	67.8	65-140		%REC	1	8/7/2012 4:59:00 AM
Sample Moisture (Percent Moisture)				Batch ID: R5182		Analyst: SC
Percent Moisture	8.36			wt%	1	8/3/2012 11:36:00 AM

Qualifiers:

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
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *8/16/2012*

Work Order: 1208016
CLIENT: Friedman & Bruya
Project: 208022

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **1208052-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/10/2012** RunNo: **5336**
Client ID: **BATCH** Batch ID: **2950** Analysis Date: **8/15/2012** SeqNo: **104421**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	14.2	5.02						8.941	45.7	30	R
Aliphatic Hydrocarbon (C10-C12)	14.3	5.02						11.56	21.2	30	
Aliphatic Hydrocarbon (C12-C16)	ND	5.02						0	0	30	R
Aliphatic Hydrocarbon (C16-C21)	ND	5.02						0	0	30	
Aliphatic Hydrocarbon (C21-C34)	ND	5.02						0	0	30	
Surr: 1-Chlorooctadecane	3.13		4.015		78.0	65	140		0		

NOTES:
R - High RPD noted in sample. The method is in control as indicated by the laboratory control sample (LCS).

Sample ID: **1208052-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/10/2012** RunNo: **5336**
Client ID: **BATCH** Batch ID: **2950** Analysis Date: **8/15/2012** SeqNo: **104422**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C10-C12)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C12-C16)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C16-C21)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C21-C34)	ND	5.02						0	0	30	
Surr: o-Terphenyl	2.67		4.015		66.5	65	140		0		

Sample ID: **LCS-2950** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/10/2012** RunNo: **5336**
Client ID: **LCSS** Batch ID: **2950** Analysis Date: **8/14/2012** SeqNo: **104425**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	70.5	5.00	100.0	0	70.5	70	130				
Aliphatic Hydrocarbon (C10-C12)	36.8	5.00	50.00	0	73.6	70	130				
Aliphatic Hydrocarbon (C12-C16)	39.0	5.00	50.00	0	77.9	70	130				
Aliphatic Hydrocarbon (C16-C21)	48.7	5.00	50.00	0	97.4	70	130				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *8/16/2012*

Work Order: 1208016
CLIENT: Friedman & Bruya
Project: 208022

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-2950**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/10/2012**	RunNo: **5336**
Client ID: **LCSS**	Batch ID: **2950**		Analysis Date: **8/14/2012**	SeqNo: **104425**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C21-C34)	50.2	5.00	50.00	0	100	70	130				
Surr: 1-Chlorooctadecane	41.8		40.00		104	65	140				

Sample ID: **LCS-2950**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/10/2012**	RunNo: **5336**
Client ID: **LCSS**	Batch ID: **2950**		Analysis Date: **8/15/2012**	SeqNo: **104426**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	70.1	5.00	100.0	0	70.1	70	130				
Aromatic Hydrocarbon (C10-C12)	41.0	5.00	50.00	0	82.0	70	130				
Aromatic Hydrocarbon (C12-C16)	48.1	5.00	50.00	0	96.2	70	130				
Aromatic Hydrocarbon (C16-C21)	51.6	5.00	50.00	0	103	70	130				
Aromatic Hydrocarbon (C21-C34)	51.2	5.00	50.00	0	102	70	130				
Surr: o-Terphenyl	36.1		40.00		90.1	65	140				

Sample ID: **LCSD-2950**	SampType: **LCSD**	Units: **mg/Kg**	Prep Date: **8/10/2012**	RunNo: **5336**
Client ID: **LCSS02**	Batch ID: **2950**		Analysis Date: **8/14/2012**	SeqNo: **104427**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	70.8	5.00	100.0	0	70.8	70	130	70.51	0.345	20	
Aliphatic Hydrocarbon (C10-C12)	35.2	5.00	50.00	0	70.4	70	130	36.78	4.46	20	
Aliphatic Hydrocarbon (C12-C16)	39.3	5.00	50.00	0	78.7	70	130	38.96	0.948	20	
Aliphatic Hydrocarbon (C16-C21)	44.9	5.00	50.00	0	89.8	70	130	48.68	8.11	20	
Aliphatic Hydrocarbon (C21-C34)	43.0	5.00	50.00	0	86.1	70	130	50.23	15.4	20	
Surr: 1-Chlorooctadecane	50.5		40.00		126	65	140		0		

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208016
CLIENT: Friedman & Bruya
Project: 208022

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCSD-2950**	SampType: **LCSD**			Units: **mg/Kg**		Prep Date: **8/10/2012**		RunNo: **5336**		
Client ID: **LCSS02**	Batch ID: **2950**					Analysis Date: **8/15/2012**		SeqNo: **104428**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	74.9	5.00	100.0	0	74.9	70	130	70.08	6.62	20	
Aromatic Hydrocarbon (C10-C12)	40.7	5.00	50.00	0	81.4	70	130	41.01	0.727	20	
Aromatic Hydrocarbon (C12-C16)	49.7	5.00	50.00	0	99.4	70	130	48.11	3.28	20	
Aromatic Hydrocarbon (C16-C21)	55.8	5.00	50.00	0	112	70	130	51.58	7.92	20	
Aromatic Hydrocarbon (C21-C34)	52.4	5.00	50.00	0	105	70	130	51.21	2.31	20	
Surr: o-Terphenyl	36.4		40.00		91.1	65	140		0		

Sample ID: **MB-2950**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/10/2012**		RunNo: **5336**		
Client ID: **MBLKS**	Batch ID: **2950**					Analysis Date: **8/14/2012**		SeqNo: **104429**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	27.8		40.00		69.5	65	140				

Sample ID: **MB-2950**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/10/2012**		RunNo: **5336**		
Client ID: **MBLKS**	Batch ID: **2950**					Analysis Date: **8/15/2012**		SeqNo: **104430**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: o-Terphenyl	38.8		40.00		96.9	65	140				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Date: *8/16/2012*

Work Order: 1208016
CLIENT: Friedman & Bruya
Project: 208022

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **MB-2950**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/10/2012**			RunNo: **5336**		
Client ID: **MBLKS**	Batch ID: **2950**					Analysis Date: **8/15/2012**			SeqNo: **104430**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208016
CLIENT: Friedman & Bruya
Project: 208022

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **LCS-2920** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/3/2012** RunNo: **5210**
Client ID: **LCSS** Batch ID: **2920** Analysis Date: **8/6/2012** SeqNo: **102110**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	39.3	0.500	40.00	0	98.2	70	130				
Aliphatic Hydrocarbon (C6-C8)	25.7	0.500	20.00	0	129	70	130				
Aliphatic Hydrocarbon (C8-C10)	21.4	0.500	20.00	0	107	70	130				
Aliphatic Hydrocarbon (C10-C12)	25.6	0.500	20.00	0	128	70	130				
Aromatic Hydrocarbon (C8-C10)	94.2	0.500	100.0	0	94.2	70	130				
Aromatic Hydrocarbon (C10-C12)	16.7	0.500	20.00	0	83.3	70	130				
Aromatic Hydrocarbon (C12-C13)	17.6	0.500	20.00	0	87.8	70	130				
Benzene	19.8	0.500	20.00	0	98.9	70	130				
Toluene	20.0	0.500	20.00	0	100	70	130				
Ethylbenzene	18.9	0.500	20.00	0	94.6	70	130				
m,p-Xylene	39.3	0.500	40.00	0	98.2	70	130				
o-Xylene	19.0	0.500	20.00	0	95.1	70	130				
Naphthalene	17.6	0.500	20.00	0	88.0	70	130				
Methyl tert-butyl ether (MTBE)	17.9	0.500	20.00	0	89.4	70	130				
Surr: Bromofluorobenzene	0.389		0.5000		77.8	65	140				
Surr: Trifluorotoluene	0.506		0.5000		101	65	140				

Sample ID: **MB-2920** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/3/2012** RunNo: **5210**
Client ID: **MBLKS** Batch ID: **2920** Analysis Date: **8/6/2012** SeqNo: **102112**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	0.500		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	0.500		0	0						

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208016
CLIENT: Friedman & Bruya
Project: 208022

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **MB-2920** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/3/2012** RunNo: **5210**
Client ID: **MBLKS** Batch ID: **2920** Analysis Date: **8/6/2012** SeqNo: **102112**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.500		0	0						
Toluene	ND	0.500		0	0						
Ethylbenzene	ND	0.500		0	0						
m,p-Xylene	ND	0.500		0	0						
o-Xylene	ND	0.500		0	0						
Naphthalene	ND	0.500		0	0						
Methyl tert-butyl ether (MTBE)	ND	0.500		0	0						
Surr: Bromofluorobenzene	0.495		0.5000		99.0	65	140				
Surr: Trifluorotoluene	0.346		0.5000		69.2	65	140				

Sample ID: **1208016-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/3/2012** RunNo: **5210**
Client ID: **A01-09ESW-01** Batch ID: **2920** Analysis Date: **8/7/2012** SeqNo: **102149**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.265		0	0			0	0	25	
Aliphatic Hydrocarbon (C6-C8)	ND	0.265		0	0			0	0	25	
Aliphatic Hydrocarbon (C8-C10)	ND	0.265		0	0			0	0	25	
Aliphatic Hydrocarbon (C10-C12)	0.511	0.265		0	0			0.6193	19.1	25	
Aromatic Hydrocarbon (C8-C10)	0.430	0.265		0	0			0.4566	5.96	25	
Aromatic Hydrocarbon (C10-C12)	ND	0.265		0	0			0	0	25	
Aromatic Hydrocarbon (C12-C13)	ND	0.265		0	0			0	0	25	
Benzene	ND	0.265		0	0			0	0	25	
Toluene	ND	0.265		0	0			0	0	25	
Ethylbenzene	ND	0.265		0	0			0	0	25	
m,p-Xylene	ND	0.265		0	0			0	0	25	
o-Xylene	ND	0.265		0	0			0	0	25	
Naphthalene	ND	0.265		0	0			0	0	25	
Methyl tert-butyl ether (MTBE)	ND	0.265		0	0			0	0	25	

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208016
CLIENT: Friedman & Bruya
Project: 208022

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **1208016-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/3/2012** RunNo: **5210**
Client ID: **A01-09ESW-01** Batch ID: **2920** Analysis Date: **8/7/2012** SeqNo: **102149**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Bromofluorobenzene	0.231		0.2647		87.4	65	140		0		
Surr: Trifluorotoluene	0.175		0.2647		66.1	65	140		0		

Sample ID: **1208016-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/3/2012** RunNo: **5210**
Client ID: **B01-09ESW01** Batch ID: **2920** Analysis Date: **8/7/2012** SeqNo: **102151**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	16.9	0.273	21.82	0	77.5	70	130				
Aliphatic Hydrocarbon (C6-C8)	10.3	0.273	10.91	0	94.3	70	130				
Aliphatic Hydrocarbon (C8-C10)	9.41	0.273	10.91	0.1781	84.6	70	130				
Aliphatic Hydrocarbon (C10-C12)	12.0	0.273	10.91	0.1764	108	70	130				
Aromatic Hydrocarbon (C8-C10)	46.9	0.273	54.56	0.2410	85.4	70	130				
Aromatic Hydrocarbon (C10-C12)	8.40	0.273	10.91	0	77.0	70	130				
Aromatic Hydrocarbon (C12-C13)	11.0	0.273	10.91	0	101	70	130				
Benzene	10.1	0.273	10.91	0	92.4	70	130				
Toluene	10.7	0.273	10.91	0	98.1	70	130				
Ethylbenzene	9.73	0.273	10.91	0	89.2	70	130				
m,p-Xylene	19.7	0.273	21.82	0	90.2	70	130				
o-Xylene	9.20	0.273	10.91	0	84.3	70	130				
Naphthalene	8.24	0.273	10.91	0	75.5	70	130				
Methyl tert-butyl ether (MTBE)	9.97	0.273	10.91	0	91.4	70	130				
Surr: Bromofluorobenzene	0.276		0.2728		101	65	140				
Surr: Trifluorotoluene	0.225		0.2728		82.6	65	140				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Sample Log-In Check List

Client Name: **FB**	Work Order Number: **1208016**
Logged by: **Troy Zehr**	Date Received: **8/3/2012 9:30:00 AM**

Chain of Custody

1.	Were custodial seals present?	Yes	☐	No	☐	Not Required	☑
2.	Is Chain of Custody complete?	Yes	☑	No	☐	Not Present	☐
3.	How was the sample delivered?	Courier					

Log In

4.	Coolers are present?	Yes	☐	No	☑	NA	☐
	Samples in cooler at Lab, picked up and brought to FAI.						
5.	Was an attempt made to cool the samples?	Yes	☑	No	☐	NA	☐
6.	Were all coolers received at a temperature of >0° C to 10.0°C	Yes	☐	No	☐	NA	☑
7.	Sample(s) in proper container(s)?	Yes	☑	No	☐		
8.	Sufficient sample volume for indicated test(s)?	Yes	☑	No	☐		
9.	Are samples properly preserved?	Yes	☑	No	☐		
10.	Was preservative added to bottles?	Yes	☐	No	☑	NA	☐
11.	Is there headspace present in VOA vials?	Yes	☐	No	☐	NA	☑
12.	Did all sample containers arrive in good condition?(unbroken)	Yes	☑	No	☐		
13.	Does paperwork match bottle labels?	Yes	☑	No	☐		
14.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No	☐		
15.	Is it clear what analyses were requested?	Yes	☑	No	☐		
16.	Were all holding times able to be met?	Yes	☑	No	☐		

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes	☐	No	☐	NA	☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

18. Additional remarks/Disrepancies

Item Information

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Fremont

PROJECT NAME/NO. 208022 208037

PO # B-869

REMARKS

Please Email Results

TURNAROUND TIME

X Standard (2 Weeks)

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity					Notes
A01-09ESW01		8/1/12	1520	Soil	1		x	x								
B01-09ESW01		↓	1530	↓	1		x	x								

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/2/12	3:40
Received by:		Troy Zehr	FA	8/3/12	9:30
Relinquished by:					
Received by:					

208022

SAMPLE CHAIN OF CUSTODY

ME 08/01/12

VS2/CT2

Send Report to: Sheri Bozic / Beau Johnson ; cc Chris Cass

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, WA 98102

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

SAMPLERS *(signature)*

PROJECT NAME/NO. TOC Facility No. 01-443

PO # 0440-041-11

REMARKS

Page # 1 of 1

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

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED: NWTPH-Gx and BTEX (8021B)	NWTPH-Dx	VOCs (8260C)	EPH/VPH					Notes
A01-095SW01	A01	09	01 A-E	8-1-12	1505	Soil	5	X								
A02-095SW01	A02	09	02 A-E	"	1515	Soil	5	X		X						
A01-09ESW01	A01	09	03 A-F	"	1520	Soil	6	X		X	X					
B01-09ESW01	B01	09	04 A-F	"	1530	Soil	6	X		X	X					
A02-11WSW01	A02	11	05 A-F	"	1610	Soil	6	X		X						
B02-10WSW01	B02	10	06 A-G	"	1630	Soil	5	X								

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Travis Zundel	Sound Earth	8/1/12	1700
Received by:	Matt Laythe	FBJ	8/1/12	1720
Relinquished by:				
Received by:		Samples received at	18	°C

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

Friedman & Bruya, Inc. #208042

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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August 9, 2012

Ryan Bixby, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Bixby:

Included are the results from the testing of material submitted on August 2, 2012 from the TOC_01-443_20120802 WORFDB6, F&BI 208042 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Audrey Hackett, Beau Johnson, Chris Cass
SOU0809R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-443_20120802 WORFDB6, F&BI 208042 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
208042-01	A02-16F01
208042-02	A01-16F01
208042-03	B01-16F01
208042-04	B02-16F01
208042-05	B02-12WSW02

The 8260C laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 08/09/12
Date Received: 08/02/12
Project: TOC_01-443_20120802 WORFDB6, F&BI 208042
Date Extracted: 08/02/12
Date Analyzed: 08/02/12

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

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
B02-12WSW02 208042-05	<2	85
Method Blank 02-1365 MB	<2	87

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
A02-16F01 208042-01	<0.02	<0.02	0.061	0.14	2.5	77
A01-16F01 208042-02	<0.02	<0.02	0.052	0.23	<2	79
B01-16F01 208042-03	<0.02	<0.02	0.023	<0.06	<2	78
B02-16F01 208042-04	<0.02	<0.02	0.075	0.12	9.7	79
Method Blank 02-1365 MB	<0.02	<0.02	<0.02	<0.06	<2	79

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B02-12WSW02	Client:	SoundEarth Strategies
Date Received:	08/02/12	Project:	TOC_01-443_20120802 WORFDB6
Date Extracted:	08/02/12	Lab ID:	208042-05
Date Analyzed:	08/02/12	Data File:	080221.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

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

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	0.052
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	SoundEarth Strategies
Date Received:	NA	Project:	TOC_01-443_20120802 WORFDB6
Date Extracted:	08/02/12	Lab ID:	02-1330 mb
Date Analyzed:	08/02/12	Data File:	080220.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Date of Report: 08/09/12
Date Received: 08/02/12
Project: TOC_01-443_20120802 WORFDB6, F&BI 208042

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: 208030-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	77	69-120
Toluene	mg/kg (ppm)	0.5	79	70-117
Ethylbenzene	mg/kg (ppm)	0.5	81	65-123
Xylenes	mg/kg (ppm)	1.5	80	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

Date of Report: 08/09/12
Date Received: 08/02/12
Project: TOC_01-443_20120802 WORFDB6, F&BI 208042

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

Laboratory Code: 208022-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	15	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	39	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	38	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	57	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	64	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	76	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	120	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	58	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	65	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	72	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	65	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	68	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	79	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	72	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	74	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	79	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	76	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	76	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	69	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	81	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	71	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.03	73	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	73	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	80	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	78	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	80	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	76	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	75	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	80	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	78	30-142
2-Hexanone	mg/kg (ppm)	12.5	<0.5	95	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	78	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	75	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	83	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	79	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	76	32-129
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	77	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	79	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	79	34-136
o-Xylene	mg/kg (ppm)	2.5	<0.05	78	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	80	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	78	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	84	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	78	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	78	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	78	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	70	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	77	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	77	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	78	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	78	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	78	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	77	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	80	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	78	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	77	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	77	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	69	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	70	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	75	19-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	73	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	71	20-144

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	55	43	10-146	24 vo
Chloromethane	mg/kg (ppm)	2.5	68	55	27-133	21 vo
Vinyl chloride	mg/kg (ppm)	2.5	74	61	22-139	19
Bromomethane	mg/kg (ppm)	2.5	85	74	38-114	14
Chloroethane	mg/kg (ppm)	2.5	92	79	20-153	15
Trichlorofluoromethane	mg/kg (ppm)	2.5	91	93	10-196	2
Acetone	mg/kg (ppm)	12.5	84	74	52-141	13
1,1-Dichloroethene	mg/kg (ppm)	2.5	86	73	47-128	16
Methylene chloride	mg/kg (ppm)	2.5	81	70	42-132	15
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	93	83	60-123	11
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	88	75	67-127	16
1,1-Dichloroethane	mg/kg (ppm)	2.5	95	83	68-115	13
2,2-Dichloropropane	mg/kg (ppm)	2.5	127	107	57-133	17
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	97	85	72-113	13
Chloroform	mg/kg (ppm)	2.5	97	85	66-120	13
2-Butanone (MEK)	mg/kg (ppm)	12.5	114	103	57-123	10
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	97	87	56-135	11
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	107	93	62-131	14
1,1-Dichloropropene	mg/kg (ppm)	2.5	99	86	69-128	14
Carbon tetrachloride	mg/kg (ppm)	2.5	112	99	60-139	12
Benzene	mg/kg (ppm)	2.5	95	83	68-114	13
Trichloroethene	mg/kg (ppm)	2.5	88	79	68-114	11
1,2-Dichloropropane	mg/kg (ppm)	2.5	96	85	72-127	12
Bromodichloromethane	mg/kg (ppm)	2.5	102	90	72-130	12
Dibromomethane	mg/kg (ppm)	2.5	99	88	70-120	12
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	97	88	45-145	10
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	105	92	75-136	13
Toluene	mg/kg (ppm)	2.5	99	86	66-126	14
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	105	92	72-132	13
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	98	87	75-113	12
2-Hexanone	mg/kg (ppm)	12.5	92	84	33-152	9
1,3-Dichloropropane	mg/kg (ppm)	2.5	98	88	72-130	11
Tetrachloroethene	mg/kg (ppm)	2.5	102	89	72-114	14
Dibromochloromethane	mg/kg (ppm)	2.5	104	93	74-125	11
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	101	89	74-132	13
Chlorobenzene	mg/kg (ppm)	2.5	98	87	76-111	12
Ethylbenzene	mg/kg (ppm)	2.5	101	89	64-123	13
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	101	88	69-135	14
m,p-Xylene	mg/kg (ppm)	5	102	88	78-122	15
o-Xylene	mg/kg (ppm)	2.5	102	91	77-124	11
Styrene	mg/kg (ppm)	2.5	103	91	74-126	12
Isopropylbenzene	mg/kg (ppm)	2.5	101	89	76-127	13
Bromoform	mg/kg (ppm)	2.5	105	94	56-132	11
n-Propylbenzene	mg/kg (ppm)	2.5	102	91	74-124	11
Bromobenzene	mg/kg (ppm)	2.5	102	91	72-122	11
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	101	89	76-126	13
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	100	88	56-143	13
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	95	87	61-137	9
2-Chlorotoluene	mg/kg (ppm)	2.5	101	90	74-121	12
4-Chlorotoluene	mg/kg (ppm)	2.5	101	90	75-122	12
tert-Butylbenzene	mg/kg (ppm)	2.5	101	88	73-130	14
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	100	89	76-125	12
sec-Butylbenzene	mg/kg (ppm)	2.5	100	88	71-130	13
p-Isopropyltoluene	mg/kg (ppm)	2.5	103	91	70-132	12
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	99	88	75-121	12
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	98	87	74-117	12
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	87	76-121	11
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	82	75	61-136	9
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	88	77	70-129	13
Hexachlorobutadiene	mg/kg (ppm)	2.5	92	82	50-153	11
Naphthalene	mg/kg (ppm)	2.5	89	81	60-125	9
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	90	79	62-130	13

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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

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

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

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

j – The result is below normal reporting limits. The value reported is an estimate.

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

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

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

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

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

208042

SAMPLE CHAIN OF CUSTODY

ME 8/2/12 VS1 CIZ

Send Report to: Sheri Bozic / Beau Johnson ; cc Chris Cass

Company: SoundEarth Strategies, Inc.

Address: 2811 Fairview Avenue E, Suite 2000

City, State, ZIP: Seattle, WA 98102

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

SAMPLERS (signature):

PROJECT NAME/NO.: TOC Facility No. 01-443

PO #: 0440-041-11

REMARKS:

Page # 1 of 1

TURNAROUND TIME: Standard (2 Weeks) (RUSH) 24-hr TAT

Rush charges authorized by: Beau Johnson

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED: NWTPH-Gx and BTEX (8021B)	NWTPH-Dx	VOCs (8260C)	EPH/VPH					Notes
A02-16F01	A02	16	01 A-E	8-2-12	0915	Soil	5	X								
A01-16F01	A01	16	02	8-2-12	0920	Soil	5	X								
B01-16F01	B01	16	03	8-2-12	0930	Soil	5	X								
B02-16F01	B02	16	04	8-2-12	0940	Soil	5	X								
B02-12WSW02	B02	12	05	8-2-12	0950	Soil	5	X		X						

Sample received at 20 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Travis Zandi	Sound Earth	8/2/2012	15:40
Received by:	HONG NGUYEN	FBI	8/2/12	1
Relinquished by:				
Received by:				

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

FORMS\COC\COC.DOC

Friedman & Bruya, Inc. #208056

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

August 17, 2012

Ryan Bixby, Project Manager
SoundEarth Strategies
2811 Fairview Ave. East, Suite 2000
Seattle, WA 98102

Dear Mr. Bixby:

Included are the results from the testing of material submitted on August 3, 2012 from the TOC_01-443_20120803 WORFDB6, F&BI 208056 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Audrey Hackett, Beau Johnson, Sheri Bozic
SOU0817R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 3, 2012 by Friedman & Bruya, Inc. from the SoundEarth Strategies TOC_01-443_20120803 WORFDB6, F&BI 208056 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	SoundEarth Strategies
208056-01	C02-11WSW01
208056-02	C01-08NSW01
208056-03	C02-15F01
208056-04	C01-15F01

Sample C02-11WSW01 was sent to Fremont for EPH/VPH analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

Date of Report: 08/17/12
Date Received: 08/03/12
Project: TOC_01-443_20120803 WORFDB6, F&BI 208056
Date Extracted: 08/03/12
Date Analyzed: 08/06/12

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
C02-11WSW01 208056-01	<0.02	<0.02	<0.02	<0.06	<2	93
C01-08NSW01 208056-02	<0.02	<0.02	<0.02	<0.06	4.3	94
C02-15F01 208056-03	<0.02	<0.02	0.029	<0.06	4.7	95
C01-15F01 208056-04	<0.02	<0.02	0.023	<0.06	<2	95
Method Blank 02-1365 MB	<0.02	<0.02	<0.02	<0.06	<2	79

Date of Report: 08/17/12
Date Received: 08/03/12
Project: TOC_01-443_20120803 WORFDB6, F&BI 208056

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: 208030-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	77	69-120
Toluene	mg/kg (ppm)	0.5	79	70-117
Ethylbenzene	mg/kg (ppm)	0.5	81	65-123
Xylenes	mg/kg (ppm)	1.5	80	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

Data Qualifiers & Definitions

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

A1 – More than one compound of similar molecule structure was identified with equal probability.

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

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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

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

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

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

j – The result is below normal reporting limits. The value reported is an estimate.

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

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

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

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

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

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

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

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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

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

1311 N. 35th St.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, Washington 98119

RE: 208056
Lab ID: 1208052

August 16, 2012

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 8/8/2012 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Volatile Petroleum Hydrocarbons by NWVPH

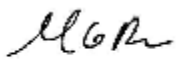
This report consists of the following:

- 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,



Michael Dee
Sr. Chemist / Principal

Date: *08/16/2012*

CLIENT: Friedman & Bruya
Project: 208056
Lab Order: 1208052

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1208052-001	C02-11WSW01	08/03/2012 11:55 AM	08/08/2012 2:30 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1208052**
Date: **8/16/2012**

CLIENT: Friedman & Bruya
Project: 208056

I. SAMPLE RECEIPT:
All samples were received intact.

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").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Analytical Report

WO#: **1208052**
Date Reported: **8/16/2012**

Client: Friedman & Bruya
Collection Date: 8/3/2012 11:55:00 AM
Project: 208056
Lab ID: 1208052-001
Matrix: Soil
Client Sample ID: C02-11WSW01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 2950		Analyst: SG
Aliphatic Hydrocarbon (C8-C10)	8.94	5.33		mg/Kg-dry	1	8/15/2012 2:54:00 AM
Aliphatic Hydrocarbon (C10-C12)	11.6	5.33		mg/Kg-dry	1	8/15/2012 2:54:00 AM
Aliphatic Hydrocarbon (C12-C16)	ND	5.33		mg/Kg-dry	1	8/15/2012 2:54:00 AM
Aliphatic Hydrocarbon (C16-C21)	ND	5.33		mg/Kg-dry	1	8/15/2012 2:54:00 AM
Aliphatic Hydrocarbon (C21-C34)	ND	5.33		mg/Kg-dry	1	8/15/2012 2:54:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	5.33		mg/Kg-dry	1	8/15/2012 1:28:00 PM
Aromatic Hydrocarbon (C10-C12)	ND	5.33		mg/Kg-dry	1	8/15/2012 1:28:00 PM
Aromatic Hydrocarbon (C12-C16)	ND	5.33		mg/Kg-dry	1	8/15/2012 1:28:00 PM
Aromatic Hydrocarbon (C16-C21)	ND	5.33		mg/Kg-dry	1	8/15/2012 1:28:00 PM
Aromatic Hydrocarbon (C21-C34)	ND	5.33		mg/Kg-dry	1	8/15/2012 1:28:00 PM
Surr: 1-Chlorooctadecane	81.1	65-140		%REC	1	8/15/2012 2:54:00 AM
Surr: o-Terphenyl	90.9	65-140		%REC	1	8/15/2012 1:28:00 PM
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 2970		Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Aliphatic Hydrocarbon (C6-C8)	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Aliphatic Hydrocarbon (C8-C10)	1.65	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Aliphatic Hydrocarbon (C10-C12)	8.54	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Aromatic Hydrocarbon (C8-C10)	3.69	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Aromatic Hydrocarbon (C10-C12)	15.8	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Aromatic Hydrocarbon (C12-C13)	1.17	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Benzene	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Toluene	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Ethylbenzene	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
m,p-Xylene	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
o-Xylene	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Naphthalene	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.290		mg/Kg-dry	1	8/11/2012 12:56:00 AM
Surr: Bromofluorobenzene	99.0	65-140		%REC	1	8/11/2012 12:56:00 AM
Surr: Trifluorotoluene	28.1	65-140	S	%REC	1	8/11/2012 12:56:00 AM

NOTES:
S - Surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Qualifiers:

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
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1208052**
Date Reported: **8/16/2012**

Client: Friedman & Bruya
Collection Date: 8/3/2012 11:55:00 AM
Project: 208056
Lab ID: 1208052-001
Matrix: Soil
Client Sample ID: C02-11WSW01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R5259		Analyst: SC
Percent Moisture	8.44			wt%	1	8/9/2012 12:47:51 PM

Qualifiers:

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
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208052
CLIENT: Friedman & Bruya
Project: 208056

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **1208052-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/10/2012** RunNo: **5336**
Client ID: **C02-11WSW01** Batch ID: **2950** Analysis Date: **8/15/2012** SeqNo: **104421**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	14.2	5.02						8.941	45.7	30	R
Aliphatic Hydrocarbon (C10-C12)	14.3	5.02						11.56	21.2	30	
Aliphatic Hydrocarbon (C12-C16)	ND	5.02						0	0	30	R
Aliphatic Hydrocarbon (C16-C21)	ND	5.02						0	0	30	
Aliphatic Hydrocarbon (C21-C34)	ND	5.02						0	0	30	
Surr: 1-Chlorooctadecane	3.13		4.015		78.0	65	140		0		

NOTES:
R - High RPD noted in sample. The method is in control as indicated by the laboratory control sample (LCS).

Sample ID: **1208052-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/10/2012** RunNo: **5336**
Client ID: **C02-11WSW01** Batch ID: **2950** Analysis Date: **8/15/2012** SeqNo: **104422**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C10-C12)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C12-C16)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C16-C21)	ND	5.02						0	0	30	
Aromatic Hydrocarbon (C21-C34)	ND	5.02						0	0	30	
Surr: o-Terphenyl	2.67		4.015		66.5	65	140		0		

Sample ID: **LCS-2950** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/10/2012** RunNo: **5336**
Client ID: **LCSS** Batch ID: **2950** Analysis Date: **8/14/2012** SeqNo: **104425**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	70.5	5.00	100.0	0	70.5	70	130				
Aliphatic Hydrocarbon (C10-C12)	36.8	5.00	50.00	0	73.6	70	130				
Aliphatic Hydrocarbon (C12-C16)	39.0	5.00	50.00	0	77.9	70	130				
Aliphatic Hydrocarbon (C16-C21)	48.7	5.00	50.00	0	97.4	70	130				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *8/16/2012*

Work Order: 1208052
CLIENT: Friedman & Bruya
Project: 208056

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-2950**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/10/2012**	RunNo: **5336**
Client ID: **LCSS**	Batch ID: **2950**		Analysis Date: **8/14/2012**	SeqNo: **104425**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C21-C34)	50.2	5.00	50.00	0	100	70	130				
Surr: 1-Chlorooctadecane	41.8		40.00		104	65	140				

Sample ID: **LCS-2950**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/10/2012**	RunNo: **5336**
Client ID: **LCSS**	Batch ID: **2950**		Analysis Date: **8/15/2012**	SeqNo: **104426**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	70.1	5.00	100.0	0	70.1	70	130				
Aromatic Hydrocarbon (C10-C12)	41.0	5.00	50.00	0	82.0	70	130				
Aromatic Hydrocarbon (C12-C16)	48.1	5.00	50.00	0	96.2	70	130				
Aromatic Hydrocarbon (C16-C21)	51.6	5.00	50.00	0	103	70	130				
Aromatic Hydrocarbon (C21-C34)	51.2	5.00	50.00	0	102	70	130				
Surr: o-Terphenyl	36.1		40.00		90.1	65	140				

Sample ID: **LCSD-2950**	SampType: **LCSD**	Units: **mg/Kg**	Prep Date: **8/10/2012**	RunNo: **5336**
Client ID: **LCSS02**	Batch ID: **2950**		Analysis Date: **8/14/2012**	SeqNo: **104427**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	70.8	5.00	100.0	0	70.8	70	130	70.51	0.345	20	
Aliphatic Hydrocarbon (C10-C12)	35.2	5.00	50.00	0	70.4	70	130	36.78	4.46	20	
Aliphatic Hydrocarbon (C12-C16)	39.3	5.00	50.00	0	78.7	70	130	38.96	0.948	20	
Aliphatic Hydrocarbon (C16-C21)	44.9	5.00	50.00	0	89.8	70	130	48.68	8.11	20	
Aliphatic Hydrocarbon (C21-C34)	43.0	5.00	50.00	0	86.1	70	130	50.23	15.4	20	
Surr: 1-Chlorooctadecane	50.5		40.00		126	65	140		0		

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208052
CLIENT: Friedman & Bruya
Project: 208056

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCSD-2950**	SampType: **LCSD**			Units: **mg/Kg**		Prep Date: **8/10/2012**		RunNo: **5336**		
Client ID: **LCSS02**	Batch ID: **2950**					Analysis Date: **8/15/2012**		SeqNo: **104428**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	74.9	5.00	100.0	0	74.9	70	130	70.08	6.62	20	
Aromatic Hydrocarbon (C10-C12)	40.7	5.00	50.00	0	81.4	70	130	41.01	0.727	20	
Aromatic Hydrocarbon (C12-C16)	49.7	5.00	50.00	0	99.4	70	130	48.11	3.28	20	
Aromatic Hydrocarbon (C16-C21)	55.8	5.00	50.00	0	112	70	130	51.58	7.92	20	
Aromatic Hydrocarbon (C21-C34)	52.4	5.00	50.00	0	105	70	130	51.21	2.31	20	
Surr: o-Terphenyl	36.4		40.00		91.1	65	140		0		

Sample ID: **MB-2950**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/10/2012**		RunNo: **5336**		
Client ID: **MBLKS**	Batch ID: **2950**					Analysis Date: **8/14/2012**		SeqNo: **104429**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	27.8		40.00		69.5	65	140				

Sample ID: **MB-2950**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/10/2012**		RunNo: **5336**		
Client ID: **MBLKS**	Batch ID: **2950**					Analysis Date: **8/15/2012**		SeqNo: **104430**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: o-Terphenyl	38.8		40.00		96.9	65	140				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Date: *8/16/2012*

Work Order: 1208052
CLIENT: Friedman & Bruya
Project: 208056

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **MB-2950**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/10/2012**			RunNo: **5336**		
Client ID: **MBLKS**	Batch ID: **2950**					Analysis Date: **8/15/2012**			SeqNo: **104430**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208052
CLIENT: Friedman & Bruya
Project: 208056

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **LCS-2970** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/10/2012** RunNo: **5322**
Client ID: **LCSS** Batch ID: **2970** Analysis Date: **8/10/2012** SeqNo: **104139**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	39.3	0.500	40.00	0	98.3	70	130				
Aliphatic Hydrocarbon (C6-C8)	23.5	0.500	20.00	0	117	70	130				
Aliphatic Hydrocarbon (C8-C10)	18.1	0.500	20.00	0	90.5	70	130				
Aliphatic Hydrocarbon (C10-C12)	24.9	0.500	20.00	0	125	70	130				
Aromatic Hydrocarbon (C8-C10)	90.3	0.500	100.0	0	90.3	70	130				
Aromatic Hydrocarbon (C10-C12)	16.9	0.500	20.00	0	84.7	70	130				
Aromatic Hydrocarbon (C12-C13)	18.0	0.500	20.00	0	90.2	70	130				
Benzene	18.6	0.500	20.00	0	93.0	70	130				
Toluene	20.0	0.500	20.00	0	99.9	70	130				
Ethylbenzene	20.1	0.500	20.00	0	101	70	130				
m,p-Xylene	38.1	0.500	40.00	0	95.3	70	130				
o-Xylene	19.2	0.500	20.00	0	95.8	70	130				
Naphthalene	17.1	0.500	20.00	0	85.5	70	130				
Methyl tert-butyl ether (MTBE)	20.3	0.500	20.00	0	102	70	130				
Surr: Bromofluorobenzene	0.541		0.5000		108	65	140				
Surr: Trifluorotoluene	0.582		0.5000		116	65	140				

Sample ID: **LCSD-2970** SampType: **LCSD** Units: **mg/Kg** Prep Date: **8/10/2012** RunNo: **5322**
Client ID: **LCSS02** Batch ID: **2970** Analysis Date: **8/10/2012** SeqNo: **104140**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	36.1	0.500	40.00	0	90.3	70	130	39.32	8.52	20	
Aliphatic Hydrocarbon (C6-C8)	25.4	0.500	20.00	0	127	70	130	23.47	7.79	20	
Aliphatic Hydrocarbon (C8-C10)	17.7	0.500	20.00	0	88.7	70	130	18.10	1.99	20	
Aliphatic Hydrocarbon (C10-C12)	22.2	0.500	20.00	0	111	70	130	24.91	11.6	20	
Aromatic Hydrocarbon (C8-C10)	87.8	0.500	100.0	0	87.8	70	130	90.27	2.75	20	
Aromatic Hydrocarbon (C10-C12)	18.5	0.500	20.00	0	92.4	70	130	16.93	8.76	20	
Aromatic Hydrocarbon (C12-C13)	16.9	0.500	20.00	0	84.6	70	130	18.04	6.42	20	

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1208052
CLIENT: Friedman & Bruya
Project: 208056

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **LCSD-2970** SampType: **LCSD** Units: **mg/Kg** Prep Date: **8/10/2012** RunNo: **5322**
Client ID: **LCSS02** Batch ID: **2970** Analysis Date: **8/10/2012** SeqNo: **104140**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	16.7	0.500	20.00	0	83.7	70	130	18.60	10.5	20	
Toluene	16.9	0.500	20.00	0	84.7	70	130	19.98	16.5	20	
Ethylbenzene	16.6	0.500	20.00	0	83.1	70	130	20.12	19.0	20	
m,p-Xylene	35.4	0.500	40.00	0	88.5	70	130	38.11	7.37	20	
o-Xylene	17.4	0.500	20.00	0	86.8	70	130	19.16	9.80	20	
Naphthalene	17.0	0.500	20.00	0	85.0	70	130	17.10	0.562	20	
Methyl tert-butyl ether (MTBE)	17.4	0.500	20.00	0	87.1	70	130	20.31	15.4	20	
Surr: Bromofluorobenzene	0.506		0.5000		101	65	140		0		
Surr: Trifluorotoluene	0.473		0.5000		94.6	65	140		0		

NOTES:
An LCS Duplicate was performed instead of an MS/MSD due to high matrix interference.

Sample ID: **MB-2970** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/10/2012** RunNo: **5322**
Client ID: **MBLKS** Batch ID: **2970** Analysis Date: **8/10/2012** SeqNo: **104141**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	0.500		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	0.500		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	0.500		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	0.500		0	0						
Benzene	ND	0.500		0	0						
Toluene	ND	0.500		0	0						
Ethylbenzene	ND	0.500		0	0						
m,p-Xylene	ND	0.500		0	0						
o-Xylene	ND	0.500		0	0						
Naphthalene	ND	0.500		0	0						

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *8/16/2012*

Work Order: 1208052
CLIENT: Friedman & Bruya
Project: 208056

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **MB-2970**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/10/2012**	RunNo: **5322**
Client ID: **MBLKS**	Batch ID: **2970**		Analysis Date: **8/10/2012**	SeqNo: **104141**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.500		0	0						
Surr: Bromofluorobenzene	0.553		0.5000		111	65	140				
Surr: Trifluorotoluene	0.345		0.5000		68.9	65	140				

Sample ID: **1208052-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **8/10/2012**	RunNo: **5322**
Client ID: **C02-11WSW01**	Batch ID: **2970**		Analysis Date: **8/11/2012**	SeqNo: **104158**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	0.290		0	0			0	0	25	
Aliphatic Hydrocarbon (C6-C8)	ND	0.290		0	0			0	0	25	
Aliphatic Hydrocarbon (C8-C10)	1.38	0.290		0	0			1.646	17.7	25	
Aliphatic Hydrocarbon (C10-C12)	8.22	0.290		0	0			8.544	3.92	25	
Aromatic Hydrocarbon (C8-C10)	3.81	0.290		0	0			3.693	3.11	25	
Aromatic Hydrocarbon (C10-C12)	16.3	0.290		0	0			15.82	2.98	25	
Aromatic Hydrocarbon (C12-C13)	0.952	0.290		0	0			1.166	20.2	25	
Benzene	ND	0.290		0	0			0	0	25	
Toluene	ND	0.290		0	0			0	0	25	
Ethylbenzene	ND	0.290		0	0			0	0	25	
m,p-Xylene	ND	0.290		0	0			0	0	25	
o-Xylene	ND	0.290		0	0			0	0	25	
Naphthalene	ND	0.290		0	0			0	0	25	
Methyl tert-butyl ether (MTBE)	ND	0.290		0	0			0	0	25	
Surr: Bromofluorobenzene	0.290		0.2901		100	65	140		0		
Surr: Trifluorotoluene	0.0814		0.2901		28.1	65	140		0		S

NOTES:

S - Surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

SUBCONTRACT SAMPLE CHAIN OF CUSTODY 1208052

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER Fremont

PROJECT NAME/NO. 208056

PO # B-869.

REMARKS

Please Email Results

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity					Notes
C02-11WSW01		8/3/12	1155	soil	2		x	x								

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/6/12	11AM.
Received by:		Clare Griggs	FAI	8/8/12	2:30pm
Relinquished by:					
Received by:					

208056

SAMPLE CHAIN OF CUSTODY ME 08/03/12

VSI/CC2

Send Report to: Sheri Bozic / Beau Johnson ; cc Chris Cass

Company SoundEarth Strategies, Inc.

Address 2811 Fairview Avenue E, Suite 2000

City, State, ZIP Seattle, WA 98102

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

SAMPLERS *(signature)*

PROJECT NAME/NO. TOC Facility No. 01-443

PO # 0440-041-11

REMARKS

Page # 1 of 1

TURNAROUND TIME
Standard (2 Weeks)
RUSH 24 hr TAT
Rush charges authorized by: Beau Johnson

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

Sample ID	Sample Location	Sample Depth	Lab ID	Date Sampled	Time Sampled	Matrix	# of Jars	ANALYSES REQUESTED: NWTPH-Gx and BTEX (8021B)	NWTPH-Dx	VOCs (8260C)	EPH/VPH					Notes
C02-11WSW01	C02	11	01 A-F	8-3-12	1155	6		X			X					
C01-08NSW01	C01	08	02 A-E	8-3-12	1205	5		X								
C02-15F01	C02	15	03 A-E	8-3-12	1215	5		X								
C01-15F01	C01	15	04 A-E	8-3-12	1225	5		X								

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Travis Zundl	SoundEarth	8/3/2012	1330
Received by:	HONG NGUYEN	FBI	"	"
Relinquished by:				
Received by:		Samples received at		4 °C

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

APPENDIX D
SOIL DISPOSAL TICKET

Ticket Listing By Customer and Vehicle Report

Dates: 07/30/2012 Thru 08/10/2012
Location(s): 1876

Scale Tickets

Ticket No	Order ID	Purchase Order	Delivery Address	Product ID	Product Desc	Ticket Date	Ticket Time	Tare	Qty	Unit	Void
Customer 3031722 - TIME OIL CO											
Vehicle 2240215 - TM51T,TMAX											
1876059322	40890936	VERBAL- SOUND E	76: 4910 LEARY AVE NW	1192508	CLASS 3 SOIL DUMPE	08/01/12	02:56PM	40,240	35.33	TON	
1876059330	40890936	VERBAL- SOUND E	76: 4910 LEARY AVE NW	1192508	CLASS 3 SOIL DUMPE	08/02/12	09:40AM	40,240	35.95	TON	
1876059339	40890936	VERBAL- SOUND E	76: 4910 LEARY AVE NW	1192508	CLASS 3 SOIL DUMPE	08/03/12	09:48AM	40,240	36.75	TON	
1876059342	40890936	VERBAL- SOUND E	76: 4910 LEARY AVE NW	1192508	CLASS 3 SOIL DUMPE	08/03/12	12:44PM	40,240	31.74	TON	
Totals for Vehicle 2240215 - TM51T,TMAX							**4**	**Ticket(s)**		**139.77**	**TON**
Vehicle 2268908 - RC19T,RO CON											
1876059325	40890936	VERBAL- SOUND E	76: 4910 LEARY AVE NW	1192508	CLASS 3 SOIL DUMPE	08/01/12	04:09PM	38,900	37.15	TON	
Totals for Vehicle 2268908 - RC19T,RO CON							**1**	**Ticket(s)**		**37.15**	**TON**
Vehicle 2268909 - RC27T,RO CON											
1876059340	40890936	VERBAL- SOUND E	76: 4910 LEARY AVE NW	1192508	CLASS 3 SOIL DUMPE	08/03/12	10:18AM	41,140	37.10	TON	
Totals for Vehicle 2268909 - RC27T,RO CON							**1**	**Ticket(s)**		**37.10**	**TON**
Total Tickets / Quantity for 3031722 - TIME OIL CO							**6**	**Ticket(s)**		**214.02**	
Report Totals:							**6**	**Ticket(s)**		**214.02**	

APPENDIX E
BORING LOGS

SoundEarth Strategies

Project: TOC Holdings Co. Facility No. 01-443
Project Number: 0440-041
Logged by: WBC
Date Started: 08/30/12
Surface Conditions: Concrete
Well Location N/S: 4' S of MW02
Well Location E/W: 12.75' W of MW02
Reviewed by: Draft
Date Completed: 08/30/12

BORING LOG MW11A

Site Address: 4910 Leary Avenue Northwest
Seattle, Washington

Water Depth At Time of Drilling: -- feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0								**2" asphalt** **@1' large chunk of concrete.**	
5								**Drilled down to 15' bgs with no sampling or soil observation.**	
10									
15		9						**Damp, loose, silty SAND, trace gravel, brown, no hydrocarbon odor (15-80-5).**	

Drilling Co./Driller: Cascade/Scott
Drilling Equipment: Hollow Stem Auger
Sampler Type: Split-Spoon
Hammer Type/Weight: lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: 20 feet bgs
State Well ID No.: BHS 313

Well/Auger Diameter: 2'/4" inches
Well Screened Interval: 5 to 20 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Silica sand
Surface Seal: Concrete
Annular Seal: Bentonite Chips
Monument Type: Flush Mount

Notes/Comments:

SoundEarth Strategies

Project: TOC Holdings Co. Facility No. 01-443
Project Number: 0440-041
Logged by: WBC
Date Started: 08/30/12
Surface Conditions: Concrete
Well Location N/S: 4' S of MW02
Well Location E/W: 12.75' W of MW02
Reviewed by: Draft
Date Completed: 08/30/12

BORING LOG MW11A

Site Address: 4910 Leary Avenue Northwest
Seattle, Washington

Water Depth At Time of Drilling: -- feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15		9 10 12	100	11.8	MW11A-16.5	SM		**Wet, loose, silty SAND, trace gravel, gray, strong hydrocarbon odor (10-85-5).**	
				251.5					
		12 15 12		6.7	MW11A-17.5	SM		**Wet, firm, silty fine to medium SAND, trace gravel, gray, possible faint odor (10-85-5).**	
			100	8.3					
20		15 16 12	100	11.7	MW11A-20.5	SM		**Wet, firm, silty fine to medium SAND, gray, moderate odor (15-80-5).**	
								Boring terminated at 20.5' bgs, well installed @20' bgs with 15' of screen, sand to 1' above screen, bentonite to 1' bgs.	
25									
30									

Drilling Co./Driller:	Cascade/Scott		**Well/Auger Diameter:**	2'/4"	inches
Drilling Equipment:	Hollow Stem Auger		**Well Screened Interval:**	5 to 20	feet bgs
Sampler Type:	Split-Spoon		**Screen Slot Size:**	0.010	inches
Hammer Type/Weight:		lbs	**Filter Pack Used:**	Silica sand	
Total Boring Depth:	20.5	feet bgs	**Surface Seal:**	Concrete	
Total Well Depth:	20	feet bgs	**Annular Seal:**	Bentonite Chips	
State Well ID No.:	BHS 313		**Monument Type:**	Flush Mount	

Notes/Comments:

SoundEarth Strategies

Project: TOC Holdings Co. Facility No. 01-443
Project Number: 0440-041
Logged by: WBC
Date Started: 08/30/12
Surface Conditions: Concrete
Well Location N/S:
Well Location E/W:
Reviewed by: Draft
Date Completed: 08/30/12

BORING LOG MW15A

Site Address: 4910 Leary Avenue Northwest
Seattle, Washington

Water Depth At Time of Drilling: -- feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0								**4" concrete** **Drilled down to 15' bgs with no sampling or soil observation.**	
5								**@7': native soil encountered based on driler observation cottings are loose, silty wet SAND, trace gravel, strong hydrocarbon odor (10-85-5).**	
10									
15									

Drilling Co./Driller: Cascade/Scott
Drilling Equipment: Hollow Stem Auger
Sampler Type: Split-Spoon
Hammer Type/Weight: lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: 20 feet bgs
State Well ID No.:

Well/Auger Diameter: 2"/4" inches
Well Screened Interval: 5 to 20 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Silica 4' -20'
Surface Seal: Concrete 0'-1'
Annular Seal: Bentonite Chips 1'-4'
Monument Type: Flush Mount

Notes/Comments:

SoundEarth Strategies

Project: TOC Holdings Co. Facility No. 01-443
Project Number: 0440-041
Logged by: WBC
Date Started: 08/30/12
Surface Conditions: Concrete
Well Location N/S:
Well Location E/W:
Reviewed by: Draft
Date Completed: 08/30/12

BORING LOG MW15A

Site Address: 4910 Leary Avenue Northwest
Seattle, Washington

Water Depth At Time of Drilling: -- feet bgs
Water Depth After Completion: -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15		30 40 50	60	5.0		SM		**Damp, firm, silty fine to medium SAND, trace gravel, gray, slight odor (10-85-5).**	
				4.1					
		36 45 50	95		MW15A-17.5	SM		**Damp, firm, silty fine to medium SAND, trace gravel, gray, no hydrocarbon odor (10-85-5).**	
		35 48 50	100	8.6	MW15A-20.5	SM		**Damp, firm, silty fine to medium SAND, trace gravel, gray, no hydrocarbon odor (10-85-5).**	
20				10.0				**Boring terminated at 20.5. bgs, well installed @20' bgs.**	
25									
30									

Drilling Co./Driller: Cascade/Scott
Drilling Equipment: Hollow Stem Auger
Sampler Type: Split-Spoon
Hammer Type/Weight: lbs
Total Boring Depth: 20.5 feet bgs
Total Well Depth: 20 feet bgs
State Well ID No.:

Well/Auger Diameter: 2"/4" inches
Well Screened Interval: 5 to 20 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: Silica 4' -20'
Surface Seal: Concrete 0'-1'
Annular Seal: Bentonite Chips 1'-4'
Monument Type: Flush Mount

Notes/Comments: