Risk Based Corrective Action Detemination

point source solutions, llc
ENGINEERING • ENVIRONMENTAL • SAFETY

7-Eleven Property
1024 SE Grand Avenue
Portland, Multnomah County, Oregon

Report Prepared for and Reliance Provided to:

Caldwell Properties LLC c/o
Wyse Real Estate Advisors
810 SE Belmont Street
Portland, Oregon 97214

Point Source Solutions Project No: OR160930-4B
May 22, 2017

Field Work Conducted and Report Prepared in Accordance with the following:

ASTM Standard Practice E1903-11

Oregon State Board of Geologist Examiners Professional Practices Guideline (May 2014)

Point Source Solutions LLC (Point Source) is pleased to provide the results from the Risk-Based Corrective Action Determination prepared for 1024 SE Grand Avenue, Portland, Oregon 97214 ("Site"). This investigation was performed in accordance with Point Source's Proposal OR160930.4B as authorized by 1024 SE Grand Avenue LLC on February 27, 2017.

The Site is currently improved with a one-story commercial structure totaling approximately 4,500 square feet currently occupied by a 7-Eleven store. According to Multnomah County Assessors, the building was construction in 1920. The Property is identified by Multnomah County as tax lot 1S1E02BC1200 comprising 0.21 acres.

1.0 PURPOSE

The purpose of this investigation is to:

- Assess onsite subsurface conditions to evaluate if there has been a release of hazardous substances; determine the nature and extent of the impacts to soil, soil vapor and groundwater, if any; and evaluate potential threats from these releases to the beneficial use of the Site.
- Develop a Conceptual Site Model (CSM).
- Complete a Beneficial Land and Water Use determination (BLWUD).
- Develop a list of Contaminants of Interest (COI) based upon the characteristics of the identified release.
- Compare Contaminants of Potential Concern (COPC) concentrations to the ODEQ's Risk Based Concentrations (RBCs) for potentially complete exposure pathways.

This investigation was completed in general accordance with ASTM E1903-11, Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process. These methodologies are described as representing good commercial and customary practice for conducting a Phase II ESA of a property for the purpose of evaluating recognized environmental conditions.

The information provided in this report describes the work performed and provides documentation of the data and evaluation that constitutes the factual findings of the investigation.

2.0 BACKGROUND INFORMATION

Point Source performed a Phase I ESA (Project No. OR160930-4 dated October 27, 2016) on 1024 SE Grand Avenue, Portland, Oregon 97214 in general conformance with the scope and limitations of ASTM Practice E 1527-13. The report was prepared for Caldwell Properties, LLC. Below is an excerpt from the Phase I ESA report.

This assessment revealed environmental concerns in connection with the Site.

- Sanborn Maps have the Site building labeled as Auto Repairing & Top Shop in 1924, Used Cars in 1950 and Auto Sales & Service in 1969. The historical use of the Site as an automobile repairing facility from 1924 through 1969 may have resulted in an adverse environmental impact to the Site.
- The north adjoining property (1006 SE Grand Avenue) was occupied by Allyn's Cleaning and Dyeing

from 1935 to 1960. The 1924 and 1950 Sanborn Maps indicated that the dry cleaning room was located immediately abutting the northeast side of the Site building. Based on Sanborn Maps, the dry cleaning facility was replaced by the current drive and parking lot by 1969. Dry cleaners are known to use hazardous solvents in the cleaning process which often are released to the subsurface environment under normal operating conditions. This facility is located in a hydrogeologically cross gradient location relative to the Site. Adverse environmental impact to the Site from this site may have occurred.

- The east adjoining property (1025 SE 6th Avenue/521 SE Taylor Street) is listed under the names Home Service Co. in 1935, Homnie Service Garage in 1940 and Japanese Auto Repair from 2001 through 2012. Sanborn Maps and city directories reviewed by Point Source Solutions also indicated that this property is currently and has historically been occupied by auto repair businesses. This property is located in a hydrogeologically up gradient location relative to the Site. The historical use of this property as an auto repair facility as noted in city directories and the Sanborn Maps may have resulted in an adverse environmental impact to the Site.

As a result of these findings, Point Source conducted a Phase II ESA (Project Number OR160930-4A dated February 21, 2017) on the Property.

Soil samples were collected from four boring locations.

Soil Borings SB15 and SB17 were advanced using a geoprobe Macrocore sampler with a 4 foot disposable acetate liner, which was advanced by a truck-mounted direct push drill rig using 4 foot long by 1.25 inch diameter drill rods. The sampler was driven into the subsurface to allow undisturbed soil to enter the open sampler barrel and retrieved in 4-foot intervals to recover the soil-filled liners.

Soil Borings SB16 and SB18 were advanced using a geoprobe large bore sampler with an acetate liner, which was advanced by an electric jack hammer using 2, 3, and 4 foot long by 1.25 inch diameter drill rods. The sampler was driven into the subsurface to allow undisturbed soil to enter the open sampler barrel and retrieved in 2-foot intervals to recover the soil-filled liners.

- Borings SB15 and SB17 were advanced in the 7-Eleven parking lot. Borings were advanced to a depth of 12.0 feet below ground surface (bgs). Soil was screened continuously and no olfactory or visual indication of petroleum hydrocarbon contamination was noted in samples collected from these borings. Field screening with a photoionization detector (PID) did not indicate VOC readings above background levels for the area.

- SB16 was advanced in the northeast corner of the storeroom located in the east half of the 7-Eleven building. This boring was advanced to hard refusal on a tight confining layer located at 16.5 feet bgs. **Stained soil with a solvent odor was observed from 9.0 feet to 16.0 feet bgs. Field screening with a PID indicated VOC readings as high as 1,192 parts per million (ppm). Soil staining abruptly terminated at the confining layer encountered slightly above the refusal depth**. **Unstained soil from 16.0 to 16.5 feet bgs retained a slight odor of solvents.** No groundwater was encountered in this boring.

- SB18 was advanced in the storeroom approximately 15 feet south of SB16. This boring was advanced to refusal on a tight confining layer located at 17.0 feet bgs. **Soil with a light solvent odor was observed starting at 9.0 feet bgs. Soil staining was observed in a narrow band from 9.5 to 10.0 feet bgs. No staining was observed from 11.0 to 14.0 feet bgs, however soils within this**

interval retained a light solvent odor. Stained soils with a heavy odor of solvents were observed again starting at 13.0 feet bgs, and continued to the refusal depth of 17.0 feet bgs. Contamination at refusal appeared moderate when compared to heavy contamination observed in earlier runs. Field screening with a PID indicated VOC readings as high as 1,508 ppm. No groundwater was encountered in this boring**.**

Sample analytical results from this investigation are included in Table 1 below.

3.0 SOILS, GEOLOGY & GROUNDWATER CHARACTERISTICS

The Site is situated in the Willamette Valley (Orr, Orr, Baldwin, 1992). Sediments collected in this area record multiple Ice Age floods that originated in Montana, poured through the Cascades via the Columbia River, and backed up in the valley before eventually draining to the Pacific Ocean. The Property is located at approximately 55 feet above mean sea level. No bedrock was observed in the vicinity of the Property. The estimated depth to bedrock at the Property is greater than 200 feet below the ground surface.

Site soils are mapped predominantly as Urban Land. Urban land is soil that has been disturbed and modified by streets, buildings and other structures.

According to a well log search conducted on the Oregon Water Resources Department (OWRD) website, no significant shallow groundwater resources have been encountered in wells advanced in close proximity of the Property. Borings advanced on the north adjoining property encountered groundwater at approximately 30 to 32 feet below ground surface (bgs).

Based on a review of the Portland Quadrangle 7.5 minute series topographic map, the inferred groundwater flow at the Property is to the west toward the Willamette River (approximately 0.36 miles to the west at its closest point). According to the USEPA Ground Water Handbook, Vol.1 Ground Water and Contamination, September 1990, the water table typically conforms to surface topography.

4.0 SCOPE OF WORK

The purpose of the subsurface environmental investigation is to collect soil, soil vapor and groundwater samples (if encountered) on the Site to confirm the presence or absence of contaminants related to past use of the Site and support closure of the release with the ODEQ.

4.1 Areas of Potential Concern, Proposed Borings and Analysis

Based upon the past and current configuration and use of the Site, the following areas were identified for investigation. Boring locations are depicted on the attached Boring Location Diagram (Figure 4).

Area of Potential Concern	Borings
Impacted soil and potential soil vapor associated with the release identified in February 2017. Potential for soil being impacted as a result of the north adjoining property (former dry cleaning plant.	SB19 – SB25

Boring	Media	Analytical Methods	Detection Limit
SB19 – SB25	Soil	NWTPH-Gx, EPA 8260 (VOCs)	RBCs for Vapor Intrusion in an Occupational Setting or Less
SS2	Sub-slab Vapor	EPA TO15 (Gx/VOCs)	RBCs for Vapor Intrusion in an Occupational Setting or Less

Task 1 – Project Coordination

Point Source performed a site visit to determine specific sampling locations and confirm utility locations, develop a site specific health and safety plan for the proposed sampling activities and coordinate the efforts of subcontracted services including geophysical surveys, and analytical laboratory services.

Task 2 – Geophysical Investigation

Ground penetrating radar (GPR) and handheld metal detectors were used by Pacific Geophysics to conduct a mapping survey and to clear proposed boring locations.

Task 3 – Subsurface Investigation

Point Source advanced borings on the Site as follows:

- Point Source advanced seven direct push borings including three borings (SB19, SB20 and SB21) on the Site and four borings (SB22, SB23, SB24 and SB25) on the east adjoining property which shares ownership with the Site for the purpose of further screening and characterizing the extent of contaminated soil identified in February 2017.

- Point Source collected one sub-slab vapor sample in the 7-Eleven storeroom.

Task 4 – Analytical Services

Point Source collected soil samples for analysis by NWTPH-Gx and EPA 8260 (Volatile Organic Compounds).

Point Source collected the sub-slab vapor sample for analysis by EPA TO-15.

4.2 UTILITY LOCATING

Prior to initiating the field activities, Oregon law requires that, at least 48 hours prior to the initiation of any subsurface work (drilling, backhoe operation, etc.), a utility inspection be performed at the Site. This inspection consists of the marking of underground utility locations by authorized utility locating personnel. The utility inspection was performed prior to the drilling activities.

The ticket number for the utility inspection is 16310898.

4.3 HEALTH AND SAFETY PLAN

A written site specific Safety Plan was read by field personnel. A toolbox safety meeting was conducted at the site prior to the commencement of the fieldwork. Topics included potential exposure to contaminants of interest, personal protective equipment (drilling and media contact), location of first aid kit, and location/directions to closest emergency medical facility.

5.0 SAMPLING METHODOLOGY and QA/QC

5.1 Soil Samples

Soil Borings SB15, SB17, and SB21 were advanced using Geoprobe macro tooling with an acetate liner, driven by a truck mounted probe. Soil samples were obtained continuously from the surface using a 4-foot-long, 2.25-inch diameter sample tool lined with an acetate sleeve. The sampling tool was driven in 4-foot intervals until the target depth was achieved.

Soil Borings SB16, SB18 through SB20, and SB22 through SB25 (interior borings) were advanced using a geoprobe large bore sampler with an acetate liner, which was advanced by an electric jack hammer using 2, 3, and 4 foot long by 1.25 inch diameter drill rods. The sampler was driven into the subsurface to allow undisturbed soil to enter the open sampler barrel and retrieved in 2-foot intervals to recover the soil-filled liners.

Soils were field-screened using visual, sheen, and olfactory observations, and for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). Headspace vapor screening was conducted on representative samples placed in a sealed plastic bag. The tip of a PID was inserted into a hole in the bag, and the presence of VOCs was measured. Readings are collected in parts per million (ppm). Notes on visual appearance, odor, and PID readings were recorded on the field boring logs.

Soil samples were collected in 4-ounce glassware with Teflon-lined lids. Each sample was labeled for identification and stored in an iced cooler. Soil cuttings generated during the advancement of the borings were visually inspected for discoloration, and monitored for odors.

5.2 Groundwater Samples

Groundwater was not encountered to a maximum explored depth of 18.0 feet bgs.

5.3 Soil Gas Samples

The sub-slab soil gas probe consisted of a pre-fabricated stainless steel VaporPin manually inserted into a 5/8-inch diameter hole drilled within the concrete building slab using a rotary hammer hand drill. An approximately 1-inch void was drilled beneath the concrete slab. Following placement of the VaporPin, the sample point was sealed and allowed to equilibrate for 20-minutes, followed by a purge of at least three dead volumes. A sealed water dam was placed around the VaporPin during purging and sampling to act as a primary leak-check. No water loss was observed in the dam, indicating a complete seal between the VaporPin and concrete slab. Paper towels saturated with 2-Propanol were placed around the vapor pin and equipment fittings during sample collection as a secondary leak-check.

Soil vapor samples were collected in 1 liter sample canisters provided by Freidman & Bruya Environmental Chemists. The sample canister, Teflon tubing, vacuum gauge, and flow rate orifice apparatus were connected in the sample string. Vacuum gauge and sample canister vacuum were checked before initiating sample collection. A clean pair of disposable nitrile gloves was worn during assembly of the sample train and collection of the soil vapor sample.

All tooling was decontaminated in a water and detergent solution and rinsed in tap water between samples and boring locations. Samples were placed in laboratory provided containers. Upon collection, all samples were chilled. One transport blank was prepared.

Chain of Custody was maintained for all samples.

6.0 SUBSURFACE INVESTIGATION

6.1 Sampling

The subsurface investigation was conducted on March 14-22, 2017. During the investigation, soil borings were advanced by Point Source Solutions.

- Boring SB19 was completed to hard refusal at 17.5 feet bgs in the southeast corner of the 7-Eleven storeroom, approximately 12 feet south of SB18. Native soil consisting of clayey silt, sandy silt, silt, and fine sand was encountered in the boring. Coarse sand and gravel was noted at the refusal depth of 17.5 feet. Soil samples were collected at depths of 10.0 feet bgs and 17.5 feet bgs at this location. Groundwater not encountered in this boring. **Indications of light to moderate contamination were noted in bands at several depths between 9.0 and 16.0 feet bgs in the continuous soil cores collected from this boring**.

- Boring SB20 was completed to progress refusal at 18.0 feet bgs in the northwest corner of the 7-Eleven storeroom against the wall separating the store room from the sales floor. Native soil consisting of clayey silt, and silt was encountered in the boring. Soil samples were collected at depths of 10.0 feet bgs and 18.0 feet bgs at this location. Groundwater not encountered in this boring. **Indications of heavy contamination were noted between 9.0 and 16.0 feet bgs in the continuous soil cores collected from this boring**. **Field screening of soils between 16.0 and 18.0 feet bgs indicated a light odor of contamination and no staining.**

- Boring SB21 was completed to 16.0 feet bgs outside the 7-Eleven building in the parking lot. Shallow soils consisted of urban fill, including asphalt, pulverized brick, and mortar. Native soils consisted of clayey silt. A soil sample was collected from a depth of 16.0 feet at this location. Groundwater was not encountered at this boring. **No indications of contamination were noted in the continuous soil cores collected from this boring.**

- Boring SB22 was completed to hard refusal at 13.8 feet bgs in the German Automotive building (east adjacent to the 7-Eleven property). Native soil consisting of silt, sandy silt, and fine sand was encountered in the boring. A soil sample was collected at a depth of 13.8 feet bgs at this location. Groundwater not encountered in this boring. **Indications of heavy contamination were noted between 12.2 and 13.8 feet bgs in the continuous soil cores collected from this boring**.

- Boring SB23 was completed to hard refusal at 13.5 feet bgs in the German Automotive building, approximately 14 feet northeast of SB22. Native soil consisting of silt, clayey silt, sandy silt, and fine sand was encountered in the boring. A soil sample was collected at a depth of 13.5 feet bgs at this location. Groundwater not encountered in this boring. **Indications of heavy contamination were noted between 12.0 and 13.5 feet bgs in the continuous soil cores collected from this boring**.

- Boring SB24 was completed to hard refusal at 13.7 feet bgs in the northwest corner of the German Automotive building. Native soil consisting of silt, clayey silt, sandy silt, and fine sand was encountered in the boring. A soil sample was collected at a depth of 13.5 feet bgs at this location. Groundwater not encountered in this boring. **Indications of heavy contamination were noted between 4.5 and 13.7 feet bgs in the continuous soil cores collected from this boring**.

- Boring SB25 was completed to hard refusal at 13.7 feet bgs in the German Automotive building, approximately 13 feet east of SB23. Native soil consisting of gravel, silt, silty sand, coarse and medium sand was encountered in the boring. A soil sample was collected at a depth of 14.0 feet bgs at this location. Groundwater not encountered in this boring. **No indications of contamination were noted in the continuous soil cores collected from this boring.**

Sub-slab vapor sampling was conducted on March, 14 2017.

- Sub-Slab 2 (SS2) was collected in the 7-eleven store storeroom.

The sample locations are illustrated on Figure 4. Boring logs are presented in Appendix I.

6.2 Laboratory Analytical Results

Soil samples collected between March 14 and 22, 2016 were transported under chain of custody to Apex Labs, Inc. for analysis.

- Ten soil samples were analyzed by NWTPH-Gx for gasoline range petroleum hydrocarbons and EPA Method 8260B for volatile organic compounds.

Sub-slab vapor samples collected on March 14, 2017 were transported under chain of custody to Friedman & Bruya Environmental Chemists for analysis.

- One sample was analyzed by EPA Method TO-15. EPA Method TO-15 is used for the analysis of volatile organic compounds in air using a 1-liter Summa canister.

The sample analytical results including the results from the February 2017 investigation and March 2017 investigation are summarized in Tables 1 and 2 below.

The laboratory analytical reports and chain-of-custody forms are included as Appendix II.

TABLE 1- SOIL SAMPLES

LABORATORY ANALYTICAL RESULTS – NWTPH-GX/DX/ VOCS/LEAD (MG/KG)

SAMPLE	DEPTH	DATE	LOCATION	NWTPH-GX/DX/HO	VOCs	TCLP LEAD
POINT SOURCE FEBRUARY 2017 INVESTIGATION						
SB15-S1	12.0'	1/06/17	7-Eleven Parking Lot – East	not detected	not detected	not analyzed
SB16-S1	11.0'	1/06/17	Store Room – Northeast Corner	**GX - 21,800**	**benzene - 1.27** **ethylbenzene – 17.9** **naphthalene – 13.8** **124 TMB - 152** **135 TMB - 44.0** **xylenes - 59.4**	not detected
SB16-S2	16.5'	1/06/17	Store Room – Northeast Corner – Vertical Delineation Sample	**GX - 79**	**124 TMB - .410**	not analyzed
SB17-S1	12.0'	1/06/17	7-Eleven Parking Lot – West	not detected	not detected	not analyzed
SB18-S1	9.5'	1/06/17	Store Room – South lateral Sample	**GX - 73**	**124 TMB - .478**	not analyzed
SB18-S2	17.0'	1/06/17	Store Room – South lateral – Vertical Delineation Sample	**GX - 6,540**	**ethylbenzene - .442** **naphthalene - 3.76** **124 TMB - 48.3** **135 TMB - 17.4** **xylenes – 6.8**	not analyzed
POINT SOURCE MARCH 2017 INVESTIGATION						
SB19-S1	10.0'	03/14/17	Store Room – South lateral	not detected	**124 TMB - .103**	not analyzed
SB19-S2	17.5'	03/14/17	Store Room – South lateral – Vertical Delineation Sample	not detected	not detected	not analyzed
SB20-S1	10.0'	03/14/17	Store Room – West lateral	**GX - 15,000**	**ethylbenzene - 1.82** **124 TMB - 99.6** **135 TMB - 33.7** **xylenes - 18.61**	not analyzed

TABLE 1- SOIL SAMPLES
LABORATORY ANALYTICAL RESULTS – NWTPH-GX/DX/ VOCS/LEAD (MG/KG)

SAMPLE	DEPTH	DATE	LOCATION	NWTPH-GX/DX/HO	VOCs	TCLP LEAD
SB20-S2	18.0'	03/14/17	Store Room – West lateral – Vertical Delineation Sample	not detected	not detected	not analyzed
SB21-S1	16.0'	03/14/17	7-Eleven Parking Lot – South lateral	not detected	not detected	not analyzed
SB22-S1	12.0'	03/22/17	German Automotive – South lateral	GX - 13,800	ethylbenzene - 2.48 naphthalene - 5.88 TCE – 2.07 124 TMB - 79.0 135 TMB - 5.25 xylenes – 15.26	not analyzed
SB23-S1	12.0'	03/22/17	German Automotive – East lateral	GX - 15,000	benzene - .338 ethylbenzene - 17.6 naphthalene - 27.9 PCE - 1.43 TCE - 12.9 124 TMB - 299 135 TMB - 103 xylenes - 80.1	not analyzed
SB24-S1	4.5'	03/22/17	German Automotive – North lateral	GX - 18,300	benzene - .102 ethylbenzene - 8.18 naphthalene - 37.4 TCE - 4.91 124 TMB - 325 135 TMB - 139 xylenes - 62.1	not analyzed
SB24-S2	13.7'	03/22/17	German Automotive – North lateral – Vertical Delineation Sample	GX - 114	benzene - .099 ethylbenzene - .06 TCE -.095 124 TMB - .836 135 TMB - .29	not analyzed
SB25-S1	14.0'	03/22/17	German Automotive – East lateral – Vertical Delineation Sample	not detected	TCE -.047	not analyzed

Table 1 Notes:

Concentrations are only presented for regulated VOCs. Various VOCs were detected in these samples without corresponding soil vapor RBCs.

Apex reported that "The samples carbon ranges are consistent with Stoddard Solvents on the chromatograph".

TABLE 2- SUB-SLAB SOIL VAPOR SAMPLE
LABORATORY ANALYTICAL RESULTS –VOCS/GAS (C4-C12 HYDROCARBONS) (UG/M^3)

Sample	Depth	Date	Location	VOCS BY EPA TO-15	GX Range
Sub-slab 2 (SS2)	0.5'	03/14/17	7-Eleven Storeroom Floor	Toluene – 5.2 PCE – 22.0 Total Xylenes – 11.7 Naphthalene – 2.6	not detected

Table 2 Notes:

Concentrations are only presented for regulated VOCs. Various VOCs were detected in these samples without corresponding soil vapor RBCs.

Concentrations of 2-proponol (<43.0 ug/m^3) used as a leak detector gas are not indicative of significant sample breakthrough.

6.3 Quality Assurance/Quality Control Review

Laboratory QA/QC measures were performed through data validation of available analytical data generated as part of these sampling events. Data validation considered the following:

- Method Detection and/or Reporting Limits
- Laboratory Matrix Blanks
- Sample Holding Times
- Surrogate and Matrix Spike Recoveries, and
- Laboratory Duplicate Analysis Results

The labs did not report any qualifiers, which would indicate problems with the sample results. According to the lab reports, all analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Exceptions are qualified in the analytical report. In cases where there is insufficient sample material provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

7.0 NATURE AND EXTENT OF CONTAMINATION

7.1 Primary Source(s) of Contamination

The primary sources of contamination include the following.

- A release of Stoddard Solvent and associated VOCs to soil. This may have been a release related to the past use of a north abutting dry cleaner which occupied the area that is now a driveway.

7.1.1 Soil

Gasoline-range petroleum hydrocarbons (Stoddard Solvent) as well as various VOCs were detected in soil samples (4.5 to 17 feet bgs) collected in the northeast portion of the 1024 SE Grand Avenue Site building and the northwest portion of the 521 SE Taylor Street Site building. Based on field screening (visual observation and PID) conducted during the investigation, contamination is not expected to be present in shallow (0-3 feet bgs) soils. Based on the analytical data identifying the gasoline range hydrocarbons as Stoddard Solvent, it is likely that the source of contamination is the former dry cleaning plant on the north abutting property.

Point Source estimates the quantity of gasoline-range petroleum hydrocarbon impacted soil present on the Site to be between 1,000 and 1,100 cubic yards based on a 6 foot lens of contaminated material spread over an aerial extent of 4,600 square feet.

7.1.2 Groundwater

Groundwater was not encountered to a maximum explored depth of 18.0 feet bgs.

7.1.3 Soil Vapor

Various VOCs including toluene, naphthalene, tetrachloroethene (PCE) and total xylenes were detected in the sub-slab vapor sample collected in the 7-Eleven storeroom.

7.2 Contaminants of Interest/Contaminants of Potential Concern

To identify compounds detected in site soils and groundwater that are most likely to be of concern to human health, detected concentrations of these contaminants were compared to a series of risk-based screening criteria that cover the range of potential human activities that may be practiced on the Property currently or in the future.

Compounds with detected concentrations were identified as being COIs. It should be noted that the identification of COIs does not indicate that an unacceptable risk or that a threat exists. Also, COI identification does not necessarily indicate that remediation of a specific environmental media is required. Screening criteria are purposely conservative so chemicals that may contribute to site risk can be further evaluated. The COIs for the Property include petroleum hydrocarbons (gas and oil), metals, VOCs, PAHs and PCBs detected in soil, sub-slab vapor and groundwater samples.

CONTAMINANTS OF INTEREST			
Contaminant	**Soil Max Concentration mg/kg**	**Depth**	**Soil Vapor Max Concentration ug/m3**
TPH-GX (Stoddard Solvent)	21,800	11.0'	Not Detected
Benzene	1.27	11.0'	Not Detected
Ethylbenzene	17.9	11.0'	Not Detected
Naphthalene	37.4	4.5'	2.6
Tetrachloroethene (PCE)	1.43	12.0'	22
Trichloroethene (TCE)	12.9	12.0'	Not Detected
1,2,4 Trimethylbenzene	325	4.5'	Not Detected
1,3,5 Trimethylbenzene	139	4.5'	Not Detected
Toluene	Not Detected	NA	5.2
Total Xylenes	80.1	12.0'	11.7
TCLP Lead	Not Detected	NA	NA

COIs that have concentrations less than their RBCs can be screened out. Constituents that remain after the screening are COPCs.

The COPCs have been carried forward for the risk screening discussed below.

8.0 BENEFICIAL LAND AND WATER USE DETERMINATION

The purpose of the BLWUD is to collect and document information regarding the current and reasonably likely future beneficial uses of land and water in the locality of the facility (LOF). Beneficial use determinations provide the basis for the development of exposure scenarios discussed later in this report. The BLWUD was completed in accordance with the ODEQ's Guidance for Conducting Beneficial Water Use Determinations at Environmental Cleanup Sites (ODEQ, 1998) and Guidance for Consideration of Land Use (ODEQ, 1998).

8.1 Locality of Facility

The LOF is defined by ODEQ as any point where human or ecological receptors may reasonably come into contact with site-related contaminants. Point Source assumes that the LOF extends to the Site boundaries to the north, west and south and include the east adjoining property (521 SE Taylor Street/

TL 1S1E02BC01100).

8.2 Summary of Water Use

The surrounding properties are all provided water by the City of Portland. According to the City of Portland, the main water supply for the district is the Bull Run Watershed (primary) and Columbia South Shore Well Field (secondary). Drinking water is stored in two reservoirs with up to 9.9 million gallons of usable water in storage. Based on our review of the available data information from the City of Portland, the Property and immediately surrounding areas are connected to the municipal water supply system.

The Property (TL 1S1E02BC1200) is located in the NW ¼ of the SE ¼ of Section 02, T.1S, R.1E. All well log records available from the Oregon Water Resources Department (OWRD) for Sections 02, 03 and 11 of T.1S, R.1E were reviewed.

Well ID	Owner	Address	Distance (FT)	Use	H2O
SECTION 02					
M2711	Pacific NW Bell	421 SW Oak Street	NA	Other	70’
M2712	NW Natural Gas	SE 8th Ave. & SW Taylor St.	NA	Test	Not Noted
M2713	Western Dairy Products	Not Noted	NA	Industrial	37’
M2714	Arden Farms	617 SE Main Street	NA	Industrial	Not Noted
M2715	Lewis Brothers	1005 SE Washington Street	NA	Industrial	38’
M2727	Arden Farms	617 SE Main Street	NA	Manufacturing	62’
M95922	ODOT	2339 SE Grand Avenue	NA	Abandon	
M115047-M115049	City of Portland	NE 6th Ave. & NE Alder St.	NA	Dewatering	18’
M115311-M115314	City of Portland	NE 6th Ave. & NE Alder St.	NA	Abandon	
SECTION 03					
M2716	NW Ice and Cold Storage	68 SE Washington Street	NA	Industrial	15’
M2717	Eastside Plating Works	310 SE Stephens Street	NA	Industrial	53’
M2718	NW Ice and Cold Storage	68 SE Washington Street	NA	Industrial	15’
M2719	NW Natural Gas	SW 1st Ave. & SW Grant St.	NA	Test	None Noted
M2720	NW Ice and Cold Storage	68 SE Washington Street	NA	Abandon	
M2721	NW Ice and Cold Storage	68 SE Washington Street	NA	Industrial	None Noted
M2722	Portland Lumber Co.	None Noted	NA	Industrial	None Noted
M2723	Pacific NW Bell	238 SW 5th Avenue	NA	Abandon	
M2724	Paramount Theater	None Noted	NA	Industrial	None Noted
M2725	Fox Theater	837 SW Broadway	NA	Industrial	None Noted
M2726	Pacific 1st Federal S&L	711 SW Alder Street	NA	Industrial	230’
M2728	Pacific Power & Light	920 SW 6th Avenue	NA	Industrial	34’

Well ID	Owner	Address	Distance (FT)	Use	H2O
M2729	Pacific 1st Federal S&L	801 6th Avenue	NA	Industrial	48’
M2730	Pacific Service Building	None Noted	NA	Industrial	55’
M2732	Pacific Service Building	None Noted	NA	Industrial	53’
M2733	Ladd Building	None Noted	NA	Industrial	52’
M2734	The Oregonian	1320 SW Broadway	NA	Industrial	64’
M2735	The Oregonian	1320 SW Broadway	NA	Industrial	95’
M2737	The Oregonian	1320 SW Broadway	NA	Industrial	86’
M2738	Boiler Maker’s Assoc.	1313 SW 3rd Avenue	NA	Industrial	56’
M2739	Equitable S&L	None Noted	NA	Other	91’
M2740	Portland State College	724 SW Harrison Street	NA	Other	144’
M2741	Portland General Electric	621 SW Alder Street	NA	Industrial	33’
M2742	Western Condensing	220 SW Harrison Street	NA	Industrial	None Noted
M2743	Pacific NW Bell	509 SW Oak Street	NA	Other	120’
M2744	Pacific NW Bell	509 SW Oak Street	NA	Other	130’
M2745	COP-City Auditorium	None Noted	NA	Other	84’
M004	Harold Coe	120 SE Clay Street	NA	Industrial	28’
M4852	Portland Parks	Waterfront Park	NA	Irrigation	23’
M75285	Portland State University	900 SW 4th Avenue	NA	Industrial	133’
M88931-M88932	Oregon DEQ	SE 3rd Ave & Washington St	NA	Dewatering	27’
M89361	COP BES	SE 3rd Ave & Washington St	NA	Abandon	
M89364	COP BES	SE 3rd Ave & Washington St	NA	Abandon	
M94412	COP BES	SE Alder St & SE MLK Blvd.	NA	Dewatering	38’
M98527	Park Lane Investors	811 SW 6th Avenue	NA	Abandon	
M115559-M115562	Killian Pacific	1510 SE Water Street	NA	Dewatering	5’
M118308-M118312	Killian Pacific	1510 SE Water Street	NA	Abandon	
M120433	Urban Renaissance	1320 SW Broadway	NA	Abandon	
M120446	Urban Renaissance	1320 SW Broadway	NA	Abandon	
M120447	Urban Renaissance	1320 SW Broadway	NA	Abandon	
M123716	Killian Pacific	120 SE Clay Street	NA	Abandon	
SECTION 11					
M2770	Darigold	2720 SE 6th Avenue	NA	Industrial	49’
M2771	Libby, McNeill, Libby	3800 SE 22nd Avenue	NA	Manufacturing	21’

Well ID	Owner	Address	Distance (FT)	Use	H2O
M2772	Libby, McNeill, Libby	3800 SE 22nd Avenue	NA	Industrial	21'
M2777	NW Natural Gas	SE 18th Ave. & SE Clinton St.	NA	Test	None Noted
M2778	Irwin Hodsen	2838 SE 9th Avenue	NA	Industrial	24'
M2779	Pemco	SE 26th Ave. & SE Powell St.	NA	Other	None Noted
M2780	Southern Pacific RR	None Noted	NA	Industrial	21'
M2781	Dairy Cooperative Assoc.	1313 E 12th Avenue	NA	Manufacturing	None Noted
M61986	Fred Meyer	3800 SE 22nd Avenue	NA	Abandon	
M101101	Cyrk Building LLC	2002 SE Clinton Street	NA	LTGT	24'
M109770-M109771	Tri-Met	1509 SE 17th Avenue	NA	Dewatering	22'
M110677-M110679	Tri-Met	1509 SE 17th Avenue	NA	Dewatering	40'
M112318	Tri-Met	1509 SE 17th Avenue	NA	Abandon	
M112434-M112436	Tri-Met	1509 SE 17th Avenue	NA	Abandon	
M112985-M112987	Tri-Met	1509 SE 17th Avenue	NA	Abandon	
M119791	Darigold	2720 SE 6th Avenue	NA	Abandon	

Research of well logs filed with the OWRD revealed no drinking water supply wells within 1000 feet of the Property. Therefore no copies of well logs are included.

Copies of resource protection well logs from the north adjoining property are included in Appendix III.

8.3 Summary of Land Use

The current zoning of 1024 SE Grand Avenue is Central Employment (EX). EX zoning allows mixed-uses and is intended for areas in the center of the City that have predominantly industrial type development. The intent of the zone is to allow industrial, business, and service uses which need a central location. Residential uses are allowed, but are not intended to predominate or set development standards for other uses in the area. The development standards are intended to allow new development which is similar in character to existing development.

The current zoning of 521 SE Taylor Street (east adjoining property) is General Industrial 1 (IG1). IG1 zoning provides areas where most industrial uses may locate, while other uses are restricted to prevent potential conflicts and to preserve land for industry. The development standards for each zone are intended to allow new development which is similar in character to existing development. The intent is to promote viable and attractive industrial areas.

Based on the BLWUD, development of the Site for commercial use (current use) is allowed.

The adjoining properties are zoned EX and General Industrial 1 (IG1), however the Property to the east across SE 6th Avenue (609 SE Taylor Street) which is zoned IG1 is occupied by apartments. The distance from the east edge of the soil plume discussed in this report to the residential property is approximately

100'.

9.0 CONCEPTUAL SITE MODEL

A CSM defines the potentially complete exposure pathways through which human or ecological receptors may be exposed to site contaminants under current or anticipated future land use conditions. A discussion of Site geology and hydrogeology, potential contaminant sources, and the nature and extent of contamination are presented above. An evaluation of current and reasonably likely future receptor-exposure pathway analysis is presented below.

A Conceptual Site Model was developed for the Site and is included as Figure 6 of this report.

The Summary of the Conceptual Site Model, which includes the reasoning for accepting or rejecting exposure scenarios, is included as Figure 7.

9.1 Potential Human Receptors

Potential receptors are those individuals who might be likely exposed to the COIs under current and reasonably likely future land-use conditions. Current land use at the site and surrounding areas is zoned EX and IG1, however the Property to the east across SE 6th Avenue (609 SE Taylor Street) is occupied by apartments. The distance from the east edge of the soil plume discussed in this report to the residential property is approximately 100 feet. Future development of the site is expected to be for commercial/retail purposes. Current and potential human receptors that have been identified in the risk-based screening include the following:

- Adults in the occupational scenario (current Property use);
- Adults in the construction/excavation worker scenario; and,
- Future residential occupants on and off site.

9.1.1 Exposure Pathways for Soil

The following summarizes the potential and/or complete exposure pathways for soil.

- Soil Ingestion, Dermal Contact, and Inhalation – These exposure pathways are considered potentially complete for future construction and excavation workers only. Underground utilities may be modified in the future within the LOF making it possible that future excavation and construction workers could be exposed to Site contamination during utility maintenance and construction activities.
- Volatilization to Outdoor Air – This pathway is considered potentially complete for current on-site occupational receptors, current adjoining occupational receptors, and future on-site and adjoining residential/urban residential receptors.
- Vapor Intrusion into Buildings – This pathway is considered potentially complete for current on-site occupational receptors, current adjoining occupational receptors, and future on-site and adjoining residential/urban residential receptors.
- Leaching to Groundwater – This pathway considers soil leaching to groundwater used for tap water. Based upon the results of the Beneficial Water Use Survey, groundwater in the vicinity of the site is not used as a drinking water source.

9.1.2 Exposure Pathways for Groundwater

The following summarizes the potential exposure pathways for groundwater.

- Ingestion and Inhalation from Tap Water – These exposure pathways are considered incomplete because drinking water wells are not located in or near the LOF and the Site and surrounding area receives drinking water from the Bull Run watershed via the City of Portland.

- Volatilization to Outdoor Air – This exposure pathway is considered potentially complete for residential, urban residential and occupational receptors.

- Vapor Intrusion into Buildings – This exposure pathway is considered potentially complete for residential, urban residential and occupational receptors.

- Direct Contact, Groundwater in Excavation – This exposure pathway is considered potentially complete for construction and excavation workers.

9.1.3 Exposure Pathways for Soil Vapor

- None of the detected concentrations in soil vapor samples exceed any of their respective RBCs.

9.2 Potential Ecological Receptors

Ecological receptors on the Property are not anticipated since there is no ecological habitat present within the assumed LOF.

10.0 RISK SCREENING

The COPCs for the Site include gasoline-range petroleum hydrocarbons noted as likely being Stoddard Solvent and various volatile organic compounds including benzene, ethylbenzene, toluene, total xylenes, naphthalene, PCE, TCE, 1,2,4 trimethylbenzene and 1,3,5 trimethylbenzene. Analytical results were compared to ODEQ RBCs (November 2015) for the applicable exposure pathways discussed above.

A summary of COPCs that exceed applicable RBCs is presented below.

CONTAMINANTS OF POTENTIAL CONCERN (COPCs)			
COPC	**Medium**	**Pathway**	**Receptor**
TPH-Gx Stoddard Solvent	Soil	Soil Ingestion, Dermal Contact and Inhalation	Future Construction Worker
		Vapor Intrusion into Buildings	Future residential/urban residential receptors Current adjoining residential receptors
		Volatilization to Outdoor Air	Future residential/urban residential receptors Current adjoining residential receptors
		Leaching to Groundwater	All current and future receptors
	Groundwater	Ingestion and Inhalation from Tapwater	All current and future receptors
Benzene	Soil	Vapor Intrusion into Buildings	Future residential/urban residential receptors Current adjoining residential receptors
		Leaching to Groundwater	Future residential/urban residential receptors Current adjoining residential receptors

CONTAMINANTS OF POTENTIAL CONCERN (COPCs)			
COPC	**Medium**	**Pathway**	**Receptor**
	Groundwater	Ingestion and Inhalation from Tapwater	Future residential receptors Current adjoining residential receptors
Ethylbenzene	Soil	Vapor Intrusion into Buildings	Future residential/urban residential receptors Current adjoining residential receptors
		Leaching to Groundwater	Future residential/urban residential receptors Current adjoining residential receptors
	Groundwater	Ingestion and Inhalation from Tapwater	All current and future receptors
Naphthalene	Soil	Soil Ingestion, Dermal Contact and Inhalation	Future Construction Worker
		Vapor Intrusion into Buildings	Future residential/urban residential receptors Current adjoining residential receptors
		Volatilization to Outdoor Air	Future residential/urban residential receptors Current adjoining residential receptors
		Leaching to Groundwater	All current and future receptors
	Groundwater	Ingestion and Inhalation from Tapwater	All current and future receptors
Tetrachloroethene	Groundwater	Ingestion and Inhalation from Tapwater	Future residential receptors Current adjoining residential receptors
Trichloroethene	Soil	Vapor Intrusion into Buildings	All current and future receptors
		Leaching to Groundwater	All current and future receptors
	Groundwater	Ingestion and Inhalation from Tapwater	All current and future receptors
124 TMB	Soil	Vapor Intrusion into Buildings	All current and future receptors
		Volatilization to Outdoor Air	Future residential/urban residential receptors Current adjoining residential receptors
		Leaching to Groundwater	All current and future receptors
	Groundwater	Ingestion and Inhalation from Tapwater	All current and future receptors
135 TMB	Soil	Leaching to Groundwater	All current and future receptors
	Groundwater	Ingestion and Inhalation from Tapwater	All current and future receptors
Xylenes	Soil	Leaching to Groundwater	Future residential/urban residential receptors Current adjoining residential receptors

10.1 Soil

COPCs detected in soil exceed the following RBCs.

- TPH-Gx in soil levels (highest 21,800 mg/kg) exceed the Soil Ingestion, Dermal Contact and Inhalation RBCs for residential, urban residential, and occupational uses; and construction workers.

  This pathway is considered incomplete for residential, urban residential, and occupational receptors because the impacted soils are not accessible. This pathway is considered complete for

construction workers and will require preparation of a Contaminated Media Management Plan for future development of the Site.

- TPH-Gx in soil levels (highest 21,800 mg/kg) exceed the Vapor Intrusion into Buildings and Volatilization to Outdoor Air RBCs for residential and urban residential use.

  These pathways are considered incomplete because gasoline was not detected in the sub-slab soil vapor sample collected within the building.

- TPH-Gx in soil levels (highest 21,800 mg/kg) exceed Leaching to Groundwater RBCs for residential, urban residential and occupational uses.

  This pathway is considered potentially complete because some of the soil samples collected at the point of equipment refusal (up to 17 feet bgs) contained concentrations of TPH-Gx above the applicable RBCs. The confining layer encountered at this depth, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

  Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling.

- Benzene in soil levels (highest 1.27 mg/kg) exceed the Vapor Intrusion into Buildings RBCs for residential and urban residential use.

  This pathway is considered incomplete because benzene was not detected in the sub-slab soil vapor sample collected within the building.

- Benzene in soil levels (highest 1.27 mg/kg) exceed the Leaching to Groundwater RBCs for residential, urban residential, and occupational use.

  This pathway is considered potentially complete because soil samples collected at depths of up to 13.7 feet bgs contained concentrations of benzene above the applicable RBCs. The confining layer encountered at this depth, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

  Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling.

- Ethylbenzene in soil levels (highest 17.9 mg/kg) exceed the Vapor Intrusion into Buildings RBCs for residential, urban residential and occupational use.

  This pathway is considered incomplete because ethylbenzene was not detected in the sub-slab soil vapor sample collected within the building.

- Ethylbenzene in soil levels (highest 17.9 mg/kg) exceed the Leaching to Groundwater RBCs for residential, urban residential and occupational use.

This pathway is considered potentially complete because soil samples collected at depths of up to 17 feet bgs contained concentrations of ethylbenzene above the applicable RBCs. The confining layer encountered at this depth, however, is likely to act as a barrier to further vertical migration.

Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling..

- Naphthalene in soil levels (highest 37.4 mg/kg) exceed the Soil Ingestion, Dermal Contact and Inhalation RBCs for residential, urban residential, and occupational uses.

  This pathway is considered incomplete because the impacted soils are not accessible. However, preparation of a Contaminated Media Management Plan will be necessary for future development of the Site.

- Naphthalene in soil levels (highest 37.4 mg/kg) exceed the Vapor Intrusion into Buildings and Volatilization to Outdoor Air RBCs for residential and urban residential use.

  These pathways are considered incomplete because naphthalene was detected at a concentration of 2.6 ug/m3 (below the most stringent RBC of 17 ug/m3) in the sub-slab soil vapor sample collected within the building

- Naphthalene in soil levels (highest 37.4 mg/kg) exceed the Leaching to Groundwater RBCs for residential, urban residential, and occupational use.

  This pathway is considered potentially complete because soil samples collected at depths of up to 17 feet bgs contained concentrations of naphthalene above the applicable RBCs. The confining layer encountered at this depth, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

  Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling.

- PCE in soil levels (highest 1.43 mg/kg) exceed the Leaching to Groundwater RBCs for residential use.

  This pathway is considered potentially complete because a single soil sample collected at a depth of 12 feet bgs contained concentrations of PCE above the applicable RBC. The confining layer encountered 13 to 17 feet, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

  Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling.

- TCE in soil levels (highest 12.9 mg/kg) exceed the Soil Ingestion, Dermal Contact and Inhalation

RBCs for residential uses.

This pathway is considered incomplete because the impacted soils are not accessible. However, preparation of a Contaminated Media Management Plan will be necessary for future development of the Site.

- TCE in soil levels (highest 12.9 mg/kg) exceed the Vapor Intrusion into Buildings RBCs for residential, urban residential and occupational use.

  This pathway is considered incomplete because TCE was not detected in the sub-slab soil vapor sample collected within the building

- TCE in soil levels (highest 12.9 mg/kg) exceed the Leaching to Groundwater RBCs for residential, urban residential and occupational use.

  This pathway is considered potentially complete because soil samples collected at depths of up to 12 feet bgs contained concentrations of TCE above the applicable RBCs. The confining layer encountered 13 to 17 feet, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

  Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling.

- 1,2,4-Trimethylbenzene in soil levels (highest 325 mg/kg) exceed the Soil Ingestion, Dermal Contact and Inhalation RBCs for residential and urban residential uses.

  This pathway is considered incomplete because the impacted soils are not accessible. However, preparation of a Contaminated Media Management Plan will be necessary for future development of the Site.

- 1,2,4-Trimethylbenzene in soil levels (highest 325 mg/kg) exceed the Vapor Intrusion into Buildings RBCs for residential, urban residential, and occupational use; and the Volatilization to Outdoor Air RBC for residential and urban residential use.

  These pathways are considered incomplete because 1,2,4-Trimethylbenzene was not detected in the sub-slab soil vapor sample collected within the building.

- 1,2,4-Trimethylbenzene in soil levels (highest 325 mg/kg) exceed the Leaching to Groundwater RBCs for residential, urban residential, and occupational use.

  This pathway is considered potentially complete because soil samples collected at depths of up to 17 feet bgs contained concentrations of 1,2,4-Trimethylbenzene above the applicable RBCs. The confining layer encountered at this depth, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling..

- 1,3,5-Trimethylbenzene in soil levels (highest 139 mg/kg) exceed the Leaching to Groundwater RBCs for residential, urban residential, and occupational use.

  This pathway is considered potentially complete because soil samples collected at depths of up to 12 feet bgs contained concentrations of 1,3,5-Trimethylbenzene above the applicable RBCs. The confining layer encountered at 13 to 17 feet, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

  Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling.

- Total Xylenes in soil levels (highest 80.1 mg/kg) exceed the Leaching to Groundwater RBCs for residential and urban residential, and use.

  This pathway is considered potentially complete because soil samples collected at depths of up to 12 feet bgs contained concentrations of xylenes above the applicable RBCs. The confining layer encountered at 13 to 17 feet, however, is likely to act as a barrier to further vertical migration.

  Furthermore, exposure pathways related to groundwater ingestion have been eliminated based upon the results of the BLWD.

  Exposure pathways related to volatilization from groundwater have been eliminated based upon the results of the sub-slab soil vapor sampling.

10.2 Groundwater

Groundwater was not encountered to a depth of 18 feet below ground surface. Based on the findings of the BLWUD, the use of groundwater at the Site for drinking water purposes is not expected.

Based upon well logs reviewed on the OWRD database from the north adjoining property, depth to first water at the Site is estimated to be in excess of 30 feet below ground surface.

10.3 Soil Vapor

No COPCs were identified.

11.0 FINDINGS

The investigation, field screening of samples, and laboratory analytical results indicated the following:

- Point Source estimates the quantity of gasoline-range petroleum hydrocarbon (identified as Stoddard Solvent by Apex Labs) and associated VOCs impacted soil present beneath the Site to be between 1,000 and 1,100 cubic yards based on a 6 foot lens of contaminated material spread over an aerial extent of 4,600 square feet.

12.0 CONCLUSIONS

Based on the BLWUD and the CSM, and upon the soil, groundwater, and soil vapor sampling results; none of the COPCs exceed the RBCs for applicable exposure scenarios. Based upon the laboratory report and the history of the site and adjoining properties, it appears likely that the source of the impact is the former dry cleaning plant that once occupied what is now the north adjoining property.

No further corrective action is recommended at this time.

Development of a Contaminated Media Management Plan will be required to assure appropriate management of contaminated soil should redevelopment of the Site occur as the contaminated soils will require specialized handling and disposal.

This report should be submitted to the Oregon Department of Environmental Quality with a request for closure.

This report is intended for the exclusive use of 1024 SE Grand Avenue LLC or entities specified by 1024 SE Grand Avenue LLC. This report and findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor relied upon by any other party, in whole or in part without prior written consent of Point Source.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Prepared by:
Gil Cobb, Registered Geologist (Oregon #G1440)

Reviewed By:
Jeff Jackman, Environmental Professional

Expires 12/31/2017

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FIGURES

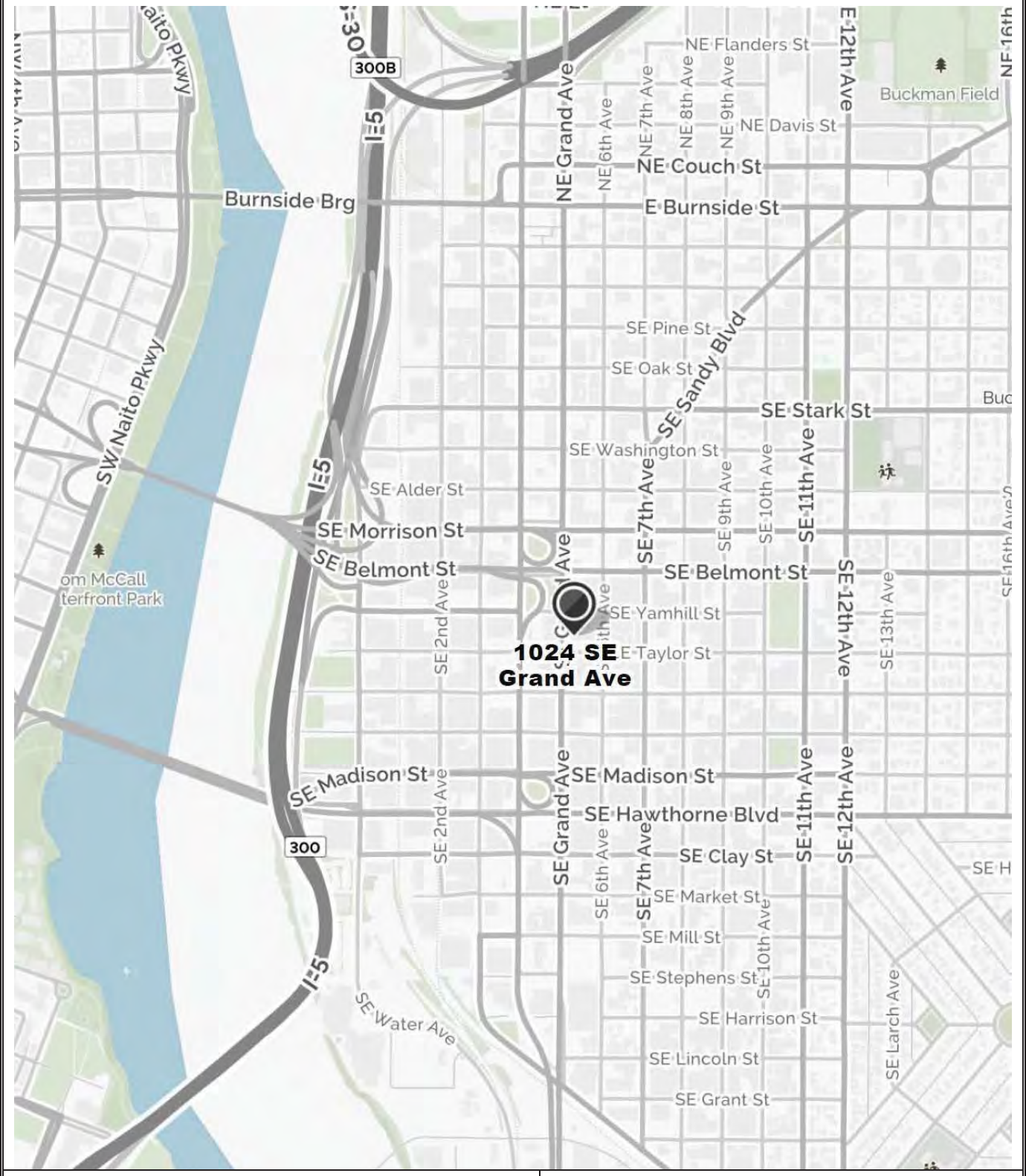

FIGURE 1: SITE LOCATION MAP

Map from Google Maps N↑

point source solutions, llc
ENGINEERING • ENVIRONMENTAL • SAFETY

Site Name: 7-Eleven Property
1024 SE Grand Avenue
Portland, Oregon, 97214

Project Number: OR160930-4B

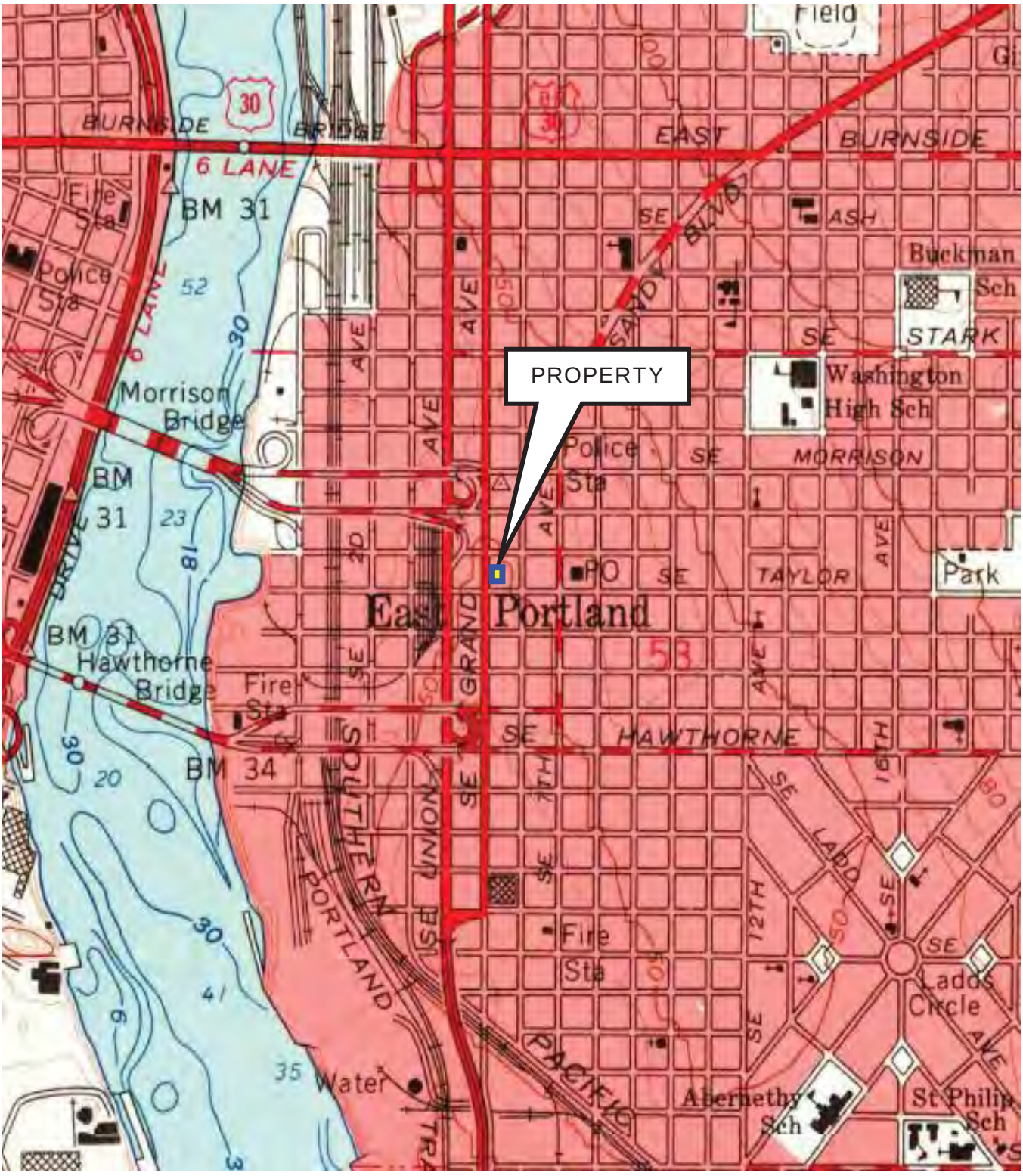

FIGURE 2: TOPOGRAPHIC MAP	**DRAWING NOT TO SCALE** Source: USGS 7.5 Minute Topographic Map Portland, OR Quadrangle 1990 **N↑**
point source solutions, llc ENGINEERING • ENVIRONMENTAL • SAFETY	**Site Name: 7-Eleven Property** **1024 SE Grand Avenue** **Portland, Oregon, 97214** **Project Number: OR160930-4B**

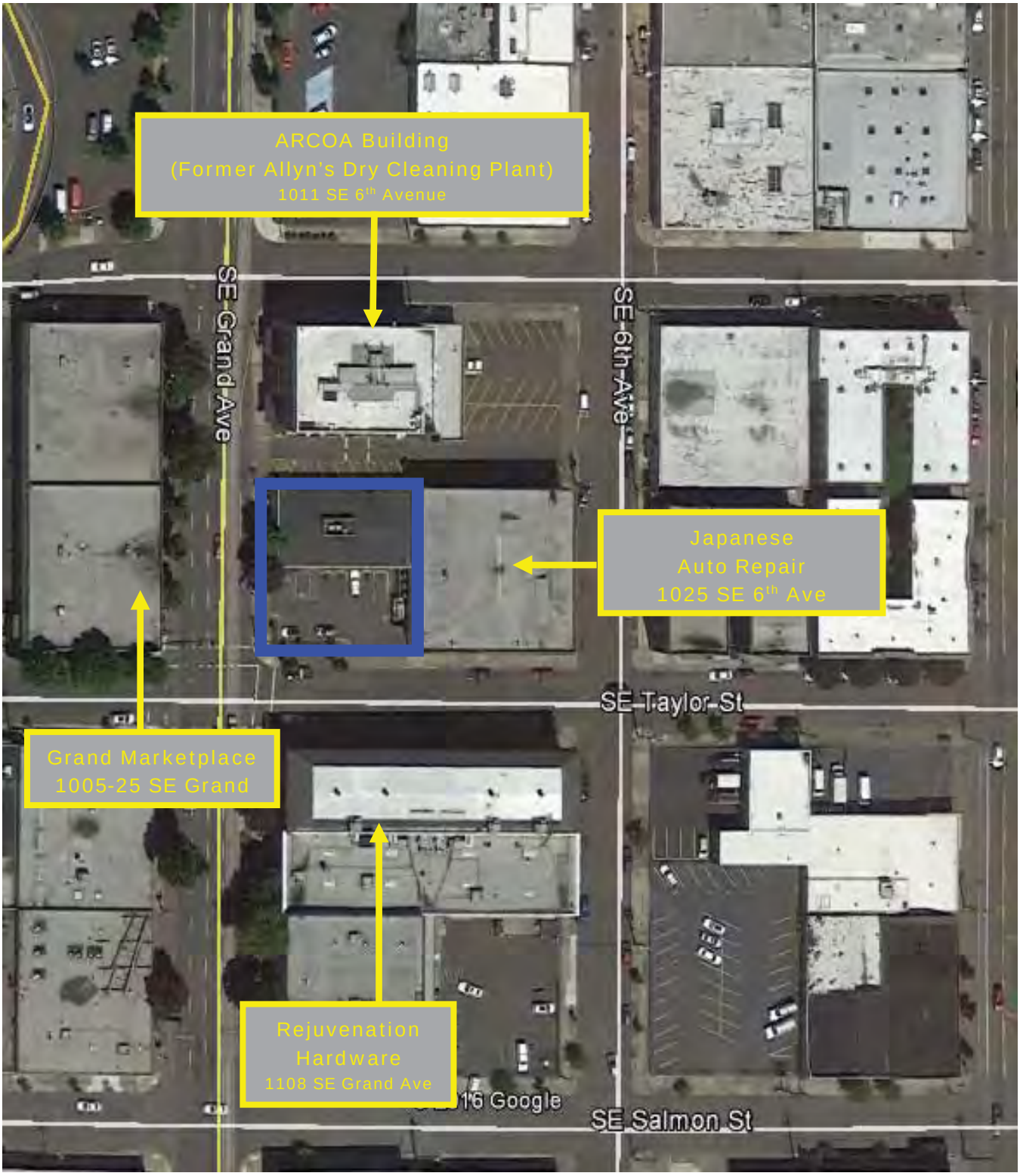

FIGURE 3 - SITE PLAN

From Google Earth 2016 **N↑**

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ENGINEERING • ENVIRONMENTAL • SAFETY

Site Name: 7-Eleven Property
1024 SE Grand Avenue
Portland, Oregon, 97214

Project Number: OR160930-4B

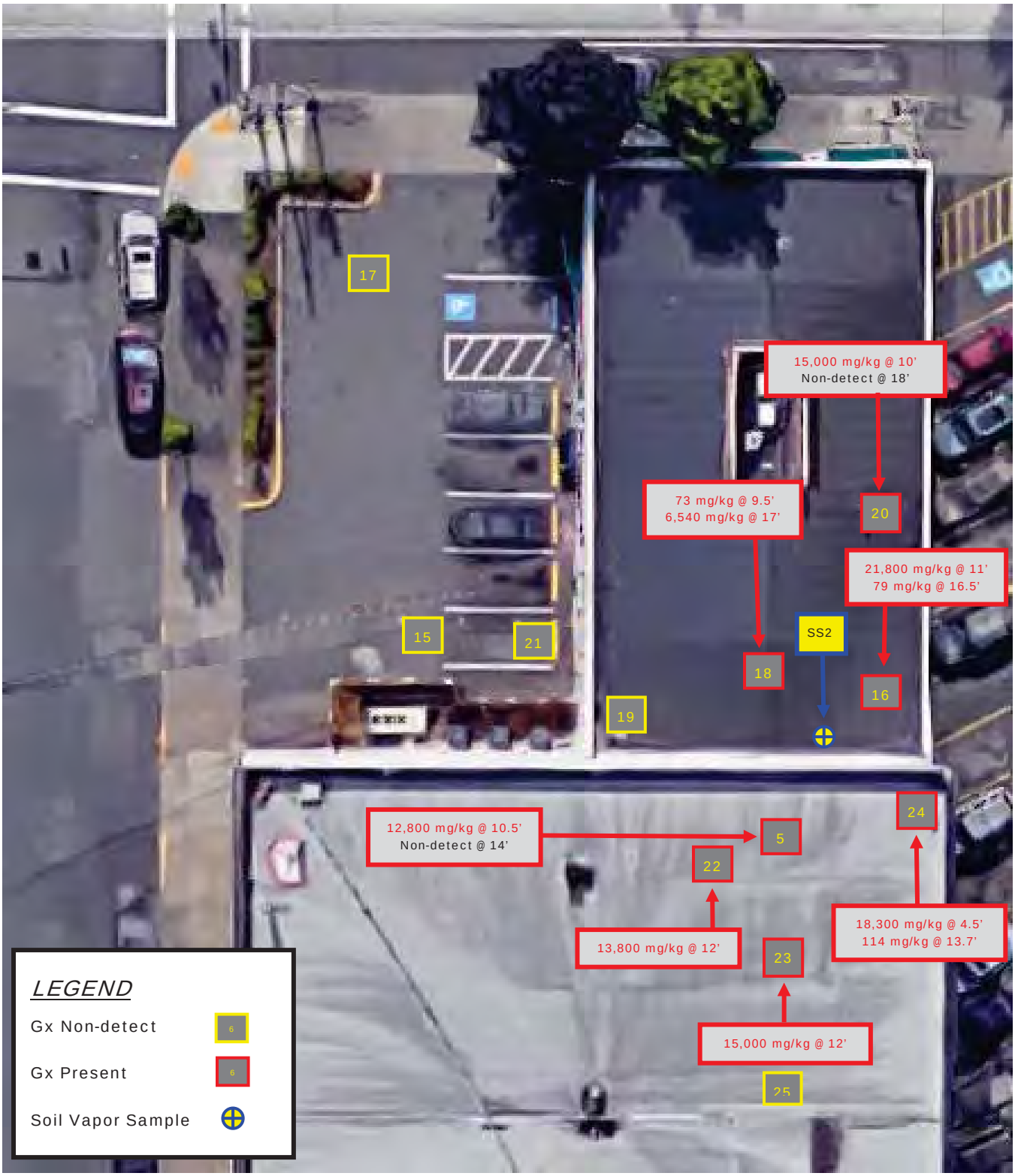


FIGURE 4 – BORING LOCATIONS

From 2017 Google Maps N→

point source solutions, llc
ENGINEERING • ENVIRONMENTAL • SAFETY

Site Name: 7-Eleven Property
1024 SE Grand Ave
Portland, OR 97214

Project Number: OR160930-4B

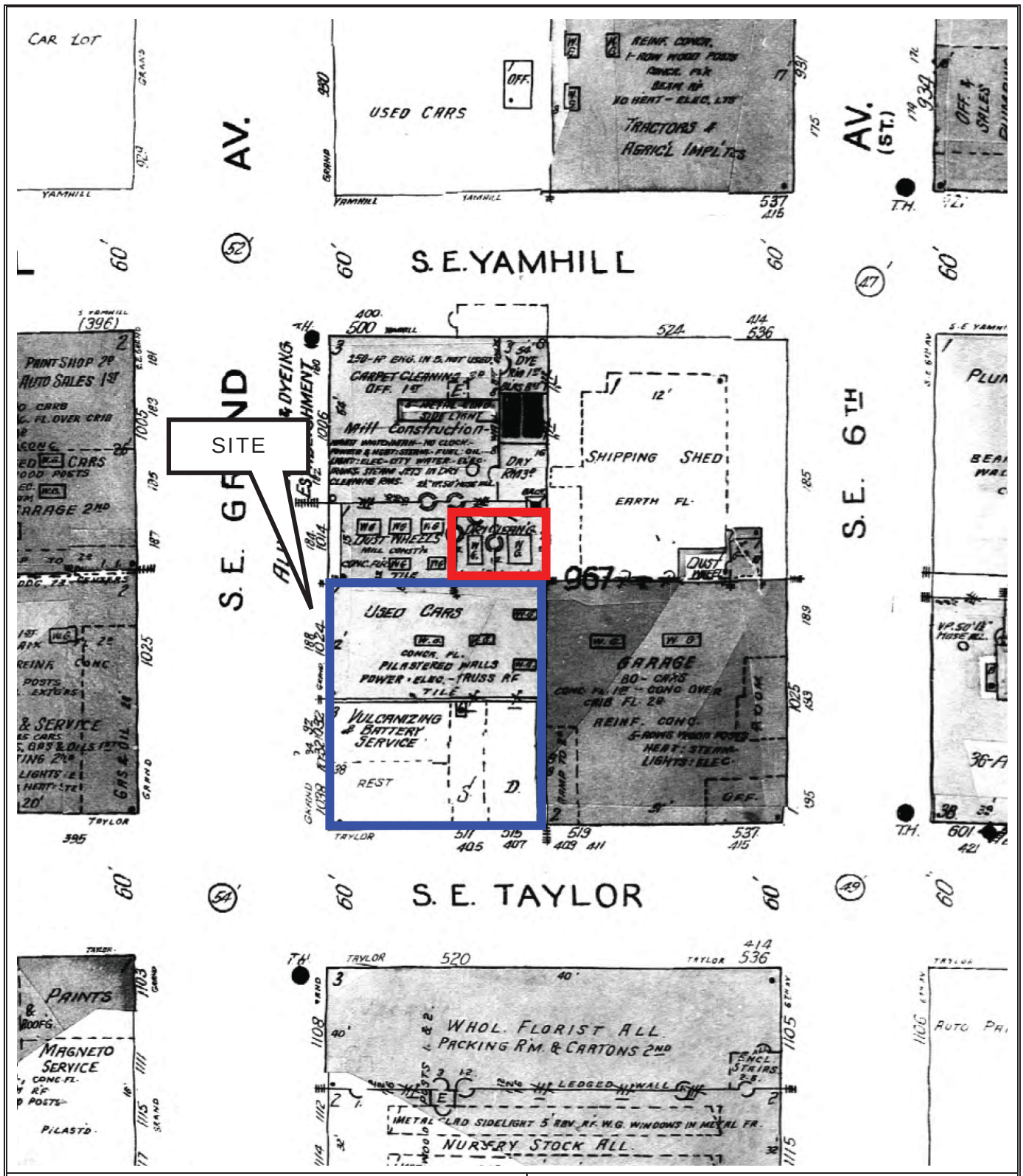
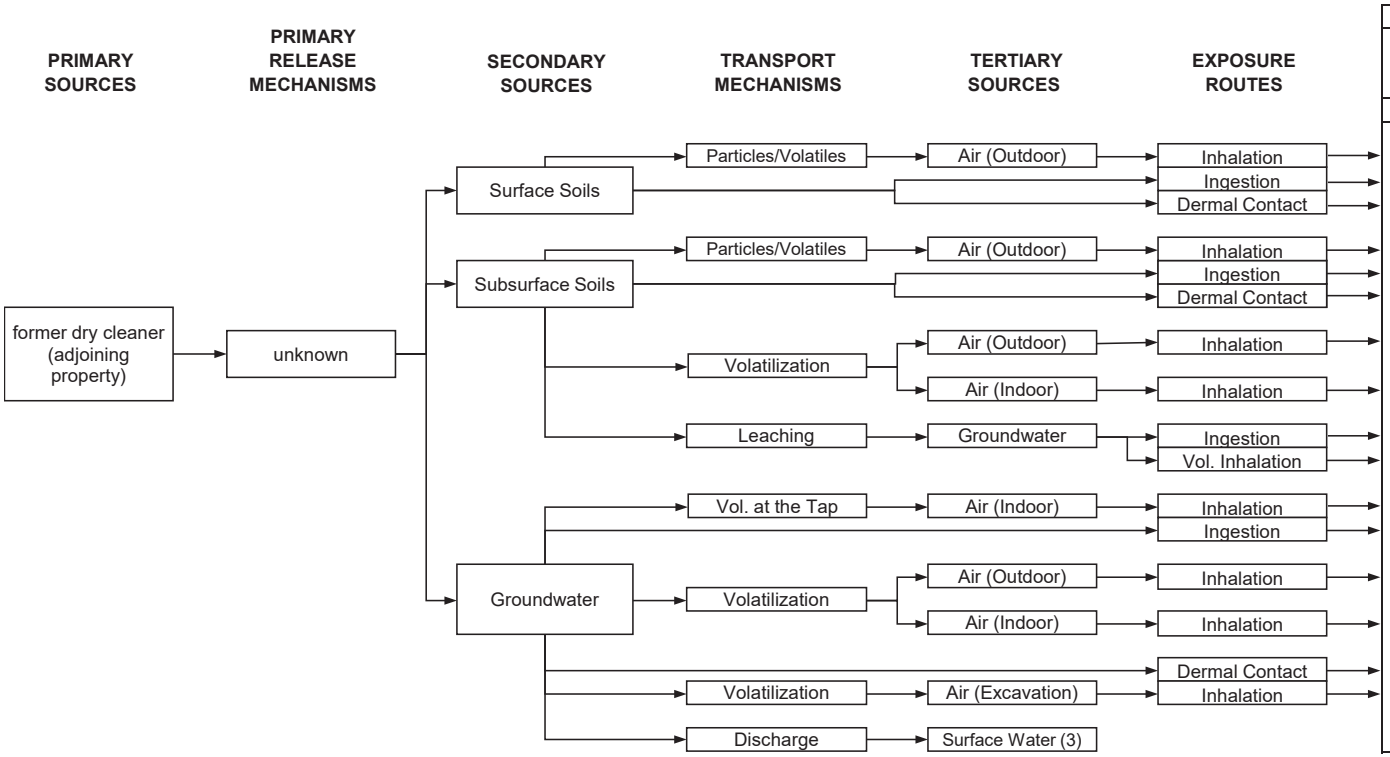


FIGURE 5 - SANBORN MAP	Date: 1950	N↑
point source solutions, llc ENGINEERING • ENVIRONMENTAL • SAFETY	Site Name: 7-Eleven Property 1024 SE Grand Avenue Portland, Oregon 97214 Project Number: OR160930-4B	

Figure 6: RBDM Conceptual Site Model

Figure 6: Conceptual Site Model



POTENTIAL RECEPTORS					
Residential		Occupational		Construction & Excavation	
Current	Future	Current	Future	Current	Future
No	No	No	No	No	No
No	No	No	No	No	No
No	No	No	No	No	No
No	No	No	No	Yes	Yes
No	No	No	No	Yes	Yes
No	No	No	No	Yes	Yes
Yes	Yes	Yes	Yes	N/A	N/A
Yes	Yes	Yes	Yes	N/A	N/A
Yes	Yes	Yes	Yes	N/A	N/A
Yes	Yes	Yes	Yes	N/A	N/A
No	No	No	No	N/A	N/A
No	No	No	No	N/A	N/A
No	No	No	No	N/A	N/A
No	No	No	No	N/A	N/A
No	No	No	No	No	No
No	No	No	No	No	No

Notes:

Yes= This route is a primary source of exposure.
No= There is no exposure by this route.

Figure 7: SUMMARY OF CONCEPTUAL SITE MODEL

Potentially Exposed Population	Exposure Route, Medium and Exposure Point	Was This Pathway Selected?	Reason for Selection or Exclusion
CURRENT LAND USE: Commercial			
Employees	*Surface soils* (all exposure routes)	No	Impacted soils are greater than 3 feet bgs
Residents (in area)		No	
Exc./Const. Workers		No	
Employees	*Subsurface soils* ingestion, dermal contact, inhalation	No	Impacted soils are not accessible.
Residents (in area)		No	
Exc./Const. Workers		Yes	Impacted soils may become accessible via excavation
Employees	*Subsurface soils* volatilization to outdoor air	Yes	Impacted soils are present
Residents (in area)		Yes	
Exc./Const. Workers		No	Not a receptor scenario
Employees	*Subsurface soils* vapor intrusion into buildings	Yes	Impacted soils are present
Residents (in area)		Yes	
Exc./Const. Workers		No	Not a receptor scenario
Employees	*Subsurface soils* leaching to groundwater	Yes	Impacted soils are present.
Residents (in area)		Yes	
Exc./Const. Workers		No	Not a receptor scenario
Employees	*Groundwater* Ingestion and inhalation of tap water	No	There are no drinking water wells on site, or within 1,000 feet of the site. The area is served by a municipal water supply
Residents (in area)		No	
Exc./Const. Workers		No	Not a receptor scenario
Employees	*Groundwater* Volatilization to outdoor air	No	Volatiles not expected to be present in groundwater.
Residents (in area)		No	
Exc./Const. Workers		No	Not a receptor scenario.
Employees	*Groundwater* Vapor intrusion into buildings	No	Volatiles not expected to be present in groundwater.
Residents (in area)		No	
Exc./Const. Workers		No	Not a receptor scenario
Exc./Const. Workers	*Groundwater* in excavation	No	Groundwater is not expected to be encountered at less than 30’ bgs

APPENDICES

APPENDIX I

SOIL BORING LOGS

BORING SB15

PROJECT: 7-Eleven Property		**DATE:** January 6, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 12.0’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 4.0’	75%			0 - 1.0 feet asphalt, gravel backfill; 1.0 – 4.0 feet fine brown sand with some brick fragments.	0
4.0’ - 8.0’	75%			4.0 – 7.0 feet moist fine brown sand; 7.0 – 7.5 feet decomposed wood, charcoal, weathered concrete; 7.5 – 8.0 feet brown silt with some fine sand.	0
8.0’ - 12.0’	100%	12.0’	SB15-S1	8.0 – 9.0 feet fine brown sand with some gravel and brick fragments; 9.0 – 12.0 feet tight, moist, fine brown sand.	0

BORING SB16

PROJECT: 7-Eleven Property		**DATE:** January 6, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 16.5’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 2.0’	NA			Gear advanced to 2.0’ bgs. No cores logged.	
2.0’ - 4.0’	90%			2.0 – 4.0 feet brown silt with some clay, layer of gravel and wood at 3.0’.	0
4.0’ - 6.0’	90%			4.0 – 6.0 feet light brown silt with some clay.	0
6.0’ - 8.0’	85%			6.0 – 8.0 feet marbled grey and light brown silt with some clay and organics.	0
8.0’ - 10.0’	65%			8.0 – 9.0 feet light brown silt; 9.0 – 10.0 feet silt with some clay, heavy solvent staining/odor.	974
10.0’ - 12.0’	70%	11.0’	SB16-S1	10.0 – 12.0 feet silt with some clay, heavy solvent staining/odor.	1,192
12.0’ - 14.0’	80%			12.0 – 14.0 feet silt with some clay, heavy solvent staining/odor.	1,104
14.0’ - 15.0’	NA			Gear advanced to 15.0’ bgs. No cores logged.	
15.0’ - 16.5’	60%	16.5’	SB16-S2	15.0 – 16.0 feet silt with some clay, heavy solvent staining/odor; 16.0 – 16.5 feet brown silt with some clay, no solvent staining/odor.	40.3
				Hard refusal at 16.5’	

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BORING SB17

PROJECT: 7-Eleven Property		**DATE:** January 6, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 12.0’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 4.0’	85%			0 – 4.0 feet fine brown sand with some brick fragments.	1.4
4.0’ - 8.0’	80%			4.0– 8.0 feet brown sandy silt with some clay, oxidation, organics, and brick.	0
8.0’ - 12.0’	100%	12.0’	SB17-S1	8.0 – 9.0 feet sandy gravel with some pulverized brick and concrete; 9.0 – 12.0 feet slightly moist, light brown sandy silt, with some clay.	0

BORING SB18

PROJECT: 7-Eleven Property		**DATE:** March 14, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 17.0’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 7.0’	NA			Gear advanced to 7.0’ bgs. No cores logged.	
7.0’ - 9.0’	50%			7.0 – 9.0 feet brown silt with slight solvent odor/no staining.	
9.0’ - 11.0’	60%			9.0 – 9.5 feet brown silt with slight solvent odor/no staining; 9.5 – 10.0 feet silt, heavy solvent staining/odor; 10.0 – 11.0 feet brown silt, slight solvent odor/no staining.	 1,508 208
11.0’-12.0’	NA			Gear advanced to 12.0’ bgs. No cores logged.	
12.0’ - 14.0’	95%			12.0 – 13.0 feet brown silt, slight solvent odor/no staining; 13.0 – 14.0 feet fine sand with some silt, moderate solvent odor/staining.	 1,203
14.0’ - 15.0’	NA			Gear advanced to 15.0’ bgs. No cores logged.	
15.0’ - 17.0’	80%	17.0	SB18-S1	15.0 – 17.0 feet fine sand with moderate solvent odor/staining, hard driving.	
				Progress refusal at 17.0’	

BORING SB19

PROJECT: 7-Eleven Property		**DATE:** March 14, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 17.5’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 2.0’	NA			Gear advanced to 2.0’ bgs. No cores logged.	
2.0’ - 4.0’	75%			2.0 – 4.0 feet brown silt.	1.0
4.0’ - 6.0’	85%			4.0 – 6.0 feet brown silt.	0.8
6.0’ - 8.0’	0%			Tube jammed. No recovery.	
8.0’ - 10.0’	75%			8.0 – 9.0 feet brown silt; 9.0 – 9.5 feet brown sandy silt; 9.0 – 9.5 feet sandy silt, light solvent staining/moderate odor.	1,558
10.0’ - 12.0’	90%	10.0’	SB19-S1	10.0 – 12.0 feet sandy silt, light solvent staining/odor.	158
12.0’ – 14.0’	90%			12.0 – 12.5 feet brown silty clay, no staining/odor. 12.5 – 13.0 feet brown silty clay, marbled with light solvent staining/odor; 13.0– 14.0 feet grey clay, possible organic odor.	15
14.0’ - 16.0’	90%			14.0 – 14.5 feet brown silty clay, no staining/odor. 14.5 – 16.0 feet brown silty sand with some clay, moderate solvent odor/no staining.	1,180 140
16.0’ – 17.5’	60%	17.5’	SB19-S2	16.0 – 17.5 feet brown silty sand with some clay, dry gravel and coarse sand in shoe, no staining/odor.	1.4
				Hard refusal at 17.5’	

BORING SB20

PROJECT: 7-Eleven Property		**DATE:** March 14, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 18.0’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 2.0’	NA			Gear advanced to 2.0’ bgs. No cores logged.	
2.0’ - 4.0’	55%			2.0 – 4.0 feet brown clayey silt with some black sandy gravel.	0.4
4.0’ - 6.0’	50%			4.0 – 6.0 feet brown marbled clayey silt.	0.3
6.0’ - 8.0’	90%			6.0 – 8.0 feet brown marbled clayey silt.	0.4
8.0’ - 10.0’	60%	10.0’	SB20-S1	8.0 – 9.0 feet brown clayey silt; 9.0 – 10.0 feet clayey silt, heavy solvent staining/odor	1,426
10.0’ - 12.0’	90%			10.0 – 12.0 feet clayey silt, moderate solvent staining/odor	577
12.0’ – 14.0’	80%			12.0 – 13.0 feet clayey silt, light solvent staining/odor 13.0– 14.0 feet clayey silt, heavy solvent staining/odor	200
14.0’ - 16.0’	75%			14.0 – 16.0 feet wet silt, heavy solvent staining/odor.	840
16.0’ – 18.0’	40%	18.0’	SB20-S2	16.0 – 18.0 feet coarse brown sand with rounded and angular gravel, wet, light solvent odor/no staining.	174
				Progress refusal at 18.0’	

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BORING SB21

PROJECT: 7-Eleven Property		**DATE:** March 14, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 16.0’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 4.0’	60%			0 – 0.5 feet asphalt; 0.5 – 4.0 feet brown clayey sand with some brick fragments.	0.8
4.0’ - 8.0’	60%			4.0– 7.0 feet brown sandy silt; 7.0– 8.0 feet pulverized brick and morter.	0.8
8.0’ - 12.0’	100%			8.0 – 12.0 feet moist, light brown clayey silt.	0.5
12.0’ - 16.0’	100%	16.0’	SB21-S1	12.0 – 16.0 feet light brown clayey silt.	0.4

BORING SB22

PROJECT: 7-Eleven Property		**DATE:** March 22, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 13.8’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 2.0’	NA			Gear advanced to 2.0’ bgs. No cores logged.	
2.0’ - 4.0’	0%			Tube jammed. Soil appeared clean.	
4.0’ - 6.0’	0%			Tube jammed. Possible slight solvent odor on tooling	
6.0’ - 8.0’	60%			6.0 – 8.0 feet light brown silt with some fine sand.	0.5
8.0’ - 10.0’	95%			8.0 – 10.0 feet light brown silt with some fine sand.	0.4
10.0’ - 12.0’	75%			10.0 – 12.0 feet light brown silt with some fine sand.	0.3
12.0’ - 13.8’	60%	13.8’	SB22-S1	12.0 – 12.2 feet light brown fine sand with some silt; 12.2– 13.8 feet fine sand, heavy solvent odor/staining.	705
				Hard refusal at 13.8’	

BORING SB23

PROJECT: 7-Eleven Property		**DATE:** March 22, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 13.5’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 2.0’	NA			Gear advanced to 2.0’ bgs. No cores logged.	
2.0’ - 4.0’	75%			2.0 – 4.0 feet brown silt with some fine sand.	0
4.0’ - 6.0’	95%			4.0 – 6.0 feet brown silt with some fine sand, and clay.	0.1
6.0’ - 8.0’	60%			6.0 – 8.0 feet brown silt with some fine sand, and clay.	0.1
8.0’ - 10.0’	80%			8.0 – 10.0 feet brown silt with some clay.	0.3
10.0’ - 12.0’	95%			10.0 – 12.0 feet light brown silt with some fine sand.	0.1
12.0’ - 13.5’	60%	13.5’	SB23-S1	12.0– 13.5 feet fine sand with some silt, heavy solvent odor/staining.	692
				Hard refusal at 13.5’	

BORING SB24

PROJECT: 7-Eleven Property		**DATE:** March 22, 2017		
CLIENT: Caldwell Properties		**DRILLED BY:** Point Source Solutions		
LOCATION: 1024 SE Grand Ave Portland, Oregon		**BORING METHOD:** Push Probe		
GEOLOGIST: Gil Cobb		**SAMPLING METHOD:** Continuous		
ELEV. GL: NA	**ELEV. TOC:** NA	**INITIAL WL:** NA	**STATIC WL:** NA	**TD:** 13.7’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 2.0’	NA			Gear advanced to 2.0’ bgs. No cores logged.	
2.0’ - 4.0’	60%			2.0 – 4.0 feet brown silt with some fine sand.	0.3
4.0’ - 6.0’	75%	4.5’	SB24-S1	4.0 – 4.5 feet brown silt with some fine sand; 4.5 – 6.0 feet silt with heavy solvent staining/odor.	
6.0’ - 8.0’	80%			6.0 – 8.0 feet silt with heavy solvent staining/odor.	684
8.0’ - 10.0’	80%			8.0 – 8.5 feet silt with heavy solvent staining/odor; 8.5 – 9.5 feet silt with some clay, moderate solvent staining/heavy odor; 9.5 – 10.0 feet silt with some fine sand, heavy solvent staining/odor;	 790
10.0’ - 12.0’	75%			10.0 – 12.0 feet fine sand with some silt, heavy solvent staining/odor.	690
12.0’ - 13.7’	60%	13.7’	SB24-S2	12.0– 13.0 silt with heavy solvent staining/odor; 13.0– 13.7 feet fine sand with some silt, moderate solvent odor/staining.	694 124
				Hard refusal at 13.7’	

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BORING SB25

PROJECT: 7-Eleven Property	**DATE:** March 22, 2017
CLIENT: Caldwell Properties	**DRILLED BY:** Point Source Solutions
LOCATION: 1024 SE Grand Ave Portland, Oregon	**BORING METHOD:** Push Probe
GEOLOGIST: Gil Cobb	**SAMPLING METHOD:** Continuous
ELEV. GL: NA **ELEV. TOC:** NA	**INITIAL WL:** NA **STATIC WL:** NA **TD:** 14.0’

DEPTH FEET	CORE REC	SAMPLE DEPTH	SAMPLE ID	SAMPLE/CORE DESCRIPTION	PID (PPM)
0 – 2.0’	NA			Gear advanced to 2.0’ bgs. No cores logged.	
2.0’ - 4.0’	60%			2.0 – 4.0 feet brown silt.	
4.0’ - 8.0’	NA			Gear advanced to 8.0’ bgs. No cores logged.	
8.0’ - 10.0’	80%			8.0 – 10.0 feet brown silt.	1.3
10.0’ - 12.0’	90%			10.0 – 12.0 feet brown silt.	3
12.0’ - 14.0’	80%	14.0’	SB25-S1	12.0– 14.0 feet brown sand and brown silt, coarse brown sand and gravel in shoe.	2.5
				Progress refusal at 14.0’	

APPENDIX II

LABORATORY ANALYTICAL REPORTS

Wy'East Analytical Report #87034 dated January 17, 2017
Friedman & Bruya Analytical Report #703265 dated March 28, 2017
APEX Labs Analytical Report #A7C0451 dated March 29, 2017
APEX Labs Analytical Report #A7C0722 dated March 30, 2017

APEX Labs Correspondence dated March 22, 2017
APEX Labs Correspondence dated March 30, 2017

WY'EAST ANALYTICAL REPORT #87034

1/9/17

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

Re: OR161203-3b

Dear Point Source Solutions

Enclosed are the results of analysis for samples received by the laboraory on 1/6/2017
The results related only to the samples included in this report.
The project was assigned a report number of 87034

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

CY Chan
QA Officer

NW-TPHDx LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

SITE NAME: **C.O.C. NUMBER:** 87034
SITE LOCATION: 1024 SE Grand Ave **REPORT DATE:** 1/10/17
PROJECT NUMBER: OR161203-3b

Analytical Method: NWTPH-Dx **Preparation Method: EPA3545A**
Analytes: Total Diesel and Heavy Oil range petroleum in Soil. Calculated on a dry-weight basis.

Field ID	LAB ID	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	Analytical Batch	Prepared Batch	Sampling Date
SB18-S1-9.5	L3578	**ND**	**ND**	**95%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB18-S2-17	L3579	**ND**	**ND**	**101%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB16-S1-11	L3580	**ND**	**ND**	**93%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB15-S1-12	L3581	**ND**	**ND**	**91%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB16-S2-16.5	L3582	**ND**	**ND**	**91%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB17-S1-12	L3583	**ND**	**ND**	**92%**	**78FL1701091**	**D170109-1**	**1/6/2017**
Reporting Limit:	--	25	100				
Surrogate Limit:				50%-150%			

Surrogate is 1-ChloroOctadecane
ND = Not Detected at or below the Reporting Limit

Results relate only to samples

Chemist Initials: CY Chan **Reviewed By:**

PERCENT MOISTURE REPORT

REPORT NUMBER: 87034
REPORT DATE: 1/10/17

ASTM D2974-07a

Analytes: Percent Moisture in Sample

LAB ID	Moisture(%)	Date Analyzed
L3578	25.9	1/6/17
L3579	24.6	1/6/17
L3580	26.6	1/6/17
L3581	24.1	1/6/17
L3582	27.4	1/6/17
L3583	24.7	1/6/17

Report Narrative

Method: NWTHP-Dx **Report No.** 87034

Client: Point Source Solutions **Date:** 1/9/2017

Sample Condition

6 Sample(s) were analyzed for NWTPH-Dx. Sample(s)were received in acceptable condition

Sample Temperature

Sample(s) arrived within acceptable temperature range

Sample Hold time

Sample(s) were analyzed within hold time

Initial Calibration

All criteria were within acceptable limits

Continuing Calibration Check (CCV)

All criteria were within method limits

Method Blank

Method Blank meets method limit

Laboratory Control Sample (LCS)

All criteria were within method limits

Duplicate Sample

All criteria were within method limits

Matrix Spike

All criteria were within method limits

Matrix Spike Duplicate

No Matrix Spike Duplicate was run on this batch

Non-Conformance

No non-conformances were associated with this request except noticed below

Quality Control for NWTPH-Dx

Batch Date: 1/9/2017

Units: Soil Blank (mg/Kg) Water Blank (mg/L) CCV & LCS (ug/mL)

Blank Number	PB	Diesel Result	Oil Result	Limits Diesel	Limits Oil	Blank Control	Surr. Recovery	Surr. Limits	Surr. Control
SBK01091	D170109-1	2	0	50	100	PASS	97%	50%-150%	PASS

Diesel LCS Number	PB	Diesel in Extract	Expected Conc.	LCS Recovery (%)	LCS Control Limits	LCS Control	Surr. Recovery	Surr. Limits	Surr. Control
SLC01091	D170109-1	545.84	500.00	109%	±30%	PASS	81%	50%-150%	PASS

Oil LCS Number	PB	Oil in Extract	Expected Conc.	LCS Recovery (%)	LCS Control Limits	LCS Control	Surr. Recovery	Surr. Limits	Surr. Control
SLC01091	D170109-1	501.34	500.00	100%	±30%	PASS	81%	50%-150%	PASS

Diesel Dupl. Number	PB	Sample in Extract	Duplicate In Extract	RPD (%)	Control Limits	Duplicate Control
L3574	D170109-1	17.91233071	2.328113498	0%	±30%	PASS

Oil Dupl. Number	PB	Sample in Extract	Duplicate in Extract	RPD (%)	Control Limits	Duplicate Control
L3574	D170109-1	0	0	0%	±30%	PASS

Diesel MS Number	PB	Sample in Extract	Diesel MS Result	MS Recovery (%)	MS Control Limits	MS Control
L3575MS	D170109-1	3.837275883	639.6959339	95%	70%-130%	PASS

Oil MS Number	PB	Sample in Extract	Oil MS Result	MS Recovery (%)	MS Control Limits	MS Control
L3575MS	D170109-1	0	552.4817328	83%	70%-130%	PASS

NW-TPHGx LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b

C.O.C. NUMBER: 87034
REPORT DATE: 1/9/2017

Analytical Method: NW-TPHGx Preparation Method: EPA 5035
Analytes: Gasoline in Soil. Calculated on a dry-weight basis.

Field ID	LAB ID	Gasoline (mg/Kg)	Surrogate Recov.(%)	Analytical Batch	Preperation Batch	Sampling Date
SB18-S1-9.5	L3578	73	106%	58PI170109-1	G170109-1	1/6/2017
SB18-S2-17	L3579	6540	126%	58PI170109-1	G170109-1	1/6/2017
SB16-S1-11	L3580	21800	108%	58PI170109-1	G170109-1	1/6/2017
SB15-S1-12	L3581	ND	102%	58PI170109-1	G170109-1	1/6/2017
SB16-S2-16.5	L3582	79	108%	58PI170109-1	G170109-1	1/6/2017
SB17-S1-12	L3583	ND	108%	58PI170109-1	G170109-1	1/6/2017
Reporting Limit:	--	20				

Surrogate is p-Bromofluorobenzene
ND = Not Detected (Below Reporting or Detection Limit)

Chemist Initials: CY Chan **Reviewer Initials:**

PERCENT MOISTURE REPORT

REPORT NUMBER: 87034
REPORT DATE: 1/9/2017

ASTM D2974-07a
Analytes: Percent Moisture in Sample

LAB ID	Moisture (%)	Date Analyzed
L3578	26	1/6/2017
L3579	25	1/6/2017
L3580	27	1/6/2017
L3581	24	1/6/2017
L3582	27	1/6/2017
L3583	25	1/6/2017

2415 SE 11th Ave.
Portland, OR 97214

These parameters are accredited in accordance with NELAP-OR100011

Phone (503) 231-9320
FAX (503) 231-9344

Report Narrative

Method: NWTHP-Gx **Report No.** 87034

Client: Point Source Solutions **Date:** 1/9/2017

Sample Condition
6 sample(s) were analyzed for NWTPH-Gx. Sample(s)were received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
sample(s) were analyzed within hold time

Initial Calibration

All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts

Method Blank
Method Blank meets method limt

Laboratory Control Sample (LCS)
All criteria were within method limts

Duplicate Sample
No duplicate was run with this batch

Matrix Spike
All MS criteria were within method limts
All MSD criteria were within method limts

Matrix Spike Duplicate RPD
All criteria were within method limts

Non-Conformance
No non-conformances were associated with this request except noticed below

Quality Control for Gasoline in Soil by NWTPH-Gx

Batch Date: 1/9/2017

Blank	Prep. Batch	Result(mg/Kg)	Accep. Range	Sur. % Recovery	% Accep.
GBK01091	G170109-1	0.73	<20	99%	50%-150%

Spike	Prep. Batch	Result (mg/Kg)	Expected (mg/Kg)	spike % Recovery	% Accep.
GLC01091	G170109-1	99.22	100.3	99%	70%-130%

MS	A. Batch	Spike (mg/Kg)	Sample(mg/Kg)	Spike % Recovery	% Accep.
BLK57MS	G170109-1	99	1	98%	70%-130%
BLK57MSD	G170109-1	98	1	97%	70%-130%

MSD	A. Batch	MSD (mg/Kg)	MS(mg/Kg)	RPD	% Accep.
BLK57MSD	58PI170109-1	98	99	-2%	±30%

2415 SE 11th Ave.
Portland, OR 97214

These parameters are accredited in accordance with NELAP-OR100011

Phone (503) 231-9320
FAX (503) 231-9344

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

		INSTRUMENT	SolaTek
PROJECT NAME:		**REPORT NUMBER:**	87034
SITE LOCATION:	1024 SE Grand Ave	**REPORT DATE:**	1/10/17
PROJECT NUMBER:	OR161203-3b	**ACQ. ON**	9Jan20173:30pm
ANALYST		**PREP. BATCH**	V170109
FIELD ID:	SB18-S1-9.5	**LAB ID:**	L3578

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**

Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	200		50
bromobenzene	ND	200		50
bromochloromethane	ND	200		50
bromodichloromethane	ND	200		50
bromoform	ND	200		50
n-butylbenzene	ND	200		50
sec-butylbenzene	ND	200		50
tert-butylbenzene	ND	200		50
chlorobenzene	ND	200		50
chloroform	ND	200		50
2-chlorotoluene	ND	200		50
4-chlorotoluene	ND	200		50
dibromochloromethane	ND	200		50
1,2dibromo3-chloropropane	ND	200		50
1,2-dibromoethane	ND	200		50
dibromomethane	ND	200		50
1,2-dichlorobenzene	ND	200		50
1,3-dichlorobenzene	ND	200		50
1,4-dichlorobenzene	ND	200		50
1,1-dichloroethane	ND	200		50
1,2-dichloroethane	ND	200		50
1,1-dichloroethene	ND	200		50
cis-1,2-dichloroethene	ND	200		50
trans-1,2-dichloroethene	ND	200		50
1,2-dichloropropane	ND	200		50
1,3-dichloropropane	ND	200		50
1,1-dichloropropene	ND	200		50
cis-1,3-dichloropropene	ND	200		50
trans-1,3-dichloropropene	ND	200		50
ethylbenzene	ND	200		50
hexachlorobutadiene	ND	200		50
isopropylbenzene	ND	200		50
p-Isopropyltoluene	ND	200		50
methyl-tert-butylether(MTBE)	ND	200		50
naphthalene	ND	200		50
n-propyl-benzene	ND	200		50
styrene	ND	200		50
1,1,1,2-tetrachloroethane	ND	200		50
1,1,2,2-tetrachloroethane	ND	200		50
tetrachloroethylene	ND	200		50
toluene	ND	200		50
1,2,3-trichlorobenzene	ND	200		50
1,2,4-trichlorobenzene	ND	200		50
1,1,1-trichloroethane	ND	200		50
1,1,2-trichloroethane	ND	200		50
trichloroethene	ND	200		50
1,2,3-trichloropropane	ND	200		50
1,2,4-trimethlybenzene	478	200		50
1,3,5-trimethylbenzene	ND	200		50
xylene(m&p)	ND	200		50
o-xylene	ND	200		50
total xylenes	ND	200		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	108	101	106

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB18-S2-17

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/10/17
ACQ. ON 9Jan20176:27pm
PREP. BATCH V170109
LAB ID: L3579

Analytical Method: EPA 8260C
Preparation Method: EPA 5035A
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	204		50
bromobenzene	ND	204		50
bromochloromethane	ND	204		50
bromodichloromethane	ND	204		50
bromoform	ND	204		50
n-butylbenzene	5851	204		500
sec-butylbenzene	5606	204		500
tert-butylbenzene	ND	204		50
chlorobenzene	ND	204		50
chloroform	ND	204		50
2-chlorotoluene	ND	204		50
4-chlorotoluene	ND	204		50
dibromochloromethane	ND	204		50
1,2dibromo3-chloropropane	ND	204		50
1,2-dibromoethane	ND	204		50
dibromomethane	ND	204		50
1,2-dichlorobenzene	ND	204		50
1,3-dichlorobenzene	ND	204		50
1,4-dichlorobenzene	ND	204		50
1,1-dichloroethane	ND	204		50
1,2-dichloroethane	ND	204		50
1,1-dichloroethene	ND	204		50
cis-1,2-dichloroethene	ND	204		50
trans-1,2-dichloroethene	ND	204		50
1,2-dichloropropane	ND	204		50
1,3-dichloropropane	ND	204		50
1,1-dichloropropene	ND	204		50
cis-1,3-dichloropropene	ND	204		50
trans-1,3-dichloropropene	ND	204		50
ethylbenzene	4420	204		500
hexachlorobutadiene	ND	204		50
isopropylbenzene	4371	204		500
p-Isopropyltoluene	7556	204		500
methyl-tert-butylether(MTBE)	ND	204		50
naphthalene	3764	204		500
n-propyl-benzene	7259	204		500
styrene	ND	204		50
1,1,1,2-tetrachloroethane	ND	204		50
1,1,2,2-tetrachloroethane	ND	204		50
tetrachloroethylene	ND	204		50
toluene	ND	204		50
1,2,3-trichlorobenzene	ND	204		50
1,2,4-trichlorobenzene	ND	204		50
1,1,1-trichloroethane	ND	204		50
1,1,2-trichloroethane	ND	204		50
trichloroethene	ND	204		50
1,2,3-trichloropropane	ND	204		50
1,2,4-trimethlybenzene	48284	204		2500
1,3,5-trimethylbenzene	17360	204		500
xylene(m&p)	6487	404		500
o-xylene	315	204		50
total xylenes	6802	204		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	82	84	96

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB16-S1-11

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/12/17
ACQ. ON 9Jan20176:57pm
PREP. BATCH V170109
LAB ID: L3580

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	1274	200		50
bromobenzene	ND	200		50
bromochloromethane	ND	200		50
bromodichloromethane	ND	200		50
bromoform	ND	200		50
n-butylbenzene	13671	200		2500
sec-butylbenzene	12540	200		2500
tert-butylbenzene	ND	200		50
chlorobenzene	ND	200		50
chloroform	ND	200		50
2-chlorotoluene	ND	200		50
4-chlorotoluene	ND	200		50
dibromochloromethane	ND	200		50
1,2dibromo3-chloropropane	ND	200		50
1,2-dibromoethane	ND	200		50
dibromomethane	ND	200		50
1,2-dichlorobenzene	ND	200		50
1,3-dichlorobenzene	ND	200		50
1,4-dichlorobenzene	ND	200		50
1,1-dichloroethane	ND	200		50
1,2-dichloroethane	ND	200		50
1,1-dichloroethene	ND	200		50
cis-1,2-dichloroethene	ND	200		50
trans-1,2-dichloroethene	ND	200		50
1,2-dichloropropane	ND	200		50
1,3-dichloropropane	ND	200		50
1,1-dichloropropene	ND	200		50
cis-1,3-dichloropropene	ND	200		50
trans-1,3-dichloropropene	ND	200		50
ethylbenzene	17895	200		2500
hexachlorobutadiene	ND	200		50
isopropylbenzene	13908	200		2500
p-Isopropyltoluene	14649	200		2500
methyl-tert-butylether(MTBE)	ND	200		50
naphthalene	13844	200		2500
n-propyl-benzene	23113	200		2500
styrene	ND	200		50
1,1,1,2-tetrachloroethane	ND	200		50
1,1,2,2-tetrachloroethane	ND	200		50
tetrachloroethylene	ND	200		50
toluene	ND	200		50
1,2,3-trichlorobenzene	ND	200		50
1,2,4-trichlorobenzene	ND	200		50
1,1,1-trichloroethane	ND	200		50
1,1,2-trichloroethane	ND	200		50
trichloroethene	ND	200		50
1,2,3-trichloropropane	ND	200		50
1,2,4-trimethlybenzene	152401	200		5000
1,3,5-trimethylbenzene	43953	200		2500
xylene(m&p)	41917	200		2500
o-xylene	17436	200		2500
total xylenes	59353	200		2500

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	81	77	98

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB15-S1-12

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/10/17
ACQ. ON 9Jan20174:57pm
PREP. BATCH V170109
LAB ID: L3581

Analytical Method: EPA 8260C
Preparation Method: EPA 5035A
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	202		50
bromobenzene	ND	202		50
bromochloromethane	ND	202		50
bromodichloromethane	ND	202		50
bromoform	ND	202		50
n-butylbenzene	ND	202		50
sec-butylbenzene	ND	202		50
tert-butylbenzene	ND	202		50
chlorobenzene	ND	202		50
chloroform	ND	202		50
2-chlorotoluene	ND	202		50
4-chlorotoluene	ND	202		50
dibromochloromethane	ND	202		50
1,2dibromo3-chloropropane	ND	202		50
1,2-dibromoethane	ND	202		50
dibromomethane	ND	202		50
1,2-dichlorobenzene	ND	202		50
1,3-dichlorobenzene	ND	202		50
1,4-dichlorobenzene	ND	202		50
1,1-dichloroethane	ND	202		50
1,2-dichloroethane	ND	202		50
1,1-dichloroethene	ND	202		50
cis-1,2-dichloroethene	ND	202		50
trans-1,2-dichloroethene	ND	202		50
1,2-dichloropropane	ND	202		50
1,3-dichloropropane	ND	202		50
1,1-dichloropropene	ND	202		50
cis-1,3-dichloropropene	ND	202		50
trans-1,3-dichloropropene	ND	202		50
ethylbenzene	ND	202		50
hexachlorobutadiene	ND	202		50
isopropylbenzene	ND	202		50
p-Isopropyltoluene	ND	202		50
methyl-tert-butylether(MTBE)	ND	202		50
naphthalene	ND	202		50
n-propyl-benzene	ND	202		50
styrene	ND	202		50
1,1,1,2-tetrachloroethane	ND	202		50
1,1,2,2-tetrachloroethane	ND	202		50
tetrachloroethylene	ND	202		50
toluene	ND	202		50
1,2,3-trichlorobenzene	ND	202		50
1,2,4-trichlorobenzene	ND	202		50
1,1,1-trichloroethane	ND	202		50
1,1,2-trichloroethane	ND	202		50
trichloroethene	ND	202		50
1,2,3-trichloropropane	ND	202		50
1,2,4-trimethlybenzene	ND	202		50
1,3,5-trimethylbenzene	ND	202		50
xylene(m&p)	ND	404		50
o-xylene	ND	202		50
total xylenes	ND	202		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	110	100	91

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB16-S2-16.5

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/10/17
ACQ. ON 9Jan20175:27pm
PREP. BATCH V170109
LAB ID: L3582

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	200		50
bromobenzene	ND	200		50
bromochloromethane	ND	200		50
bromodichloromethane	ND	200		50
bromoform	ND	200		50
n-butylbenzene	ND	200		50
sec-butylbenzene	ND	200		50
tert-butylbenzene	ND	200		50
chlorobenzene	ND	200		50
chloroform	ND	200		50
2-chlorotoluene	ND	200		50
4-chlorotoluene	ND	200		50
dibromochloromethane	ND	200		50
1,2dibromo3-chloropropane	ND	200		50
1,2-dibromoethane	ND	200		50
dibromomethane	ND	200		50
1,2-dichlorobenzene	ND	200		50
1,3-dichlorobenzene	ND	200		50
1,4-dichlorobenzene	ND	200		50
1,1-dichloroethane	ND	200		50
1,2-dichloroethane	ND	200		50
1,1-dichloroethene	ND	200		50
cis-1,2-dichloroethene	ND	200		50
trans-1,2-dichloroethene	ND	200		50
1,2-dichloropropane	ND	200		50
1,3-dichloropropane	ND	200		50
1,1-dichloropropene	ND	200		50
cis-1,3-dichloropropene	ND	200		50
trans-1,3-dichloropropene	ND	200		50
ethylbenzene	ND	200		50
hexachlorobutadiene	ND	200		50
isopropylbenzene	ND	200		50
p-Isopropyltoluene	ND	200		50
methyl-tert-butylether(MTBE)	ND	200		50
naphthalene	ND	200		50
n-propyl-benzene	ND	200		50
styrene	ND	200		50
1,1,1,2-tetrachloroethane	ND	200		50
1,1,2,2-tetrachloroethane	ND	200		50
tetrachloroethylene	ND	200		50
toluene	ND	200		50
1,2,3-trichlorobenzene	ND	200		50
1,2,4-trichlorobenzene	ND	200		50
1,1,1-trichloroethane	ND	200		50
1,1,2-trichloroethane	ND	200		50
trichloroethene	ND	200		50
1,2,3-trichloropropane	ND	200		50
1,2,4-trimethlybenzene	410	200		50
1,3,5-trimethylbenzene	ND	200		50
xylene(m&p)	ND	400		50
o-xylene	ND	200		50
total xylenes	ND	200		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	118	100	104

Analyst: C Y Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

		INSTRUMENT	SolaTek
PROJECT NAME:		**REPORT NUMBER:**	87034
SITE LOCATION:	1024 SE Grand Ave	**REPORT DATE:**	1/10/17
PROJECT NUMBER:	OR161203-3b	**ACQ. ON**	9Jan20175:57pm
ANALYST		**PREP. BATCH**	V170109
FIELD ID:	SB17-S1-12	**LAB ID:**	L3583

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**

Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	202		50
bromobenzene	ND	202		50
bromochloromethane	ND	202		50
bromodichloromethane	ND	202		50
bromoform	ND	202		50
n-butylbenzene	ND	202		50
sec-butylbenzene	ND	202		50
tert-butylbenzene	ND	202		50
chlorobenzene	ND	202		50
chloroform	ND	202		50
2-chlorotoluene	ND	202		50
4-chlorotoluene	ND	202		50
dibromochloromethane	ND	202		50
1,2dibromo3-chloropropane	ND	202		50
1,2-dibromoethane	ND	202		50
dibromomethane	ND	202		50
1,2-dichlorobenzene	ND	202		50
1,3-dichlorobenzene	ND	202		50
1,4-dichlorobenzene	ND	202		50
1,1-dichloroethane	ND	202		50
1,2-dichloroethane	ND	202		50
1,1-dichloroethene	ND	202		50
cis-1,2-dichloroethene	ND	202		50
trans-1,2-dichloroethene	ND	202		50
1,2-dichloropropane	ND	202		50
1,3-dichloropropane	ND	202		50
1,1-dichloropropene	ND	202		50
cis-1,3-dichloropropene	ND	202		50
trans-1,3-dichloropropene	ND	202		50
ethylbenzene	ND	202		50
hexachlorobutadiene	ND	202		50
isopropylbenzene	ND	202		50
p-Isopropyltoluene	ND	202		50
methyl-tert-butylether(MTBE)	ND	202		50
naphthalene	ND	202		50
n-propyl-benzene	ND	202		50
styrene	ND	202		50
1,1,1,2-tetrachloroethane	ND	202		50
1,1,2,2-tetrachloroethane	ND	202		50
tetrachloroethylene	ND	202		50
toluene	ND	202		50
1,2,3-trichlorobenzene	ND	202		50
1,2,4-trichlorobenzene	ND	202		50
1,1,1-trichloroethane	ND	202		50
1,1,2-trichloroethane	ND	202		50
trichloroethene	ND	202		50
1,2,3-trichloropropane	ND	202		50
1,2,4-trimethlybenzene	ND	202		50
1,3,5-trimethylbenzene	ND	202		50
xylene(m&p)	ND	404		50
o-xylene	ND	202		50
total xylenes	ND	202		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	124	100	89

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

QUALITY CONTROL REPORT (EPA 8260C)

Run Date: 1/9/2017 **Prep batch:** P1-9-17
Report Date: 1/10/2017 **Analytical batch:** STRA170109

Analyte	BLANK (ug/Kg)	LCS (ug/Kg)	Expected (ug/Kg)	Recovery %
benzene	<4	17	16	105
bromobenzene	<4	19	16	119
bromochloromethane	<4	15	16	93
bromodichloromethane	<4	16	16	101
bromoform	<4	19	16	116
n-butylbenzene	<4	14	16	89
sec-butylbenzene	<4	19	16	120
tert-butylbenzene	<4	20	16	122
chlorobenzene	<4	18	16	111
chloroform	<4	16	16	100
2-chlorotoluene	<4	18	16	114
4-chlorotoluene	<4	19	16	116
dibromochloromethane	<4	15	16	95
1,2dibromo3-chloropropane	<4	17	16	104
1,2-dibromoethane	<4	15	16	93
dibromomethane	<4	17	16	107
1,2-dichlorobenzene	<4	14	16	89
1,3-dichlorobenzene	<4	14	16	91
1,4-dichlorobenzene	<4	15	16	95
1,1-dichloroethane	<4	16	16	97
1,2-dichloroethane	<4	16	16	100
1,1-dichloroethene	<4	16	16	100
cis-1,2-dichloroethene	<4	15	16	93
trans-1,2-dichloroethene	<4	16	16	98
1,2-dichloropropane	<4	16	16	101
1,3-dichloropropane	<4	15	16	92
1,1-dichloropropene	<4	15	16	91
cis-1,3-dichloropropene	<4	13	16	82
trans-1,3-dichloropropene	<4	14	16	89
ethylbenzene	<4	17	16	109
hexachlorobutadiene	<4	15	16	92
isopropylbenzene	<4	19	16	116
p-Isopropyltoluene	<4	17	16	106
methyl-tert-butylether(MTBE)	<4	14	16	85
naphthalene	<4	18	16	114
n-propyl-benzene	<4	20	16	122
styrene	<4	17	16	108
1,1,1,2-tetrachloroethane	<4	19	16	119
1,1,2,2-tetrachloroethane	<4	20	16	128
tetrachloroethylene	<4	16	16	100
toluene	<4	16	16	103
1,2,3-trichlorobenzene	<4	20	16	127
1,2,4-trichlorobenzene	<4	16	16	101
1,1,1-trichloroethane	<4	17	16	106
1,1,2-trichloroethane	<4	16	16	102
trichloroethene	<4	16	16	97
1,2,3-trichloropropane	<4	17	16	105
1,2,4-trimethlybenzene	<4	18	16	110
1,3,5-trimethylbenzene	<4	19	16	117
xylene(m&p)	<8	36	32	114
o-xylene	<4	17	16	108

Control: 70%-130%

DUPLICATE / MATRIX SPIKE REPORT (EPA 8260C)

Run Date:	1/9/2017	**Prep batch:**	P1-9-17	**MSD ID:**	SBK33MSD
Report Date:	1/10/2017	**Analytical batch:**	STRA170109	**MS ID**	SBK33MS

Analyte	Sample (ug/Kg)	MSD (ug/Kg)	Recovery (%)	Sample (ug/Kg)	Spike (ug/Kg)	Recovery (%)
benzene	0	15	96	0	17	105
bromobenzene	0	15	93	0	19	119
bromochloromethane	0	15	96	0	15	93
bromodichloromethane	0	16	101	0	16	101
bromoform	0	16	97	0	19	116
n-butylbenzene	0	15	95	0	14	89
sec-butylbenzene	0	15	92	0	19	120
tert-butylbenzene	0	15	93	0	20	122
chlorobenzene	0	15	95	0	18	111
chloroform	0	14	90	0	16	100
2-chlorotoluene	0	17	105	0	18	114
4-chlorotoluene	0	15	91	0	19	116
dibromochloromethane	0	17	103	0	15	95
1,2dibromo3-chloropropane	0	15	96	0	17	104
1,2-dibromoethane	0	17	104	0	15	93
dibromomethane	0	16	102	0	17	107
1,2-dichlorobenzene	0	16	99	0	14	89
1,3-dichlorobenzene	0	14	88	0	14	91
1,4-dichlorobenzene	0	16	98	0	15	95
1,1-dichloroethane	0	15	96	0	16	97
1,2-dichloroethane	0	15	91	0	16	100
1,1-dichloroethene	0	15	93	0	16	100
cis-1,2-dichloroethene	0	15	95	0	15	93
trans-1,2-dichloroethene	0	15	95	0	16	98
1,2-dichloropropane	0	16	98	0	16	101
1,3-dichloropropane	0	16	100	0	15	92
1,1-dichloropropene	0	15	95	0	15	91
cis-1,3-dichloropropene	0	16	99	0	13	82
trans-1,3-dichloropropene	0	17	106	0	14	89
ethylbenzene	0	15	94	0	17	109
hexachlorobutadiene	0	15	96	0	15	92
isopropylbenzene	0	15	94	0	19	116
p-Isopropyltoluene	0	14	90	0	17	106
methyl-tert-butylether(MTBE)	0	16	98	0	14	85
naphthalene	0	18	110	0	18	114
n-propyl-benzene	0	15	93	0	20	122
styrene	0	15	93	0	17	108
1,1,1,2-tetrachloroethane	0	15	97	0	19	119
1,1,2,2-tetrachloroethane	0	15	93	0	20	128
tetrachloroethylene	0	16	99	0	16	100
toluene	0	16	97	0	16	103
1,2,3-trichlorobenzene	0	16	103	0	20	127
1,2,4-trichlorobenzene	0	16	97	0	16	101
1,1,1-trichloroethane	0	16	99	0	17	106
1,1,2-trichloroethane	0	16	102	0	16	102
trichloroethene	0	15	95	0	16	97
1,2,3-trichloropropane	0	16	99	0	17	105
1,2,4-trimethlybenzene	0	14	90	0	18	110
1,3,5-trimethylbenzene	0	15	93	0	19	117
xylene(m&p)	0	30	94	0	36	114
o-xylene	0	15	95	0	17	108
Control:			70%-130%			70%-130%

MATRIX SPIKE / MATRIX SPIKE DUPLICATE REPORT (EPA 8260C)

Run Date:	1/9/2017	**Prep batch:**	P1-9-17	**MS ID:**	SBK33MS
Report Date:	1/10/2017	**Analytical batch:**	STRA170109	**MSD ID:**	SBK33MSD

Analyte	**MS** (ug/Kg)	**MSD** (ug/Kg)	**RPD** (%)
benzene	17	15	9
bromobenzene	19	15	25
bromochloromethane	15	15	3
bromodichloromethane	16	16	0
bromoform	19	16	18
n-butylbenzene	14	15	6
sec-butylbenzene	19	15	26
tert-butylbenzene	20	15	28
chlorobenzene	18	15	16
chloroform	16	14	10
2-chlorotoluene	18	17	9
4-chlorotoluene	19	15	24
dibromochloromethane	15	17	9
1,2dibromo3-chloropropane	17	15	8
1,2-dibromoethane	15	17	11
dibromomethane	17	16	5
1,2-dichlorobenzene	14	16	10
1,3-dichlorobenzene	14	14	3
1,4-dichlorobenzene	15	16	3
1,1-dichloroethane	16	15	2
1,2-dichloroethane	16	15	9
1,1-dichloroethene	16	15	7
cis-1,2-dichloroethene	15	15	2
trans-1,2-dichloroethene	16	15	4
1,2-dichloropropane	16	16	3
1,3-dichloropropane	15	16	8
1,1-dichloropropene	15	15	3
cis-1,3-dichloropropene	13	16	19
trans-1,3-dichloropropene	14	17	17
ethylbenzene	17	15	14
hexachlorobutadiene	15	15	4
isopropylbenzene	19	15	21
p-Isopropyltoluene	17	14	17
methyl-tert-butylether(MTBE)	14	16	14
naphthalene	18	18	3
n-propyl-benzene	20	15	28
1,1,1,2-tetrachloroethane	17	15	14
1,1,2,2-tetrachloroethane	19	15	20
tetrachloroethylene	20	15	31*
toluene	16	16	1
1,2,3-trichlorobenzene	16	16	6
1,2,4-trichlorobenzene	20	16	21
1,1,1-trichloroethane	16	16	3
1,1,2-trichloroethane	17	16	7
trichloroethene	16	16	0
trichlorofluoromethane	16	15	2
1,2,3-trichloropropane	17	16	6
1,2,4-trimethlybenzene	18	14	19
1,3,5-trimethylbenzene	19	15	23
xylene(m&p)	36	30	19
o-xylene	17	15	13
Control:			30

* - QC fails on this compound

Laboratory Report

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

Project Name:
Project Location: 1024 SE Grand Ave
Project Number: OR161203-3b
Report Number: 87034
Report Date: 1/16/17
Date Sampled: 1/6/17
Date received: 1/6/17

TCLP-Pb Toxicity Characteristic Leaching Procedure for Lead

EPA 1311- Extraction; EPA 700-Analysis

Field ID	Lab ID	Result mg/L(ppm)	Detection Limit mg/L(ppm)
SB16-S1-11	L3580	<0.2	0.2

Quality Control Report: Lead (Pb)

PB1701161	Measured Conc. (mg/L)	Expected Concentration (mg/L)	Recovery (%)	Lower Limit	Upper Limit	
ICV	5.2	5.0	104%	80%	120%	PASS
Prep Blank	0.0	0.0	--	0.5 mg/L	--	PASS
LCS	3.1	2.7	113%	70%	130%	PASS
QC Blank	0.0	0.0	--	0.5 mg/L	--	PASS
QC Check	5.3	5.0	105%	80%	120%	PASS
Calibration R^2 :	*1.*	*(Lower Limit: 0.990)*				*PASS*

Wy'East
Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214

CHAIN OF CUSTODY

Report Number 87034

Phone(503) 231-9320 FAX(503) 231-9344

Company: Point Source Solutions	Phone: (503) 422-2675
Project #: ORI61203-36	FAX:
Project Name:	Purchase Order #:
Site: 1024 SE Grand Ave	Report Attention: / Collected By:
Samples: Temperature 1.5 °C On Ice? (Yes) / No	Turnaround Time: ☒ Regular ☐ 3-5 Business Days

Comments: Andy cc: Johnny & Gil

LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B
L3578	SB18-S1-9.5	1-6-17		S	1	4oz	X	X				X
L3579	SB18-S2-17	↓		S	2	↓	X	X				X
L3580	SB16-S1-11			S	2		X	X				X
L3581	SB15-S1-12			S	1		X	X				X
L3582	SB16-S2-16.5			S	1		X	X				X
L3583	SB17-S1-12			S	1		X	X				X

Analysis Requested

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
Jake Rau	PSS	1-6-17				1/6/17	2035
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time

Wy'East
Environmental Sciences Inc.

2415 SE 11th Ave
Portland, OR 97214
Ph: 503-231-9320
Fax: 503-231-9344

Sample Condition Check List

Customer Name : Point Source **COC # :** 87034

Method of Delivery: courier (client) other

Type of ice: (Ice) Blue None **Cooler Temperature:** 1.5°C

Matrix : (Soil) Water Other_____

	Yes	No	NA	Comments
Relinquish signed on Chain of Custody.	/			*
Received by signed on Chain of Custody.	/			*
Chain of Custody filled out.	/			*
Were samples Arrived within Hold Time.	/			* Same day
Rush Trun Around Time Requested. *If yes, how many days* ____			/	* Regular
Temperatures measured and written in correct place on COC.	/			* 1.5°C
Correct containers used.	/			* 40z
Sufficient Volume.	/			*
ID on COC and Sample labels match.	/			*
Duplicate jars and vials labeled with a, b, c, d etc.			/	* NO Dup Jar
All tests logged in checked against the COC.	/			*
The COC scanned into the main office computer.	/			*

FOR WATER SAMPLES:

Trip Blank: Yes Waiver on file Submitted by: _____
No

	Yes	No	Comments
Was sufficient volume provided for analysis.			*
Was sufficient volume provided for QC samples (at least two).			*
HCL Preserved vials.			*
HCL LOT Number: _____			
Were duplicate jars and vials labeled with a, b, c, d etc.			*
Headspace in VOA Vials (>6mm).			*

Client Notification/Resolution: _____

Comments: _____

Reviewed: _____ **Date:** 1/6/17

CSF-0004

FRIEDMAN & BRUYA ANALYTICAL REPORT #703265 DATED MARCH 28, 2017

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 28, 2017

Andy Klopfenstein, Project Manager
Point Source Solutions
10445 SW Canyon Rd., Ste. 115
Beaverton, OR 97005

Dear Mr. Klopfenstein:

Included are the results from the testing of material submitted on March 15, 2017 from the 1024 SE Grand Ave OR161206-3C, F&BI 703265 project. There are 6 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
PSS0328R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 15, 2017 by Friedman & Bruya, Inc. from the Point Source Solutions 1024 SE Grand Ave OR161206-3C, F&BI 703265 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Point Source Solutions
703265 -01	SS2

The sample did not contain of peaks indicating the presence of a Stoddard solvent range product.

The TO-15 gasoline range concentrations were quantified using a single point calibration at 200 ppbv.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SS2	Client:	Point Source Solutions
Date Received:	03/15/17	Project:	1024 SE Grand Ave OR161206-3C
Date Collected:	03/14/17	Lab ID:	703265-01 1/5
Date Analyzed:	03/17/17	Data File:	031717.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<1.8	<0.5	1-Butanol	<30	<10
Propene	<3.4	<2	Carbon tetrachloride	<3.1	<0.5
Dichlorodifluoromethane	<2.5	<0.5	Benzene	<1.6	<0.5
Chloromethane	<1	<0.5	Cyclohexane	<34	<10
F-114	<3.5	<0.5	2-Pentanone	<18	<5
Isobutene	<4.6	<2	3-Pentanone	<18	<5
Acetaldehyde	<45	<25	Pentanal	<18	<5
Vinyl chloride	<1.3	<0.5	1,2-Dichloropropane	<2.3	<0.5
1,3-Butadiene	<1.1	<0.5	1,4-Dioxane	<1.8	<0.5
Bromomethane	<1.9	<0.5	Bromodichloromethane	<3.4	<0.5
Chloroethane	<1.3	<0.5	Trichloroethene	<2.7	<0.5
Ethanol	210	110	cis-1,3-Dichloropropene	<2.3	<0.5
Acetonitrile	<8.4	<5	4-Methyl-2-pentanone	<20	<5
Acrolein	<4.6	<2	trans-1,3-Dichloropropene	<2.3	<0.5
Acrylonitrile	<1.1 ca	<0.5 ca	Toluene	5.2	1.4
Pentane	<15 ca	<5 ca	1,1,2-Trichloroethane	<2.7	<0.5
Trichlorofluoromethane	<2.8	<0.5	3-Hexanone	<20	<5
Acetone	97	41	2-Hexanone	<20	<5
2-Propanol	<43	<17	Hexanal	<20	<5
Isoprene	<1.4	<0.5	Tetrachloroethene	23	3.4
Iodomethane	<2.9	<0.5	Dibromochloromethane	<4.3	<0.5
1,1-Dichloroethene	<2	<0.5	1,2-Dibromoethane (EDB)	<3.8	<0.5
Methacrolein	<14	<5	Chlorobenzene	<2.3	<0.5
trans-1,2-Dichloroethene	<2	<0.5	Ethylbenzene	<2.2	<0.5
Cyclopentane	<1.4 ca	<0.5 ca	1,1,2,2-Tetrachloroethane	<3.4	<0.5
Methyl vinyl ketone	<5.7	<2	m,p-Xylene	7.6	1.8
Butanal	<15	<5	o-Xylene	4.1	0.95
Methylene chloride	<430	<120	Styrene	<4.3	<1
CFC-113	<3.8	<0.5	Bromoform	<10	<1
Carbon disulfide	<31	<10	Benzyl chloride	<2.6	<0.5
Methyl t-butyl ether	<1.8	<0.5	1,3,5-Trimethylbenzene	<12	<2.5
Vinyl acetate	<35 ca	<10 ca	1,2,4-Trimethylbenzene	<12	<2.5
1,1-Dichloroethane	<2	<0.5	1,3-Dichlorobenzene	<6	<1
cis-1,2-Dichloroethene	<2	<0.5	1,4-Dichlorobenzene	<3	<0.5
Hexane	<18	<5	1,2,3-Trimethylbenzene	<12	<2.5
Chloroform	<2.4	<0.5	1,2-Dichlorobenzene	<6	<1
2-Butanone (MEK)	<15	<5	1,2,4-Trichlorobenzene	<3.7	<0.5
1,2-Dichloroethane (EDC)	<2	<0.5	Naphthalene	2.6	0.50
1,1,1-Trichloroethane	<2.7	<0.5	Hexachlorobutadiene	<5.3	<0.5
Gasoline Range Organics	<2,100	<500			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Point Source Solutions
Date Received:	Not Applicable	Project:	1024 SE Grand Ave OR161206-3C
Date Collected:	Not Applicable	Lab ID:	07-536 mb
Date Analyzed:	03/16/17	Data File:	031607.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	MP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	99	70	130

Compounds:	Concentration ug/m3	Concentration ppbv	Compounds:	Concentration ug/m3	Concentration ppbv
Chlorodifluoromethane	<0.35	<0.1	1-Butanol	<6.1	<2
Propene	<0.69	<0.4	Carbon tetrachloride	<0.63	<0.1
Dichlorodifluoromethane	<0.49	<0.1	Benzene	<0.32	<0.1
Chloromethane	<0.21	<0.1	Cyclohexane	<6.9	<2
F-114	<0.7	<0.1	2-Pentanone	<3.5	<1
Isobutene	<0.92	<0.4	3-Pentanone	<3.5	<1
Acetaldehyde	<9	<5	Pentanal	<3.5	<1
Vinyl chloride	<0.26	<0.1	1,2-Dichloropropane	<0.46	<0.1
1,3-Butadiene	<0.22	<0.1	1,4-Dioxane	<0.36	<0.1
Bromomethane	<0.39	<0.1	Bromodichloromethane	<0.67	<0.1
Chloroethane	<0.26	<0.1	Trichloroethene	<0.54	<0.1
Ethanol	<7.5	<4	cis-1,3-Dichloropropene	<0.45	<0.1
Acetonitrile	<1.7	<1	4-Methyl-2-pentanone	<4.1	<1
Acrolein	<0.92	<0.4	trans-1,3-Dichloropropene	<0.45	<0.1
Acrylonitrile	<0.22	<0.1	Toluene	<0.38	<0.1
Pentane	<3 ca	<1 ca	1,1,2-Trichloroethane	<0.55	<0.1
Trichlorofluoromethane	<0.56	<0.1	3-Hexanone	<4.1	<1
Acetone	<4.8	<2	2-Hexanone	<4.1	<1
2-Propanol	<8.6	<3.5	Hexanal	<4.1	<1
Isoprene	<0.28	<0.1	Tetrachloroethene	<0.68	<0.1
Iodomethane	<0.58	<0.1	Dibromochloromethane	<0.85	<0.1
1,1-Dichloroethene	<0.4	<0.1	1,2-Dibromoethane (EDB)	<0.77	<0.1
Methacrolein	<2.9	<1	Chlorobenzene	<0.46	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1	Ethylbenzene	<0.43	<0.1
Cyclopentane	<0.29	<0.1	1,1,2,2-Tetrachloroethane	<0.69	<0.1
Methyl vinyl ketone	<1.1	<0.4	m,p-Xylene	<0.87	<0.2
Butanal	<2.9	<1	o-Xylene	<0.43	<0.1
Methylene chloride	<87	<25	Styrene	<0.85	<0.2
CFC-113	<0.77	<0.1	Bromoform	<2.1	<0.2
Carbon disulfide	<6.2	<2	Benzyl chloride	<0.52	<0.1
Methyl t-butyl ether	<0.36	<0.1	1,3,5-Trimethylbenzene	<2.5	<0.5
Vinyl acetate	<7	<2	1,2,4-Trimethylbenzene	<2.5	<0.5
1,1-Dichloroethane	<0.4	<0.1	1,3-Dichlorobenzene	<1.2	<0.2
cis-1,2-Dichloroethene	<0.4	<0.1	1,4-Dichlorobenzene	<0.6	<0.1
Hexane	<3.5	<1	1,2,3-Trimethylbenzene	<2.5	<0.5
Chloroform	<0.49	<0.1	1,2-Dichlorobenzene	<1.2	<0.2
2-Butanone (MEK)	<2.9	<1	1,2,4-Trichlorobenzene	<0.74	<0.1
1,2-Dichloroethane (EDC)	<0.4	<0.1	Naphthalene	<0.52	<0.1
1,1,1-Trichloroethane	<0.55	<0.1	Hexachlorobutadiene	<1.1	<0.1
Gasoline Range Organics	<410	<100			

Date of Report: 03/28/17
Date Received: 03/15/17
Project: 1024 SE Grand Ave OR161206-3C, F&BI 703265

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chlorodifluoromethane	ppbv	10	94	70-130
Propene	ppbv	10	78	70-130
Dichlorodifluoromethane	ppbv	10	93	70-130
Chloromethane	ppbv	10	94	70-130
F-114	ppbv	10	103	70-130
Isobutene	ppbv	10	93	70-130
Acetaldehyde	ppbv	10	94	70-130
Vinyl chloride	ppbv	10	100	70-130
1,3-Butadiene	ppbv	10	98	70-130
Bromomethane	ppbv	10	104	70-130
Chloroethane	ppbv	10	99	70-130
Ethanol	ppbv	10	101	70-130
Acetonitrile	ppbv	10	95	70-130
Acrolein	ppbv	10	95	70-130
Acrylonitrile	ppbv	10	71	70-130
Pentane	ppbv	10	69 vo	70-130
Trichlorofluoromethane	ppbv	10	103	70-130
Acetone	ppbv	10	97	70-130
2-Propanol	ppbv	10	99	70-130
Isoprene	ppbv	10	87	70-130
Iodomethane	ppbv	10	94	70-130
1,1-Dichloroethene	ppbv	10	91	70-130
Methacrolein	ppbv	10	84	70-130
trans-1,2-Dichloroethene	ppbv	10	92	70-130
Cyclopentane	ppbv	10	74	70-130
Methyl Vinyl Ketone	ppbv	10	100	70-130
Butanal	ppbv	10	91	70-130
Methylene chloride	ppbv	10	92	70-130
CFC-113	ppbv	10	95	70-130
Carbon disulfide	ppbv	10	91	70-130
Methyl t-butyl ether	ppbv	10	84	70-130
Vinyl acetate	ppbv	10	70	70-130
1,1-Dichloroethane	ppbv	10	88	70-130
cis-1,2-Dichloroethene	ppbv	10	88	70-130
Hexane	ppbv	10	84	70-130
Chloroform	ppbv	10	90	70-130
2-Butanone (MEK)	ppbv	10	90	70-130
1,2-Dichloroethane (EDC)	ppbv	10	86	70-130
1,1,1-Trichloroethane	ppbv	10	84	70-130
1-Butanol	ppbv	10	80	70-130
Carbon tetrachloride	ppbv	10	86	70-130

Date of Report: 03/28/17
Date Received: 03/15/17
Project: 1024 SE Grand Ave OR161206-3C, F&BI 703265

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ppbv	10	88	70-130
Cyclohexane	ppbv	10	83	70-130
2-Pentanone	ppbv	10	93	70-130
3-Pentanone	ppbv	10	93	70-130
Pentanal	ppbv	10	85	70-130
1,2-Dichloropropane	ppbv	10	94	70-130
1,4-Dioxane	ppbv	10	103	70-130
Bromodichloromethane	ppbv	10	95	70-130
Trichloroethene	ppbv	10	95	70-130
cis-1,3-Dichloropropene	ppbv	10	87	70-130
4-Methyl-2-pentanone	ppbv	10	96	70-130
trans-1,3-Dichloropropene	ppbv	10	88	70-130
Toluene	ppbv	10	94	70-130
1,1,2-Trichloroethane	ppbv	10	102	70-130
3-Hexanone	ppbv	10	94	70-130
2-Hexanone	ppbv	10	94	70-130
Hexanal	ppbv	10	89	70-130
Tetrachloroethene	ppbv	10	98	70-130
Dibromochloromethane	ppbv	10	104	70-130
1,2-Dibromoethane (EDB)	ppbv	10	101	70-130
Chlorobenzene	ppbv	10	99	70-130
Ethylbenzene	ppbv	10	97	70-130
1,1,2,2,-Tetrachloroethane	ppbv	10	100	70-130
m,p-Xylene	ppbv	20	97	70-130
o-Xylene	ppbv	10	96	70-130
Styrene	ppbv	10	94	70-130
Bromoform	ppbv	10	101	70-130
Benzyl chloride	ppbv	10	83	70-130
1,3,5-Trimethylbenzene	ppbv	10	96	70-130
1,2,4-Trimethylbenzene	ppbv	10	98	70-130
1,3-Dichlorobenzene	ppbv	10	100	70-130
1,4-Dichlorobenzene	ppbv	10	98	70-130
1,2,3-Trimethylbenzene	ppbv	10	97	70-130
1,2-Dichlorobenzene	ppbv	10	100	70-130
1,2,4-Trichlorobenzene	ppbv	10	83	70-130
Naphthalene	ppbv	10	84	70-130
Hexachlorobutadiene	ppbv	10	89	70-130
Gasoline Range Organics	ppbv	10	97	70-130

Data Qualifiers & Definitions

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

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

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

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

cf - The sample was centrifuged prior to analysis.

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

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

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

703265

SAMPLE CHAIN OF CUSTODY

ME 03/15/17

Page # 1 of 1

Report To: Andy Klopfenstein

Company: Point Source Solutions

Address: 10445 SW Canyon Rd Ste 115

City, State, ZIP: Beaverton, OR 97005

Phone: 503-780-1569 Email: Andy@pointsourcesolutions.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
1024 SE Grand Ave	OR161206-3C

REMARKS	INVOICE TO
per AK 3/24/17 AS	

TURNAROUND TIME
- ☐ Standard
- ☒ RUSH 5 day
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Contr. ID	Date Sampled	Field Initial Press. (Hg)	Field Initial Time	Field Final Press. (Hg)	Field Final Time	TO-15 Full Scan	TO-15 BTEXN	TO-15 cVOCs	6x/2prop	Notes
SS2	01	2294	FB106	3/14/17	29.5	10:06	5	10:12	X			X	need standard solvents
													Samples received at 20 C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:				
Received by: [signature]	Nhan Phan	FeBI	3/15/17	1400
Relinquished by:				
Received by:				

FORMS\COC\COCTO-15.DOC

APEX LABS ANALYTICAL REPORT #A7C0451 DATED MARCH 29, 2017

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Wednesday, March 29, 2017

Gil Cobb
Point Source Solutions, LLC
10445 SW Canyon Road Suite 115
Beaverton, OR 97005

RE: 7-Eleven / OR161202-3B

Enclosed are the results of analyses for work order A7C0451, which was received by the laboratory on 3/15/2017 at 2:05:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: KFriscia@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories

Kevin J. Friscia, Project Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB19-S1-10	A7C0451-01	Soil	03/14/17 12:15	03/15/17 14:05
SB19-S2-17.5	A7C0451-02	Soil	03/14/17 12:58	03/15/17 14:05
SB20-S1-10	A7C0451-03	Soil	03/14/17 14:00	03/15/17 14:05
SB20-S2-18	A7C0451-04	Soil	03/14/17 15:00	03/15/17 14:05
SB21-S1-16	A7C0451-05	Soil	03/14/17 15:25	03/15/17 14:05

Apex Laboratories

Kevin J. Friscia, Project Manager

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Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB19-S1-10 (A7C0451-01)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Gasoline Range Organics	ND	---	7.77	mg/kg dry	50	03/15/17 18:53	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 109 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
SB19-S2-17.5 (A7C0451-02)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Gasoline Range Organics	ND	---	8.49	mg/kg dry	50	03/15/17 19:20	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
SB20-S1-10 (A7C0451-03)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Gasoline Range Organics	**15000**	---	324	mg/kg dry	2000	03/15/17 20:41	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 193 %*	*Limits: 50-150 %*	1	"	"	*S-08*
1,4-Difluorobenzene (Sur)			*104 %*	*Limits: 50-150 %*	"	"	"	
SB20-S2-18 (A7C0451-04)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Gasoline Range Organics	ND	---	4.73	mg/kg dry	50	03/15/17 19:47	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 107 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
SB21-S1-16 (A7C0451-05)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Gasoline Range Organics	ND	---	7.19	mg/kg dry	50	03/15/17 20:14	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	

Apex Laboratories

Kevin J. Friscia, Project Manager

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Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB19-S1-10 (A7C0451-01)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Acetone	ND	---	1550	ug/kg dry	50	03/15/17 18:53	5035/8260B	
Benzene	ND	---	15.5	"	"	"	"	
Bromobenzene	ND	---	38.9	"	"	"	"	
Bromochloromethane	ND	---	77.7	"	"	"	"	
Bromodichloromethane	ND	---	155	"	"	"	"	
Bromoform	ND	---	155	"	"	"	"	
Bromomethane	ND	---	777	"	"	"	"	
2-Butanone (MEK)	ND	---	777	"	"	"	"	
n-Butylbenzene	ND	---	77.7	"	"	"	"	
sec-Butylbenzene	ND	---	77.7	"	"	"	"	
tert-Butylbenzene	ND	---	77.7	"	"	"	"	
Carbon tetrachloride	ND	---	77.7	"	"	"	"	
Chlorobenzene	ND	---	38.9	"	"	"	"	
Chloroethane	ND	---	777	"	"	"	"	Q-31
Chloroform	ND	---	77.7	"	"	"	"	
Chloromethane	ND	---	389	"	"	"	"	
2-Chlorotoluene	ND	---	77.7	"	"	"	"	
4-Chlorotoluene	ND	---	77.7	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	389	"	"	"	"	
Dibromochloromethane	ND	---	155	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	77.7	"	"	"	"	
Dibromomethane	ND	---	77.7	"	"	"	"	
1,2-Dichlorobenzene	ND	---	38.9	"	"	"	"	
1,3-Dichlorobenzene	ND	---	38.9	"	"	"	"	
1,4-Dichlorobenzene	ND	---	38.9	"	"	"	"	
Dichlorodifluoromethane	ND	---	155	"	"	"	"	
1,1-Dichloroethane	ND	---	38.9	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	38.9	"	"	"	"	
1,1-Dichloroethene	ND	---	38.9	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	38.9	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	38.9	"	"	"	"	
1,2-Dichloropropane	ND	---	38.9	"	"	"	"	
1,3-Dichloropropane	ND	---	77.7	"	"	"	"	
2,2-Dichloropropane	ND	---	77.7	"	"	"	"	
1,1-Dichloropropene	ND	---	77.7	"	"	"	"	

Apex Laboratories

Kevin J. Friscia, Project Manager

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Tigard, OR 97223
503-718-2323 Phone
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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB19-S1-10 (A7C0451-01)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
cis-1,3-Dichloropropene	ND	---	77.7	ug/kg dry	50	"	5035/8260B	
trans-1,3-Dichloropropene	ND	---	77.7	"	"	"	"	
Ethylbenzene	ND	---	38.9	"	"	"	"	
Hexachlorobutadiene	ND	---	155	"	"	"	"	
2-Hexanone	ND	---	777	"	"	"	"	
Isopropylbenzene	ND	---	77.7	"	"	"	"	
4-Isopropyltoluene	ND	---	77.7	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	777	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	77.7	"	"	"	"	
Methylene chloride	ND	---	389	"	"	"	"	
Naphthalene	ND	---	155	"	"	"	"	
n-Propylbenzene	ND	---	38.9	"	"	"	"	
Styrene	ND	---	77.7	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	38.9	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	77.7	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	38.9	"	"	"	"	
Toluene	ND	---	77.7	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	389	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	389	"	"	"	"	
1,1,1-Trichloroethane	ND	---	38.9	"	"	"	"	
1,1,2-Trichloroethane	ND	---	38.9	"	"	"	"	
Trichloroethene (TCE)	ND	---	38.9	"	"	"	"	
Trichlorofluoromethane	ND	---	155	"	"	"	"	Q-31
1,2,3-Trichloropropane	ND	---	77.7	"	"	"	"	
1,2,4-Trimethylbenzene	**103**	---	77.7	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	77.7	"	"	"	"	
Vinyl chloride	ND	---	38.9	"	"	"	"	
m,p-Xylene	ND	---	77.7	"	"	"	"	
o-Xylene	ND	---	38.9	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 114 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*99 %*	*Limits: 70-130 %*	"	"	"	

Apex Laboratories

Kevin J. Friscia, Project Manager

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Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB19-S2-17.5 (A7C0451-02)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Acetone	ND	---	1700	ug/kg dry	50	03/15/17 19:20	5035/8260B	
Benzene	ND	---	17.0	"	"	"	"	
Bromobenzene	ND	---	42.4	"	"	"	"	
Bromochloromethane	ND	---	84.9	"	"	"	"	
Bromodichloromethane	ND	---	170	"	"	"	"	
Bromoform	ND	---	170	"	"	"	"	
Bromomethane	ND	---	849	"	"	"	"	
2-Butanone (MEK)	ND	---	849	"	"	"	"	
n-Butylbenzene	ND	---	84.9	"	"	"	"	
sec-Butylbenzene	ND	---	84.9	"	"	"	"	
tert-Butylbenzene	ND	---	84.9	"	"	"	"	
Carbon tetrachloride	ND	---	84.9	"	"	"	"	
Chlorobenzene	ND	---	42.4	"	"	"	"	
Chloroethane	ND	---	849	"	"	"	"	Q-31
Chloroform	ND	---	84.9	"	"	"	"	
Chloromethane	ND	---	424	"	"	"	"	
2-Chlorotoluene	ND	---	84.9	"	"	"	"	
4-Chlorotoluene	ND	---	84.9	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	424	"	"	"	"	
Dibromochloromethane	ND	---	170	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	84.9	"	"	"	"	
Dibromomethane	ND	---	84.9	"	"	"	"	
1,2-Dichlorobenzene	ND	---	42.4	"	"	"	"	
1,3-Dichlorobenzene	ND	---	42.4	"	"	"	"	
1,4-Dichlorobenzene	ND	---	42.4	"	"	"	"	
Dichlorodifluoromethane	ND	---	170	"	"	"	"	
1,1-Dichloroethane	ND	---	42.4	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	42.4	"	"	"	"	
1,1-Dichloroethene	ND	---	42.4	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	42.4	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	42.4	"	"	"	"	
1,2-Dichloropropane	ND	---	42.4	"	"	"	"	
1,3-Dichloropropane	ND	---	84.9	"	"	"	"	
2,2-Dichloropropane	ND	---	84.9	"	"	"	"	
1,1-Dichloropropene	ND	---	84.9	"	"	"	"	

Apex Laboratories

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Kevin J. Friscia, Project Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB19-S2-17.5 (A7C0451-02)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
cis-1,3-Dichloropropene	ND	---	84.9	ug/kg dry	50	"	5035/8260B	
trans-1,3-Dichloropropene	ND	---	84.9	"	"	"	"	
Ethylbenzene	ND	---	42.4	"	"	"	"	
Hexachlorobutadiene	ND	---	170	"	"	"	"	
2-Hexanone	ND	---	849	"	"	"	"	
Isopropylbenzene	ND	---	84.9	"	"	"	"	
4-Isopropyltoluene	ND	---	84.9	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	849	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	84.9	"	"	"	"	
Methylene chloride	ND	---	424	"	"	"	"	
Naphthalene	ND	---	170	"	"	"	"	
n-Propylbenzene	ND	---	42.4	"	"	"	"	
Styrene	ND	---	84.9	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	42.4	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	84.9	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	42.4	"	"	"	"	
Toluene	ND	---	84.9	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	424	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	424	"	"	"	"	
1,1,1-Trichloroethane	ND	---	42.4	"	"	"	"	
1,1,2-Trichloroethane	ND	---	42.4	"	"	"	"	
Trichloroethene (TCE)	ND	---	42.4	"	"	"	"	
Trichlorofluoromethane	ND	---	170	"	"	"	"	Q-31
1,2,3-Trichloropropane	ND	---	84.9	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	84.9	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	84.9	"	"	"	"	
Vinyl chloride	ND	---	42.4	"	"	"	"	
m,p-Xylene	ND	---	84.9	"	"	"	"	
o-Xylene	ND	---	42.4	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 115 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*96 %*	*Limits: 70-130 %*	"	"	"	

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB20-S1-10 (A7C0451-03)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Acetone	ND	---	64900	ug/kg dry	2000	03/15/17 20:41	5035/8260B	
Benzene	ND	---	649	"	"	"	"	
Bromobenzene	ND	---	1620	"	"	"	"	
Bromochloromethane	ND	---	3240	"	"	"	"	
Bromodichloromethane	ND	---	6490	"	"	"	"	
Bromoform	ND	---	6490	"	"	"	"	
Bromomethane	ND	---	32400	"	"	"	"	
2-Butanone (MEK)	ND	---	32400	"	"	"	"	
n-Butylbenzene	**10300**	---	3240	"	"	"	"	M-02
sec-Butylbenzene	**15300**	---	3240	"	"	"	"	
tert-Butylbenzene	ND	---	3240	"	"	"	"	
Carbon tetrachloride	ND	---	3240	"	"	"	"	
Chlorobenzene	ND	---	1620	"	"	"	"	
Chloroethane	ND	---	32400	"	"	"	"	Q-31
Chloroform	ND	---	3240	"	"	"	"	
Chloromethane	ND	---	16200	"	"	"	"	
2-Chlorotoluene	ND	---	3240	"	"	"	"	
4-Chlorotoluene	ND	---	3240	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	16200	"	"	"	"	
Dibromochloromethane	ND	---	6490	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	3240	"	"	"	"	
Dibromomethane	ND	---	3240	"	"	"	"	
1,2-Dichlorobenzene	ND	---	1620	"	"	"	"	
1,3-Dichlorobenzene	ND	---	1620	"	"	"	"	
1,4-Dichlorobenzene	ND	---	1620	"	"	"	"	
Dichlorodifluoromethane	ND	---	6490	"	"	"	"	
1,1-Dichloroethane	ND	---	1620	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	1620	"	"	"	"	
1,1-Dichloroethene	ND	---	1620	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	1620	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	1620	"	"	"	"	
1,2-Dichloropropane	ND	---	1620	"	"	"	"	
1,3-Dichloropropane	ND	---	3240	"	"	"	"	
2,2-Dichloropropane	ND	---	3240	"	"	"	"	
1,1-Dichloropropene	ND	---	3240	"	"	"	"	

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB20-S1-10 (A7C0451-03)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
cis-1,3-Dichloropropene	ND	---	3240	ug/kg dry	2000	"	5035/8260B	
trans-1,3-Dichloropropene	ND	---	3240	"	"	"	"	
Ethylbenzene	**1820**	---	1620	"	"	"	"	
Hexachlorobutadiene	ND	---	6490	"	"	"	"	
2-Hexanone	ND	---	32400	"	"	"	"	
Isopropylbenzene	**5320**	---	3240	"	"	"	"	
4-Isopropyltoluene	**12700**	---	3240	"	"	"	"	M-02
4-Methyl-2-pentanone (MiBK)	ND	---	32400	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	3240	"	"	"	"	
Methylene chloride	ND	---	16200	"	"	"	"	
Naphthalene	ND	---	6490	"	"	"	"	
n-Propylbenzene	**14600**	---	1620	"	"	"	"	
Styrene	ND	---	3240	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	1620	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	19500	"	"	"	"	R-02
Tetrachloroethene (PCE)	ND	---	1620	"	"	"	"	
Toluene	ND	---	3240	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	16200	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	16200	"	"	"	"	
1,1,1-Trichloroethane	ND	---	1620	"	"	"	"	
1,1,2-Trichloroethane	ND	---	1620	"	"	"	"	
Trichloroethene (TCE)	ND	---	1620	"	"	"	"	
Trichlorofluoromethane	ND	---	6490	"	"	"	"	Q-31
1,2,3-Trichloropropane	ND	---	22700	"	"	"	"	R-02
1,2,4-Trimethylbenzene	**99600**	---	3240	"	"	"	"	
1,3,5-Trimethylbenzene	**33700**	---	3240	"	"	"	"	
Vinyl chloride	ND	---	1620	"	"	"	"	
m,p-Xylene	**14300**	---	3240	"	"	"	"	
o-Xylene	**4310**	---	1620	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 116 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*94 %*	*Limits: 70-130 %*	"	"	"	

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB20-S2-18 (A7C0451-04)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Acetone	ND	---	946	ug/kg dry	50	03/15/17 19:47	5035/8260B	
Benzene	ND	---	9.46	"	"	"	"	
Bromobenzene	ND	---	23.7	"	"	"	"	
Bromochloromethane	ND	---	47.3	"	"	"	"	
Bromodichloromethane	ND	---	94.6	"	"	"	"	
Bromoform	ND	---	94.6	"	"	"	"	
Bromomethane	ND	---	473	"	"	"	"	
2-Butanone (MEK)	ND	---	473	"	"	"	"	
n-Butylbenzene	ND	---	47.3	"	"	"	"	
sec-Butylbenzene	ND	---	47.3	"	"	"	"	
tert-Butylbenzene	ND	---	47.3	"	"	"	"	
Carbon tetrachloride	ND	---	47.3	"	"	"	"	
Chlorobenzene	ND	---	23.7	"	"	"	"	
Chloroethane	ND	---	473	"	"	"	"	Q-31
Chloroform	ND	---	47.3	"	"	"	"	
Chloromethane	ND	---	237	"	"	"	"	
2-Chlorotoluene	ND	---	47.3	"	"	"	"	
4-Chlorotoluene	ND	---	47.3	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	237	"	"	"	"	
Dibromochloromethane	ND	---	94.6	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	47.3	"	"	"	"	
Dibromomethane	ND	---	47.3	"	"	"	"	
1,2-Dichlorobenzene	ND	---	23.7	"	"	"	"	
1,3-Dichlorobenzene	ND	---	23.7	"	"	"	"	
1,4-Dichlorobenzene	ND	---	23.7	"	"	"	"	
Dichlorodifluoromethane	ND	---	94.6	"	"	"	"	
1,1-Dichloroethane	ND	---	23.7	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	23.7	"	"	"	"	
1,1-Dichloroethene	ND	---	23.7	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	23.7	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	23.7	"	"	"	"	
1,2-Dichloropropane	ND	---	23.7	"	"	"	"	
1,3-Dichloropropane	ND	---	47.3	"	"	"	"	
2,2-Dichloropropane	ND	---	47.3	"	"	"	"	
1,1-Dichloropropene	ND	---	47.3	"	"	"	"	

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB20-S2-18 (A7C0451-04)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
cis-1,3-Dichloropropene	ND	---	47.3	ug/kg dry	50	"	5035/8260B	
trans-1,3-Dichloropropene	ND	---	47.3	"	"	"	"	
Ethylbenzene	ND	---	23.7	"	"	"	"	
Hexachlorobutadiene	ND	---	94.6	"	"	"	"	
2-Hexanone	ND	---	473	"	"	"	"	
Isopropylbenzene	ND	---	47.3	"	"	"	"	
4-Isopropyltoluene	ND	---	47.3	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	473	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	47.3	"	"	"	"	
Methylene chloride	ND	---	237	"	"	"	"	
Naphthalene	ND	---	94.6	"	"	"	"	
n-Propylbenzene	ND	---	23.7	"	"	"	"	
Styrene	ND	---	47.3	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	23.7	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	47.3	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	23.7	"	"	"	"	
Toluene	ND	---	47.3	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	237	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	237	"	"	"	"	
1,1,1-Trichloroethane	ND	---	23.7	"	"	"	"	
1,1,2-Trichloroethane	ND	---	23.7	"	"	"	"	
Trichloroethene (TCE)	ND	---	23.7	"	"	"	"	
Trichlorofluoromethane	ND	---	94.6	"	"	"	"	Q-31
1,2,3-Trichloropropane	ND	---	47.3	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	47.3	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	47.3	"	"	"	"	
Vinyl chloride	ND	---	23.7	"	"	"	"	
m,p-Xylene	ND	---	47.3	"	"	"	"	
o-Xylene	ND	---	23.7	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 114 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 70-130 %*	"	"	"	

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB21-S1-16 (A7C0451-05)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
Acetone	ND	---	1440	ug/kg dry	50	03/15/17 20:14	5035/8260B	
Benzene	ND	---	14.4	"	"	"	"	
Bromobenzene	ND	---	36.0	"	"	"	"	
Bromochloromethane	ND	---	71.9	"	"	"	"	
Bromodichloromethane	ND	---	144	"	"	"	"	
Bromoform	ND	---	144	"	"	"	"	
Bromomethane	ND	---	719	"	"	"	"	
2-Butanone (MEK)	ND	---	719	"	"	"	"	
n-Butylbenzene	ND	---	71.9	"	"	"	"	
sec-Butylbenzene	ND	---	71.9	"	"	"	"	
tert-Butylbenzene	ND	---	71.9	"	"	"	"	
Carbon tetrachloride	ND	---	71.9	"	"	"	"	
Chlorobenzene	ND	---	36.0	"	"	"	"	
Chloroethane	ND	---	719	"	"	"	"	Q-31
Chloroform	ND	---	71.9	"	"	"	"	
Chloromethane	ND	---	360	"	"	"	"	
2-Chlorotoluene	ND	---	71.9	"	"	"	"	
4-Chlorotoluene	ND	---	71.9	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	360	"	"	"	"	
Dibromochloromethane	ND	---	144	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	71.9	"	"	"	"	
Dibromomethane	ND	---	71.9	"	"	"	"	
1,2-Dichlorobenzene	ND	---	36.0	"	"	"	"	
1,3-Dichlorobenzene	ND	---	36.0	"	"	"	"	
1,4-Dichlorobenzene	ND	---	36.0	"	"	"	"	
Dichlorodifluoromethane	ND	---	144	"	"	"	"	
1,1-Dichloroethane	ND	---	36.0	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	36.0	"	"	"	"	
1,1-Dichloroethene	ND	---	36.0	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	36.0	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	36.0	"	"	"	"	
1,2-Dichloropropane	ND	---	36.0	"	"	"	"	
1,3-Dichloropropane	ND	---	71.9	"	"	"	"	
2,2-Dichloropropane	ND	---	71.9	"	"	"	"	
1,1-Dichloropropene	ND	---	71.9	"	"	"	"	

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB21-S1-16 (A7C0451-05)			**Matrix: Soil**		**Batch: 7030628**			**V-15**
cis-1,3-Dichloropropene	ND	---	71.9	ug/kg dry	50	"	5035/8260B	
trans-1,3-Dichloropropene	ND	---	71.9	"	"	"	"	
Ethylbenzene	ND	---	36.0	"	"	"	"	
Hexachlorobutadiene	ND	---	144	"	"	"	"	
2-Hexanone	ND	---	719	"	"	"	"	
Isopropylbenzene	ND	---	71.9	"	"	"	"	
4-Isopropyltoluene	ND	---	71.9	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	719	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	71.9	"	"	"	"	
Methylene chloride	ND	---	360	"	"	"	"	
Naphthalene	ND	---	144	"	"	"	"	
n-Propylbenzene	ND	---	36.0	"	"	"	"	
Styrene	ND	---	71.9	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	36.0	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	71.9	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	36.0	"	"	"	"	
Toluene	ND	---	71.9	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	360	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	360	"	"	"	"	
1,1,1-Trichloroethane	ND	---	36.0	"	"	"	"	
1,1,2-Trichloroethane	ND	---	36.0	"	"	"	"	
Trichloroethene (TCE)	ND	---	36.0	"	"	"	"	
Trichlorofluoromethane	ND	---	144	"	"	"	"	Q-31
1,2,3-Trichloropropane	ND	---	71.9	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	71.9	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	71.9	"	"	"	"	
Vinyl chloride	ND	---	36.0	"	"	"	"	
m,p-Xylene	ND	---	71.9	"	"	"	"	
o-Xylene	ND	---	36.0	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 114 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 70-130 %*	"	"	"	

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
SB19-S1-10 (A7C0451-01)			**Matrix: Soil**		**Batch: 7030630**			
% Solids	**73.7**	---	1.00	% by Weight	1	03/16/17 07:28	EPA 8000C	
SB19-S2-17.5 (A7C0451-02)			**Matrix: Soil**		**Batch: 7030630**			
% Solids	**73.9**	---	1.00	% by Weight	1	03/16/17 07:28	EPA 8000C	
SB20-S1-10 (A7C0451-03)			**Matrix: Soil**		**Batch: 7030630**			
% Solids	**73.7**	---	1.00	% by Weight	1	03/16/17 07:28	EPA 8000C	
SB20-S2-18 (A7C0451-04)			**Matrix: Soil**		**Batch: 7030630**			
% Solids	**94.7**	---	1.00	% by Weight	1	03/16/17 07:28	EPA 8000C	
SB21-S1-16 (A7C0451-05)			**Matrix: Soil**		**Batch: 7030630**			
% Solids	**76.6**	---	1.00	% by Weight	1	03/16/17 07:28	EPA 8000C	

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030628 - EPA 5035A							Soil					
Blank (7030628-BLK1)					Prepared: 03/15/17 09:00 Analyzed: 03/15/17 12:09							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*100 %*		*50-150 %*				*"*			
LCS (7030628-BS2)					Prepared: 03/15/17 09:00 Analyzed: 03/15/17 11:42							
NWTPH-Gx (MS)												
Gasoline Range Organics	27.7	---	5.00	mg/kg wet	50	25.0	---	111	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*101 %*		*50-150 %*				*"*			

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030628 - EPA 5035A							Soil					
Blank (7030628-BLK1)					Prepared: 03/15/17 09:00 Analyzed: 03/15/17 12:09							
5035/8260B												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	6.67	"	"	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	"	"	---	---	---	---	---	---	
Bromodichloromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
Bromoform	ND	---	66.7	"	"	---	---	---	---	---	---	
Bromomethane	ND	---	333	"	"	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	"	"	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	"	"	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Chloroethane	ND	---	333	"	"	---	---	---	---	---	---	Q-31
Chloroform	ND	---	33.3	"	"	---	---	---	---	---	---	
Chloromethane	ND	---	167	"	"	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	"	"	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	33.3	"	"	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	"	"	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	16.7	"	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	33.3	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	"	"	---	---	---	---	---	---	

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030628 - EPA 5035A							**Soil**					
Blank (7030628-BLK1)					Prepared: 03/15/17 09:00 Analyzed: 03/15/17 12:09							
5035/8260B												
1,1-Dichloropropene	ND	---	33.3	ug/kg wet	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	333	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	167	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Styrene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	33.3	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	"	"	---	---	---	---	---	---	Q-31
1,2,3-Trichloropropane	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	"	"	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 116 %* *Limits: 70-130 %* *Dilution: 1x*
Toluene-d8 (Surr) *98 %* *70-130 %* *"*
4-Bromofluorobenzene (Surr) *96 %* *70-130 %* *"*

LCS (7030628-BS1) Prepared: 03/15/17 09:00 Analyzed: 03/15/17 11:15

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030628 - EPA 5035A							Soil					
LCS (7030628-BS1)					Prepared: 03/15/17 09:00 Analyzed: 03/15/17 11:15							
5035/8260B												
Acetone	2270	---	1000	ug/kg wet	50	2000	---	113	65-135%	---	---	
Benzene	1330	---	10.0	"	"	1000	---	133	"	---	---	
Bromobenzene	1100	---	25.0	"	"	"	---	110	"	---	---	
Bromochloromethane	1130	---	50.0	"	"	"	---	113	"	---	---	
Bromodichloromethane	1240	---	100	"	"	"	---	124	"	---	---	
Bromoform	1280	---	100	"	"	"	---	128	"	---	---	
Bromomethane	1210	---	500	"	"	"	---	121	"	---	---	
2-Butanone (MEK)	2180	---	500	"	"	2000	---	109	"	---	---	
n-Butylbenzene	1130	---	50.0	"	"	1000	---	113	"	---	---	
sec-Butylbenzene	1120	---	50.0	"	"	"	---	112	"	---	---	
tert-Butylbenzene	1040	---	50.0	"	"	"	---	104	"	---	---	
Carbon tetrachloride	1270	---	50.0	"	"	"	---	127	"	---	---	
Chlorobenzene	1110	---	25.0	"	"	"	---	111	"	---	---	
Chloroethane	598	---	500	"	"	"	---	60	"	---	---	Q-31
Chloroform	1220	---	50.0	"	"	"	---	122	"	---	---	
Chloromethane	912	---	250	"	"	"	---	91	"	---	---	
2-Chlorotoluene	1090	---	50.0	"	"	"	---	109	"	---	---	
4-Chlorotoluene	1070	---	50.0	"	"	"	---	107	"	---	---	
1,2-Dibromo-3-chloropropane	1240	---	250	"	"	"	---	124	"	---	---	
Dibromochloromethane	1190	---	100	"	"	"	---	119	"	---	---	
1,2-Dibromoethane (EDB)	1150	---	50.0	"	"	"	---	115	"	---	---	
Dibromomethane	1200	---	50.0	"	"	"	---	120	"	---	---	
1,2-Dichlorobenzene	1150	---	25.0	"	"	"	---	115	"	---	---	
1,3-Dichlorobenzene	1120	---	25.0	"	"	"	---	112	"	---	---	
1,4-Dichlorobenzene	1110	---	25.0	"	"	"	---	111	"	---	---	
Dichlorodifluoromethane	773	---	100	"	"	"	---	77	"	---	---	
1,1-Dichloroethane	1140	---	25.0	"	"	"	---	114	"	---	---	
1,2-Dichloroethane (EDC)	1090	---	25.0	"	"	"	---	109	"	---	---	
1,1-Dichloroethene	1050	---	25.0	"	"	"	---	105	"	---	---	
cis-1,2-Dichloroethene	1170	---	25.0	"	"	"	---	117	"	---	---	
trans-1,2-Dichloroethene	1140	---	25.0	"	"	"	---	114	"	---	---	
1,2-Dichloropropane	1240	---	25.0	"	"	"	---	124	"	---	---	
1,3-Dichloropropane	1120	---	50.0	"	"	"	---	112	"	---	---	
2,2-Dichloropropane	1090	---	50.0	"	"	"	---	109	"	---	---	

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030628 - EPA 5035A							**Soil**					
LCS (7030628-BS1)					Prepared: 03/15/17 09:00 Analyzed: 03/15/17 11:15							
5035/8260B												
1,1-Dichloropropene	1230	---	50.0	ug/kg wet	"	"	---	123	"	---	---	
cis-1,3-Dichloropropene	980	---	50.0	"	"	"	---	98	"	---	---	
trans-1,3-Dichloropropene	1020	---	50.0	"	"	"	---	102	"	---	---	
Ethylbenzene	1090	---	25.0	"	"	"	---	109	"	---	---	
Hexachlorobutadiene	1130	---	100	"	"	"	---	113	"	---	---	
2-Hexanone	1960	---	500	"	"	2000	---	98	"	---	---	
Isopropylbenzene	1120	---	50.0	"	"	1000	---	112	"	---	---	
4-Isopropyltoluene	1120	---	50.0	"	"	"	---	112	"	---	---	
4-Methyl-2-pentanone (MiBK)	1870	---	500	"	"	2000	---	94	"	---	---	
Methyl tert-butyl ether (MTBE)	1100	---	50.0	"	"	1000	---	110	"	---	---	
Methylene chloride	1320	---	250	"	"	"	---	132	"	---	---	
Naphthalene	1310	---	100	"	"	"	---	131	"	---	---	
n-Propylbenzene	1140	---	25.0	"	"	"	---	114	"	---	---	
Styrene	1130	---	50.0	"	"	"	---	113	"	---	---	
1,1,1,2-Tetrachloroethane	1170	---	25.0	"	"	"	---	117	"	---	---	
1,1,2,2-Tetrachloroethane	1290	---	50.0	"	"	"	---	129	"	---	---	
Tetrachloroethene (PCE)	1100	---	25.0	"	"	"	---	110	"	---	---	
Toluene	1120	---	50.0	"	"	"	---	112	"	---	---	
1,2,3-Trichlorobenzene	1180	---	250	"	"	"	---	118	"	---	---	
1,2,4-Trichlorobenzene	1140	---	250	"	"	"	---	114	"	---	---	
1,1,1-Trichloroethane	1180	---	25.0	"	"	"	---	118	"	---	---	
1,1,2-Trichloroethane	1160	---	25.0	"	"	"	---	116	"	---	---	
Trichloroethene (TCE)	1250	---	25.0	"	"	"	---	125	"	---	---	
Trichlorofluoromethane	600	---	100	"	"	"	---	60	"	---	---	Q-31
1,2,3-Trichloropropane	1170	---	50.0	"	"	"	---	117	"	---	---	
1,2,4-Trimethylbenzene	1090	---	50.0	"	"	"	---	109	"	---	---	
1,3,5-Trimethylbenzene	1110	---	50.0	"	"	"	---	111	"	---	---	
Vinyl chloride	971	---	25.0	"	"	"	---	97	"	---	---	
m,p-Xylene	2180	---	50.0	"	"	2000	---	109	"	---	---	
o-Xylene	1090	---	25.0	"	"	1000	---	109	"	---	---	

Surr: 1,4-Difluorobenzene (Surr)	*Recovery: 114 %*	*Limits: 70-130 %*	*Dilution: 1x*
Toluene-d8 (Surr)	*99 %*	*70-130 %*	*"*
4-Bromofluorobenzene (Surr)	*95 %*	*70-130 %*	*"*

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7030630 - Total Solids (Dry Weight)												**Soil**
Duplicate (7030630-DUP3)						Prepared: 03/15/17 18:09		Analyzed: 03/16/17 07:28				
QC Source Sample: SB21-S1-16 (A7C0451-05)												
EPA 8000C												
% Solids	**76.4**	---	1.00	% by Weight	1	---	76.6	---	---	0.3	10%	

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 7030628							
A7C0451-01	Soil	NWTPH-Gx (MS)	03/14/17 12:15	03/15/17 16:16	5.66g/5mL	5g/5mL	0.88
A7C0451-02	Soil	NWTPH-Gx (MS)	03/14/17 12:58	03/15/17 16:16	5.04g/5mL	5g/5mL	0.99
A7C0451-03	Soil	NWTPH-Gx (MS)	03/14/17 14:00	03/15/17 16:16	5.36g/5mL	5g/5mL	0.93
A7C0451-04	Soil	NWTPH-Gx (MS)	03/14/17 15:00	03/15/17 16:16	5.93g/5mL	5g/5mL	0.84
A7C0451-05	Soil	NWTPH-Gx (MS)	03/14/17 15:25	03/15/17 16:16	5.76g/5mL	5g/5mL	0.87

Volatile Organic Compounds by EPA 8260B

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 7030628							
A7C0451-01	Soil	5035/8260B	03/14/17 12:15	03/15/17 16:16	5.66g/5mL	5g/5mL	0.88
A7C0451-02	Soil	5035/8260B	03/14/17 12:58	03/15/17 16:16	5.04g/5mL	5g/5mL	0.99
A7C0451-03	Soil	5035/8260B	03/14/17 14:00	03/15/17 16:16	5.36g/5mL	5g/5mL	0.93
A7C0451-04	Soil	5035/8260B	03/14/17 15:00	03/15/17 16:16	5.93g/5mL	5g/5mL	0.84
A7C0451-05	Soil	5035/8260B	03/14/17 15:25	03/15/17 16:16	5.76g/5mL	5g/5mL	0.87

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 7030630							
A7C0451-01	Soil	EPA 8000C	03/14/17 12:15	03/15/17 18:09	1N/A/1N/A	1N/A/1N/A	NA
A7C0451-02	Soil	EPA 8000C	03/14/17 12:58	03/15/17 18:09	1N/A/1N/A	1N/A/1N/A	NA
A7C0451-03	Soil	EPA 8000C	03/14/17 14:00	03/15/17 18:09	1N/A/1N/A	1N/A/1N/A	NA
A7C0451-04	Soil	EPA 8000C	03/14/17 15:00	03/15/17 18:09	1N/A/1N/A	1N/A/1N/A	NA
A7C0451-05	Soil	EPA 8000C	03/14/17 15:25	03/15/17 18:09	1N/A/1N/A	1N/A/1N/A	NA

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

Notes and Definitions

Qualifiers:

M-02	Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
Q-31	Estimated Results. Recovery of Continuing Calibration Verification sample below lower control limit for this analyte. Results are likely biased low.
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
S-08	TPH-Gx Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract. See 8260B results for accurate Surrogate recovery.
V-15	Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
---	QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
***	Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

Kevin J. Friscia, Project Manager

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Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

APEX LABS — CHAIN OF CUSTODY

Lab # A7C0451 COC 1 of 1

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

PO#

Company: Point Source Solutions Project Mgr: Gil Project Name: 7-eleven Project # OR161202-3B

Address: 10445 SW Canyon Rd. Ste 115 Phone: 503-780-1569 Email: Andy@pointsource solutions.com

Sampled by: ATK Beav 97005

Site Location: (OR) WA Other:

ANALYSIS REQUEST

	SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	RCRA Metals (8)	TCLP Metals (8)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS TCLP	1200-COLS	1200-Z
1	SB19-S1-10		3/14/17	12:15	S	1			X	X												
2	SB19-S2-17.5		↓	12:58	S	1			X	X												
3	SB20-S1-10		↓	14:00	S	1			X	X												
4	SB20-S2-18		↓	15:00	S	1			X	X												
5	SB21-S1-16		↓	15:25	S	1			X	X												
6																						
7																						
8																						
9																						
10																						

Normal Turn Around Time (TAT) = 10 Business Days YES NO

TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY (5 DAY) Other: ______

SAMPLES ARE HELD FOR 30 DAYS

SPECIAL INSTRUCTIONS: check for stoddard solvents. All samples.

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date: 3/15/17	Signature: [signature] Date: 3/15/17	Signature: Date:	Signature: Date:
Printed Name: Andy Hoffenstein Time: 14:05	Printed Name: [illegible] Time: 14:05	Printed Name: Time:	Printed Name: Time:
Company:	Company: Apex	Company:	Company:

Apex Labs

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Point Source Solutions, LLC	Project: **7-Eleven**	
10445 SW Canyon Road Suite 115	Project Number: OR161202-3B	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/29/17 08:01

APEX LABS COOLER RECEIPT FORM

Client: Point Source Solutions Element WO#: A7 C0457

Project/Project #: 7-Eleven

Delivery info:

Date/Time Received: 3/15/17 @ 14:05 By: MS

Delivered by: Apex___Client X ESS___FedEx___UPS___Swift___Senvoy___SDS___Other___

Cooler Inspection Inspected by: MS : 3/15/17 @ 14:08

Chain of Custody Included? Yes X No___ Custody Seals? Yes___ No X

Signed/Dated by Client? Yes X No___

Signed/Dated by Apex? Yes X No___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	4.8						
Received on Ice? (Y/N)							
Temp. Blanks? (Y/N)							
Ice Type: (Gel/Real/Other)							
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why:

If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No (NA)

Samples Inspection: Inspected by: MS : 3/15/17 @ 14:13

All Samples Intact? Yes X No___ Comments:

Bottle Labels/COCs agree? Yes X No___ Comments: No T on cont

Containers/Volumes Received Appropriate for Analysis? Yes X No___ Comments:

Do VOA Vials have Visible Headspace? Yes___ No___ NA X

Comments

Water Samples: pH Checked and Appropriate (except VOAs): Yes___No___NA X

Comments:

Additional Information:

Labeled by: Witness: Cooler Inspected by: See Project Contact Form: Y

MS KM Client

Apex Laboratories

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Kevin J. Friscia, Project Manager

APEX LABS ANALYTICAL REPORT #A7C0722 DATED MARCH 30, 2017

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Thursday, March 30, 2017

Gil Cobb
Point Source Solutions, LLC
10445 SW Canyon Road Suite 115
Beaverton, OR 97005

RE: German Auto / OR1203-3C

Enclosed are the results of analyses for work order A7C0722, which was received by the laboratory on 3/23/2017 at 3:22:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: KFriscia@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories

Kevin J. Friscia, Project Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L RI PORT FOR Sv MPLI S

SAMPLE INFORMATION

SaE ple Ym	LaDoratorb Ym	Matrix	mate SaE pled	mate Receiyed
SB22-S1-12	A7C0722-01	Woil	03/22/17 20:00	03/23/17 15:22
SB23-S1-12	A7C0722-02	Woil	03/22/17 14:S5	03/23/17 15:22
SB26-S1-6.5	A7C0722-03	Woil	03/22/17 20:29	03/23/17 15:22
SB26-S2-13.7	A7C0722-0S	Woil	03/22/17 21:20	03/23/17 15:22
SB25-S1-16	A7C0722-05	Woil	03/22/17 22:07	03/23/17 15:22

Apex Laboratories

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB99-S1-19 (A07C099-C1)			**Matrix: Soil**		**Batch: 0C4C369**			**V-15**
Gasoline Range Organics	**13800**	---	152	6 g/kg urd	1000	03/2S/17 15:32	my TPH-Gx (MW)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 352 %*	*Limits: 50-150 %*	1	"	"	*S-08*
1,4-Difluorobenzene (Sur)			*102 %*	*Limits: 50-150 %*	"	"	"	
SB94-S1-19 (A07C099-C9RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
Gasoline Range Organics	**15000**	---	1810	6 g/kg urd	10000	03/28/17 15:32	my TPH-Gx (MW)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 121 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
SB96-S1-685 (A07C099-C4RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
Gasoline Range Organics	**18300**	---	1570	6 g/kg urd	10000	03/28/17 15:59	my TPH-Gx (MW)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 133 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*98 %*	*Limits: 50-150 %*	"	"	"	
SB96-S9-1480 (A07C099-C6RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
Gasoline Range Organics	**116**	---	4.23	6 g/kg urd	50	03/28/17 1S:34	my TPH-Gx (MW)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 133 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*105 %*	*Limits: 50-150 %*	"	"	"	
SB95-S1-16 (A07C099-C5RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
Gasoline Range Organics	mD	---	4.2S	6 g/kg urd	50	03/28/17 15:05	my TPH-Gx (MW)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	

Apex Laboratories

Kevin J. Friscia, Project Manager

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503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB99-S1-19 (A07 C099-C1)			**Matrix: Soil**		**Batch: 0C4C369**			**V-15**
Acetone	mD	---	30500	Ng/kg urd	1000	03/2S/17 15:32	5035/4280B	
Benzene	mD	---	305	"	"	"	"	
Bro6 obenzene	mD	---	781	"	"	"	"	
Bro6 ochloro6 ethane	mD	---	1520	"	"	"	"	
Bro6 ouichloro6 ethane	mD	---	3050	"	"	"	"	
Bro6 ofor6	mD	---	3050	"	"	"	"	
Bro6 o6 ethane	mD	---	15200	"	"	"	"	
2-BNanone (MEK)	mD	---	15200	"	"	"	"	
n-ButblDen4ene	**9770**	---	1520	"	"	"	"	
sec-ButblDen4ene	**11300**	---	1520	"	"	"	"	
tert-BNdlbenzene	mD	---	1520	"	"	"	"	
Carbon tetrachloriue	mD	---	1520	"	"	"	"	
Chlorobenzene	mD	---	781	"	"	"	"	
Chloroethane	mD	---	15200	"	"	"	"	EWT
Chlorofor6	mD	---	1520	"	"	"	"	
Chloro6 ethane	mD	---	7810	"	"	"	"	
2-ChlorotolNene	mD	---	3050	"	"	"	"	R-02
S-ChlorotolNene	mD	---	1520	"	"	"	"	
1,2-Dibro6 o-3-chloropropane	mD	---	7810	"	"	"	"	
Dibro6 ochloro6 ethane	mD	---	3050	"	"	"	"	
1,2-Dibro6 oethane (EDB)	mD	---	1520	"	"	"	"	
Dibro6 o6 ethane	mD	---	1520	"	"	"	"	
1,2-Dichlorobenzene	mD	---	781	"	"	"	"	
1,3-Dichlorobenzene	mD	---	781	"	"	"	"	
1,S-Dichlorobenzene	mD	---	781	"	"	"	"	
DichlorouiflNoro6 ethane	mD	---	3050	"	"	"	"	
1,1-Dichloroethane	mD	---	781	"	"	"	"	
1,2-Dichloroethane (EDC)	mD	---	781	"	"	"	"	
1,1-Dichloroethene	mD	---	781	"	"	"	"	
cis-1,2-Dichloroethene	mD	---	781	"	"	"	"	
trans-1,2-Dichloroethene	mD	---	781	"	"	"	"	
1,2-Dichloropropane	mD	---	781	"	"	"	"	
1,3-Dichloropropane	mD	---	1520	"	"	"	"	
2,2-Dichloropropane	mD	---	1520	"	"	"	"	
1,1-Dichloropropene	mD	---	1520	"	"	"	"	

Apex Laboratories

Kevin J. Friscia, Project Manager

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12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB99-S1-19 (A07 C099-C1)			**Matrix: Soil**		**Batch: 0C4C369**			**V-15**
cis-1,3-Dichloropropene	mD	---	1520	Ng/kg urd	1000	"	5035/4280B	
trans-1,3-Dichloropropene	mD	---	1520	"	"	"	"	
I thblDen4ene	**2680**	---	781	"	"	"	"	
HexachlorobNauiene	mD	---	3050	"	"	"	"	
2-Hexanone	mD	---	15200	"	"	"	"	
YsopropblDen4ene	**70z0**	---	1520	"	"	"	"	
6-Ysopropbltoluene	**12900**	---	1520	"	"	"	"	M-02
S-Methdl-2-pentanone (MiBK)	mD	---	15200	"	"	"	"	
Methdl tert-bNdl ether (MTBE)	mD	---	1520	"	"	"	"	
Methdlene chloriue	mD	---	7810	"	"	"	"	
Aaphthalene	**5880**	---	3050	"	"	"	"	
n-PropblDen4ene	**11200**	---	781	"	"	"	"	
Wdrene	mD	---	1520	"	"	"	"	
1,1,1,2-Tetrachloroethane	mD	---	781	"	"	"	"	
1,1,2,2-Tetrachloroethane	mD	---	2SS00	"	"	"	"	R-02
Tetrachloroethene (PCE)	mD	---	781	"	"	"	"	
TolNene	mD	---	1520	"	"	"	"	
1,2,3-Trichlorobenzene	mD	---	7810	"	"	"	"	
1,2,S-Trichlorobenzene	mD	---	7810	"	"	"	"	
1,1,1-Trichloroethane	mD	---	781	"	"	"	"	
1,1,2-Trichloroethane	mD	---	781	"	"	"	"	
Trichloroethene XTCI %	**2070**	---	781	"	"	"	"	
TrichloroflNoro6 ethane	mD	---	3050	"	"	"	"	EWT
1,2,3-Trichloropropane	mD	---	15200	"	"	"	"	R-02
1,2,6-TriE ethblDen4ene	**79000**	---	1520	"	"	"	"	
1,3,5-TriE ethblDen4ene	**5250**	---	1520	"	"	"	"	
Qindl chloriue	mD	---	781	"	"	"	"	
E ,p-Qblene	**62z0**	---	1520	"	"	"	"	
o-Qblene	**11000**	---	781	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*103 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*94 %*	*Limits: 70-130 %*	"	"	"	

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Kevin J. Friscia, Project Manager

Apex Labs

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB94-S1-19 (A07 C099-C9)			**Matrix: Soil**		**Batch: 0C4C369**			**V-15**
Acetone	mD	---	32200	Ng/kg urd	1000	03/2S/17 15:59	5035/4280B	
Ben4ene	**338**	---	322	"	"	"	"	
Bro6 obenzene	mD	---	405	"	"	"	"	
Bro6 ochloro6 ethane	mD	---	1810	"	"	"	"	
Bro6 ouichloro6 ethane	mD	---	3220	"	"	"	"	
Bro6 ofor6	mD	---	3220	"	"	"	"	
Bro6 o6 ethane	mD	---	18100	"	"	"	"	
2-BNanone (MEK)	mD	---	18100	"	"	"	"	
n-ButblDen4ene	**29700**	---	1810	"	"	"	"	M-02
sec-ButblDen4ene	**36300**	---	1810	"	"	"	"	
tert-ButblDen4ene	**2960**	---	1810	"	"	"	"	M-02
Carbon tetrachloriue	mD	---	1810	"	"	"	"	
Chlorobenzene	mD	---	405	"	"	"	"	
Chloroethane	mD	---	18100	"	"	"	"	EWT
Chlorofor6	mD	---	1810	"	"	"	"	
Chloro6 ethane	mD	---	4050	"	"	"	"	
2-ChlorotolNene	mD	---	1810	"	"	"	"	
S-ChlorotolNene	mD	---	1810	"	"	"	"	
1,2-Dibro6 o-3-chloropropane	mD	---	4050	"	"	"	"	
Dibro6 ochloro6 ethane	mD	---	3220	"	"	"	"	
1,2-Dibro6 oethane (EDB)	mD	---	1810	"	"	"	"	
Dibro6 o6 ethane	mD	---	1810	"	"	"	"	
1,2-Dichlorobenzene	mD	---	405	"	"	"	"	
1,3-Dichlorobenzene	mD	---	405	"	"	"	"	
1,S-Dichlorobenzene	mD	---	405	"	"	"	"	
DichlorouiflNoro6 ethane	mD	---	3220	"	"	"	"	
1,1-Dichloroethane	mD	---	405	"	"	"	"	
1,2-Dichloroethane (EDC)	mD	---	405	"	"	"	"	
1,1-Dichloroethene	mD	---	405	"	"	"	"	
cis-1,2-Dichloroethene	mD	---	405	"	"	"	"	
trans-1,2-Dichloroethene	mD	---	405	"	"	"	"	
1,2-Dichloropropane	mD	---	405	"	"	"	"	
1,3-Dichloropropane	mD	---	1810	"	"	"	"	
2,2-Dichloropropane	mD	---	1810	"	"	"	"	
1,1-Dichloropropene	mD	---	1810	"	"	"	"	
cis-1,3-Dichloropropene	mD	---	1810	"	"	"	"	

Apex Laboratories

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB94-S1-19 (A07 C099-C9)			**Matrix: Soil**		**Batch: 0C4C369**			**V-15**
trans-1,3-Dichloropropene	mD	---	1810	Ng/kg urd	1000	"	5035/4280B	
I thblDen4ene	**17z00**	---	405	"	"	"	"	
HexachlorobNauiene	mD	---	3220	"	"	"	"	
2-Hexanone	mD	---	18100	"	"	"	"	
YsopropblDen4ene	**25900**	---	1810	"	"	"	"	
6-Ysopropbltoluene	**37z00**	---	1810	"	"	"	"	M-02
S-Methdl-2-pentanone (MiBK)	mD	---	18100	"	"	"	"	
Methdl tert-bNdl ether (MTBE)	mD	---	1810	"	"	"	"	
Methdlene chloriue	mD	---	4050	"	"	"	"	
Aaphthalene	**27900**	---	3220	"	"	"	"	
n-PropblDen4ene	**69z00**	---	405	"	"	"	"	
Wdrene	mD	---	1810	"	"	"	"	
1,1,1,2-Tetrachloroethane	mD	---	405	"	"	"	"	
1,1,2,2-Tetrachloroethane	mD	---	25700	"	"	"	"	R-02
Tetrachloroethene XPCI %	**1630**	---	405	"	"	"	"	
TolNene	mD	---	1810	"	"	"	"	
1,2,3-Trichlorobenzene	mD	---	4050	"	"	"	"	
1,2,S-Trichlorobenzene	mD	---	4050	"	"	"	"	
1,1,1-Trichloroethane	mD	---	405	"	"	"	"	
1,1,2-Trichloroethane	mD	---	9850	"	"	"	"	R-02
Trichloroethene XTCI %	**12900**	---	405	"	"	"	"	
TrichloroflNoro6 ethane	mD	---	3220	"	"	"	"	EWT
1,2,3-Trichloropropane	mD	---	20900	"	"	"	"	R-02
1,2,6-TriE ethblDen4ene	**299000**	---	1810	"	"	"	"	
1,3,5-TriE ethblDen4ene	**103000**	---	1810	"	"	"	"	
Qindl chloriue	mD	---	405	"	"	"	"	
E ,p-Qblene	**28500**	---	1810	"	"	"	"	
o-Qblene	**51z00**	---	405	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*104 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*93 %*	*Limits: 70-130 %*	"	"	"	

Apex Laboratories

Kevin J. Friscia, Project Manager

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12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB96-S1-685 (A07 C099-C4)			**Matrix: Soil**		**Batch: 0C4C369**			**V-15**
Acetone	mD	---	31500	Ng/kg urd	1000	03/2S/17 18:28	5035/4280B	
Ben4ene	**1020**	---	315	"	"	"	"	
Bro6 obenzene	mD	---	747	"	"	"	"	
Bro6 ochloro6 ethane	mD	---	1570	"	"	"	"	
Bro6 ouichloro6 ethane	mD	---	3150	"	"	"	"	
Bro6 ofor6	mD	---	3150	"	"	"	"	
Bro6 o6 ethane	mD	---	15700	"	"	"	"	
2-BNanone (MEK)	mD	---	15700	"	"	"	"	
n-ButblDen4ene	**61000**	---	1570	"	"	"	"	M-02
sec-ButblDen4ene	**50300**	---	1570	"	"	"	"	
tert-ButblDen4ene	**6z70**	---	1570	"	"	"	"	M-02
Carbon tetrachloriue	mD	---	1570	"	"	"	"	
Chlorobenzene	mD	---	747	"	"	"	"	
Chloroethane	mD	---	15700	"	"	"	"	EWT
Chlorofor6	mD	---	1570	"	"	"	"	
Chloro6 ethane	mD	---	7470	"	"	"	"	
2-ChlorotolNene	mD	---	8290	"	"	"	"	R-02
S-ChlorotolNene	mD	---	1570	"	"	"	"	
1,2-Dibro6 o-3-chloropropane	mD	---	7470	"	"	"	"	
Dibro6 ochloro6 ethane	mD	---	3150	"	"	"	"	
1,2-Dibro6 oethane (EDB)	mD	---	1570	"	"	"	"	
Dibro6 o6 ethane	mD	---	1570	"	"	"	"	
1,2-Dichlorobenzene	mD	---	747	"	"	"	"	
1,3-Dichlorobenzene	mD	---	747	"	"	"	"	
1,S-Dichlorobenzene	mD	---	747	"	"	"	"	
DichlorouiflNoro6 ethane	mD	---	3150	"	"	"	"	
1,1-Dichloroethane	mD	---	747	"	"	"	"	
1,2-Dichloroethane (EDC)	mD	---	747	"	"	"	"	
1,1-Dichloroethene	mD	---	747	"	"	"	"	
cis-1,2-Dichloroethene	mD	---	747	"	"	"	"	
trans-1,2-Dichloroethene	mD	---	747	"	"	"	"	
1,2-michloropropane	**1380**	---	747	"	"	"	"	
1,3-Dichloropropane	mD	---	1570	"	"	"	"	
2,2-Dichloropropane	mD	---	1570	"	"	"	"	
1,1-Dichloropropene	mD	---	1570	"	"	"	"	
cis-1,3-Dichloropropene	mD	---	1570	"	"	"	"	

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Kevin J. Friscia, Project Manager

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Tigard, OR 97223
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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNion	Date Analdzeu	Methou	motes
SB96-S1-685 (A07 C099-C4)			**Matrix: Soil**		**Batch: 0C4C369**			**V-15**
trans-1,3-Dichloropropene	mD	---	1570	Ng/kg urd	1000	"	5035/4280B	
I thblDen4ene	**8180**	---	747	"	"	"	"	
HexachlorobNauiene	mD	---	3150	"	"	"	"	
2-Hexanone	mD	---	14900	"	"	"	"	R-02
YsopropblDen4ene	**2z100**	---	1570	"	"	"	"	
6-Ysopropbltoluene	**58000**	---	1570	"	"	"	"	M-02
S-Methdl-2-pentanone (MiBK)	mD	---	15700	"	"	"	"	
Methdl tert-bNdl ether (MTBE)	mD	---	1570	"	"	"	"	
Methdlene chloriue	mD	---	7470	"	"	"	"	
Aaphthalene	**37600**	---	3150	"	"	"	"	
n-PropblDen4ene	**59900**	---	747	"	"	"	"	
Wdrene	mD	---	1570	"	"	"	"	
1,1,1,2-Tetrachloroethane	mD	---	747	"	"	"	"	
1,1,2,2-Tetrachloroethane	mD	---	S7200	"	"	"	"	R-02
Tetrachloroethene (PCE)	mD	---	747	"	"	"	"	
TolNene	mD	---	1570	"	"	"	"	
1,2,3-Trichlorobenzene	mD	---	7470	"	"	"	"	
1,2,S-Trichlorobenzene	mD	---	7470	"	"	"	"	
1,1,1-Trichloroethane	mD	---	747	"	"	"	"	
1,1,2-Trichloroethane	mD	---	747	"	"	"	"	
Trichloroethene XTCI %	**6910**	---	747	"	"	"	"	
TrichloroflNoro6 ethane	mD	---	3150	"	"	"	"	EWT
1,2,3-Trichloropropane	mD	---	3S800	"	"	"	"	R-02
1,3,5-TriE ethblDen4ene	**139000**	---	1570	"	"	"	"	
Qindl chloriue	mD	---	747	"	"	"	"	
E ,p-Qblene	**15600**	---	1570	"	"	"	"	
o-Qblene	**6z700**	---	747	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 70-130 %*	"	"	"	

Apex Laboratories

Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB96-S1-685 (A07 C099-C4RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
1,2,6-TriE ethblDen4ene	**325000**	---	15700	Ng/kg urd	10000	03/28/17 15:59	5035/4280B	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*98 %*	*Limits: 70-130 %*	"	"	"	
SB96-S9-1480 (A07 C099-C6RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
Acetone	mD	---	1850	Ng/kg urd	50	03/28/17 1S:34	5035/4280B	
Ben4ene	**98.7**	---	18.5	"	"	"	"	
Bro6 obenzene	mD	---	S1.1	"	"	"	"	
Bro6 ochloro6 ethane	mD	---	42.3	"	"	"	"	
Bro6 ouichloro6 ethane	mD	---	185	"	"	"	"	
Bro6 ofor6	mD	---	185	"	"	"	"	
Bro6 o6 ethane	mD	---	423	"	"	"	"	
2-BNanone (MEK)	mD	---	423	"	"	"	"	
n-ButblDen4ene	**8z.6**	---	42.3	"	"	"	"	M-02
sec-ButblDen4ene	**8z.6**	---	42.3	"	"	"	"	
tert-BNdlbenzene	mD	---	42.3	"	"	"	"	
Carbon tetrachloriue	mD	---	42.3	"	"	"	"	
Chlorobenzene	mD	---	S1.1	"	"	"	"	
Chloroethane	mD	---	423	"	"	"	"	EWa
Chlorofor6	mD	---	42.3	"	"	"	"	
Chloro6 ethane	mD	---	S11	"	"	"	"	
2-ChlorotolNene	mD	---	42.3	"	"	"	"	
S-ChlorotolNene	mD	---	42.3	"	"	"	"	
1,2-Dibro6 o-3-chloropropane	mD	---	S11	"	"	"	"	
Dibro6 ochloro6 ethane	mD	---	185	"	"	"	"	
1,2-Dibro6 oethane (EDB)	mD	---	42.3	"	"	"	"	
Dibro6 o6 ethane	mD	---	42.3	"	"	"	"	
1,2-Dichlorobenzene	mD	---	S1.1	"	"	"	"	
1,3-Dichlorobenzene	mD	---	S1.1	"	"	"	"	
1,S-Dichlorobenzene	mD	---	S1.1	"	"	"	"	
DichlorouiflNoro6 ethane	mD	---	185	"	"	"	"	
1,1-Dichloroethane	mD	---	S1.1	"	"	"	"	
1,2-Dichloroethane (EDC)	mD	---	S1.1	"	"	"	"	
1,1-Dichloroethene	mD	---	S1.1	"	"	"	"	
cis-1,2-Dichloroethene	mD	---	S1.1	"	"	"	"	

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Kevin J. Friscia, Project Manager

Apex Labs

12232 S.W. Garden Place
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503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB96-S9-1480 (A07 C099-C6RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
trans-1,2-Dichloroethene	mD	---	S1.1	Ng/kg urd	50	"	5035/4280B	
1,2-michloropropane	**2zz**	---	S1.1	"	"	"	"	
1,3-Dichloropropane	mD	---	42.3	"	"	"	"	
2,2-Dichloropropane	mD	---	42.3	"	"	"	"	
1,1-Dichloropropene	mD	---	42.3	"	"	"	"	
cis-1,3-Dichloropropene	mD	---	42.3	"	"	"	"	
trans-1,3-Dichloropropene	mD	---	42.3	"	"	"	"	
I thblDen4ene	**z0.0**	---	S1.1	"	"	"	"	
HexachlorobNauiene	mD	---	185	"	"	"	"	
2-Hexanone	mD	---	423	"	"	"	"	
Isopropdlbenzene	mD	---	42.3	"	"	"	"	
6-Ysopropbltoluene	**122**	---	42.3	"	"	"	"	M-02
S-Methdl-2-pentanone (MiBK)	mD	---	423	"	"	"	"	
Methdl tert-bNdl ether (MTBE)	mD	---	42.3	"	"	"	"	
Methdlene chloriue	mD	---	S11	"	"	"	"	
maphthalene	mD	---	185	"	"	"	"	
n-PropblDen4ene	**11z**	---	S1.1	"	"	"	"	
Wdrene	mD	---	42.3	"	"	"	"	
1,1,1,2-Tetrachloroethane	mD	---	S1.1	"	"	"	"	
1,1,2,2-Tetrachloroethane	mD	---	2S7	"	"	"	"	R-02
Tetrachloroethene (PCE)	mD	---	S1.1	"	"	"	"	
TolNene	mD	---	42.3	"	"	"	"	
1,2,3-Trichlorobenzene	mD	---	S11	"	"	"	"	
1,2,S-Trichlorobenzene	mD	---	S11	"	"	"	"	
1,1,1-Trichloroethane	mD	---	S1.1	"	"	"	"	
1,1,2-Trichloroethane	mD	---	S1.1	"	"	"	"	
Trichloroethene XTCI %	**95.6**	---	S1.1	"	"	"	"	
TrichloroflNoro6 ethane	mD	---	185	"	"	"	"	EWa
1,2,3-Trichloropropane	mD	---	42.3	"	"	"	"	
1,2,6-TriE ethblDen4ene	**83z**	---	42.3	"	"	"	"	
1,3,5-TriE ethblDen4ene	**290**	---	42.3	"	"	"	"	
Qindl chloriue	mD	---	S1.1	"	"	"	"	
6 ,p-Vdlene	mD	---	42.3	"	"	"	"	
o-Vdlene	mD	---	S1.1	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*	*Limits: 70-130 %*	1	"	"	

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB96-S9-1480 (A07 C099-C6RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
Surrogate: Toluene-d8 (Surr)			*Recovery: 98 %*	*Limits: 70-130 %*	1	"	5035/4280B	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 70-130 %*	"	"	"	
SB95-S1-16 (A07 C099-C5RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
Acetone	mD	---	1850	Ng/kg urd	50	03/28/17 15:05	5035/4280B	
Benzene	mD	---	18.5	"	"	"	"	
Bro6 obenzene	mD	---	S1.2	"	"	"	"	
Bro6 ochloro6 ethane	mD	---	42.S	"	"	"	"	
Bro6 ouichloro6 ethane	mD	---	185	"	"	"	"	
Bro6 ofor6	mD	---	185	"	"	"	"	
Bro6 o6 ethane	mD	---	42S	"	"	"	"	
2-BNanone (MEK)	mD	---	42S	"	"	"	"	
n-BNdlbenzene	mD	---	42.S	"	"	"	"	
sec-BNdlbenzene	mD	---	42.S	"	"	"	"	
tert-BNdlbenzene	mD	---	42.S	"	"	"	"	
Carbon tetrachloriue	mD	---	42.S	"	"	"	"	
Chlorobenzene	mD	---	S1.2	"	"	"	"	
Chloroethane	mD	---	42S	"	"	"	"	EWa
Chlorofor6	mD	---	42.S	"	"	"	"	
Chloro6 ethane	mD	---	S12	"	"	"	"	
2-ChlorotolNene	mD	---	42.S	"	"	"	"	
S-ChlorotolNene	mD	---	42.S	"	"	"	"	
1,2-Dibro6 o-3-chloropropane	mD	---	S12	"	"	"	"	
Dibro6 ochloro6 ethane	mD	---	185	"	"	"	"	
1,2-Dibro6 oethane (EDB)	mD	---	42.S	"	"	"	"	
Dibro6 o6 ethane	mD	---	42.S	"	"	"	"	
1,2-Dichlorobenzene	mD	---	S1.2	"	"	"	"	
1,3-Dichlorobenzene	mD	---	S1.2	"	"	"	"	
1,S-Dichlorobenzene	mD	---	S1.2	"	"	"	"	
DichlorouiflNoro6 ethane	mD	---	185	"	"	"	"	
1,1-Dichloroethane	mD	---	S1.2	"	"	"	"	
1,2-Dichloroethane (EDC)	mD	---	S1.2	"	"	"	"	
1,1-Dichloroethene	mD	---	S1.2	"	"	"	"	
cis-1,2-Dichloroethene	mD	---	S1.2	"	"	"	"	
trans-1,2-Dichloroethene	mD	---	S1.2	"	"	"	"	
1,2-Dichloropropane	mD	---	S1.2	"	"	"	"	

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB95-S1-16 (A07 C099-C5RE1)			**Matrix: Soil**		**Batch: 0C4C325**			**V-15**
1,3-Dichloropropane	mD	---	42.S	Ng/kg urd	50	"	5035/4280B	
2,2-Dichloropropane	mD	---	42.S	"	"	"	"	
1,1-Dichloropropene	mD	---	42.S	"	"	"	"	
cis-1,3-Dichloropropene	mD	---	42.S	"	"	"	"	
trans-1,3-Dichloropropene	mD	---	42.S	"	"	"	"	
Ethdlbenzene	mD	---	S1.2	"	"	"	"	
HexachlorobNauiene	mD	---	185	"	"	"	"	
2-Hexanone	mD	---	42S	"	"	"	"	
Isopropdlbenzene	mD	---	42.S	"	"	"	"	
S-IsopropdltolNene	mD	---	42.S	"	"	"	"	
S-Methdl-2-pentanone (MiBK)	mD	---	42S	"	"	"	"	
Methdl tert-bNtdl ether (MTBE)	mD	---	42.S	"	"	"	"	
Methdlene chloriue	mD	---	S12	"	"	"	"	
maphthalene	mD	---	185	"	"	"	"	
n-Propdlbenzene	mD	---	S1.2	"	"	"	"	
Wdrene	mD	---	42.S	"	"	"	"	
1,1,1,2-Tetrachloroethane	mD	---	S1.2	"	"	"	"	
1,1,2,2-Tetrachloroethane	mD	---	42.S	"	"	"	"	
Tetrachloroethene (PCE)	mD	---	S1.2	"	"	"	"	
TolNene	mD	---	42.S	"	"	"	"	
1,2,3-Trichlorobenzene	mD	---	S12	"	"	"	"	
1,2,S-Trichlorobenzene	mD	---	S12	"	"	"	"	
1,1,1-Trichloroethane	mD	---	S1.2	"	"	"	"	
1,1,2-Trichloroethane	mD	---	S1.2	"	"	"	"	
Trichloroethene XTCI %	**67.0**	---	S1.2	"	"	"	"	
TrichloroflNoro6 ethane	mD	---	185	"	"	"	"	EWa
1,2,3-Trichloropropane	mD	---	42.S	"	"	"	"	
1,2,S-Tri6 ethdlbenzene	mD	---	42.S	"	"	"	"	
1,3,5-Tri6 ethdlbenzene	mD	---	42.S	"	"	"	"	
Qindl chloriue	mD	---	S1.2	"	"	"	"	
6 ,p-Vdlene	mD	---	42.S	"	"	"	"	
o-Vdlene	mD	---	S1.2	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 104 %*	*Limits: 70-130 %*	1	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*99 %*	*Limits: 70-130 %*	"	"	"	

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Kevin J. Friscia, Project Manager

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12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

v Av LNTYCv L Sv MPLI RI SULTS

Percent Dry Weight

Analdte	ResNt	MDL	Reporting Li6 it	Units	DilNtion	Date Analdzeu	Methou	motes
SB99-S1-19 (A07C099-C1)			**Matrix: Soil**		**Batch: 0C4C3m1**			
(Solids	**7z.2**	---	1.00	X bd y eight	1	03/27/17 04:00	EPA 4000C	
SB94-S1-19 (A07C099-C9)			**Matrix: Soil**		**Batch: 0C4C3m1**			
(Solids	**77.1**	---	1.00	X bd y eight	1	03/27/17 04:00	EPA 4000C	
SB96-S1-685 (A07C099-C4)			**Matrix: Soil**		**Batch: 0C4C3m1**			
(Solids	**7z.7**	---	1.00	X bd y eight	1	03/27/17 04:00	EPA 4000C	
SB96-S9-1480 (A07C099-C6)			**Matrix: Soil**		**Batch: 0C4C3m1**			
(Solids	**75.8**	---	1.00	X bd y eight	1	03/27/17 04:00	EPA 4000C	
SB95-S1-16 (A07C099-C5)			**Matrix: Soil**		**Batch: 0C4C3m1**			
(Solids	**77.0**	---	1.00	X bd y eight	1	03/27/17 04:00	EPA 4000C	

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL XY C%Sv MPLI RI SULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C369 - EPA 5C45A					**Soil**							
Blank X7030962-BLK1%				Prepareu: 03/2S/17 09:00	Analdzeu: 03/2S/17 11:27							
AWTPH-Gx XMS%												
Gasoline Range Organics	mD	---	3.33	6 g/kg %et	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 99 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*96 %*	*50-150 %*			*"*					
LCS X7030962-BS2%				Prepareu: 03/2S/17 09:00	Analdzeu: 03/2S/17 11:01							
AWTPH-Gx XMS%												
Gasoline Range Organics	28.2	---	5.00	6 g/kg %et	50	25.0	---	105	70-130X	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 96 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*			*"*					
Batch 0C4C325 - EPA 5C45A					**Soil**							
Blank X7030985-BLK1%				Prepareu: 03/28/17 09:30	Analdzeu: 03/28/17 12:10							
AWTPH-Gx XMS%												
Gasoline Range Organics	mD	---	3.33	6 g/kg %et	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 95 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*96 %*	*50-150 %*			*"*					
LCS X7030985-BS2%				Prepareu: 03/28/17 09:30	Analdzeu: 03/28/17 11:SS							
AWTPH-Gx XMS%												
Gasoline Range Organics	25.7	---	5.00	6 g/kg %et	50	25.0	---	103	70-130X	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 99 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*101 %*	*50-150 %*			*"*					

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL XY C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C369 - EPA 5C45A						**Soil**						
Blank X7030962-BLK1%					Prepareu: 03/2S/17 09:00 Analdzeu: 03/2S/17 11:27							
5035/82z0B												
Acetone	mD	---	887	Ng/kg %et	50	---	---	---	---	---	---	
Benzene	mD	---	8.87	"	"	---	---	---	---	---	---	
Bro6 obenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
Bro6 ochloro6 ethane	mD	---	33.3	"	"	---	---	---	---	---	---	
Bro6 ouichloro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	
Bro6 ofor6	mD	---	88.7	"	"	---	---	---	---	---	---	
Bro6 o6 ethane	mD	---	333	"	"	---	---	---	---	---	---	
2-BNanone (MEK)	mD	---	333	"	"	---	---	---	---	---	---	
n-BNdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
sec-BNdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
tert-BNdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloriue	mD	---	33.3	"	"	---	---	---	---	---	---	
Chlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
Chloroethane	mD	---	333	"	"	---	---	---	---	---	---	EWT
Chlorofor6	mD	---	33.3	"	"	---	---	---	---	---	---	
Chloro6 ethane	mD	---	187	"	"	---	---	---	---	---	---	
2-ChlorotolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
S-ChlorotolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibro6 o-3-chloropropane	mD	---	187	"	"	---	---	---	---	---	---	
Dibro6 ochloro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	
1,2-Dibro6 oethane (EDB)	mD	---	33.3	"	"	---	---	---	---	---	---	
Dibro6 o6 ethane	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
1,S-Dichlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
DichlorouiflNoro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	mD	---	18.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	mD	---	18.7	"	"	---	---	---	---	---	---	
cis-1,2-Dichloroethene	mD	---	18.7	"	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	mD	---	18.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	mD	---	33.3	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	mD	---	33.3	"	"	---	---	---	---	---	---	

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503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL XY C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C369 - EPA 5C45A						**Soil**						
Blank X7030962-BLK1%					Prepareu: 03/2S/17 09:00	Analdzeu: 03/2S/17 11:27						
5035/82z0B												
1,1-Dichloropropene	mD	---	33.3	Ng/kg %et	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	mD	---	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	mD	---	33.3	"	"	---	---	---	---	---	---	
Ethdlbenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
HexachlorobNauiene	mD	---	88.7	"	"	---	---	---	---	---	---	
2-Hexanone	mD	---	333	"	"	---	---	---	---	---	---	
Isopropdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
S-IsopropdltolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
S-Methdl-2-pentanone (MiBK)	mD	---	333	"	"	---	---	---	---	---	---	
Methdl tert-bNdl ether (MTBE)	mD	---	33.3	"	"	---	---	---	---	---	---	
Methdlene chloriue	mD	---	187	"	"	---	---	---	---	---	---	
maphthalene	mD	---	88.7	"	"	---	---	---	---	---	---	
n-Propdlbenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
Wdrene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	mD	---	33.3	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	mD	---	18.7	"	"	---	---	---	---	---	---	
TolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	mD	---	187	"	"	---	---	---	---	---	---	
1,2,S-Trichlorobenzene	mD	---	187	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	mD	---	18.7	"	"	---	---	---	---	---	---	
TrichloroflNoro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	EWT
1,2,3-Trichloropropane	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2,S-Tri6 ethdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Tri6 ethdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
Qindl chloriue	mD	---	18.7	"	"	---	---	---	---	---	---	
6 ,p-Vdlene	mD	---	33.3	"	"	---	---	---	---	---	---	
o-Vdlene	mD	---	18.7	"	"	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr)	*Recovery: 101 %*	*Limits: 70-130 %*	*Dilution: 1x*
Toluene-d8 (Surr)	*101 %*	*70-130 %*	*"*
4-Bromofluorobenzene (Surr)	*101 %*	*70-130 %*	*"*

LCS X7030962-BS1% Prepareu: 03/2S/17 09:00 Analdzeu: 03/2S/17 10:3S

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Kevin J. Friscia, Project Manager

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL X) C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C369 - EPA 5C45A						**Soil**						
LCS X7030962-BS1%					Prepareu: 03/2S/17 09:00		Analdzeu: 03/2S/17 10:3S					
5035/82z0B												
Acetone	1910	---	1000	Ng/kg %et	50	2000	---	98	85-135X	---	---	
Benzene	1050	---	10.0	"	"	1000	---	105	"	---	---	
Bro6 obenzene	1050	---	25.0	"	"	"	---	105	"	---	---	
Bro6 ochloro6 ethane	1100	---	50.0	"	"	"	---	110	"	---	---	
Bro6 ouichloro6 ethane	972	---	100	"	"	"	---	97	"	---	---	
Bro6 ofor6	430	---	100	"	"	"	---	43	"	---	---	
Bro6 o6 ethane	1190	---	500	"	"	"	---	119	"	---	---	
2-BNanone (MEK)	2000	---	500	"	"	2000	---	100	"	---	---	
n-BNdlbenzene	1090	---	50.0	"	"	1000	---	109	"	---	---	
sec-BNdlbenzene	1040	---	50.0	"	"	"	---	104	"	---	---	
tert-BNdlbenzene	1080	---	50.0	"	"	"	---	108	"	---	---	
Carbon tetrachloriue	997	---	50.0	"	"	"	---	100	"	---	---	
Chlorobenzene	1080	---	25.0	"	"	"	---	108	"	---	---	
Chloroethane	1190	---	500	"	"	"	---	119	"	---	---	EWT
Chlorofor6	1000	---	50.0	"	"	"	---	100	"	---	---	
Chloro6 ethane	1070	---	250	"	"	"	---	107	"	---	---	
2-ChlorotolNene	1090	---	50.0	"	"	"	---	109	"	---	---	
S-ChlorotolNene	10S0	---	50.0	"	"	"	---	10S	"	---	---	
1,2-Dibro6 o-3-chloropropane	482	---	250	"	"	"	---	48	"	---	---	
Dibro6 ochloro6 ethane	448	---	100	"	"	"	---	49	"	---	---	
1,2-Dibro6 oethane (EDB)	1090	---	50.0	"	"	"	---	109	"	---	---	
Dibro6 o6 ethane	1020	---	50.0	"	"	"	---	102	"	---	---	
1,2-Dichlorobenzene	1090	---	25.0	"	"	"	---	109	"	---	---	
1,3-Dichlorobenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
1,S-Dichlorobenzene	1080	---	25.0	"	"	"	---	108	"	---	---	
DichlorouiflNoro6 ethane	993	---	100	"	"	"	---	99	"	---	---	
1,1-Dichloroethane	1040	---	25.0	"	"	"	---	104	"	---	---	
1,2-Dichloroethane (EDC)	1100	---	25.0	"	"	"	---	110	"	---	---	
1,1-Dichloroethene	1030	---	25.0	"	"	"	---	103	"	---	---	
cis-1,2-Dichloroethene	1110	---	25.0	"	"	"	---	111	"	---	---	
trans-1,2-Dichloroethene	1040	---	25.0	"	"	"	---	104	"	---	---	
1,2-Dichloropropane	1110	---	25.0	"	"	"	---	111	"	---	---	
1,3-Dichloropropane	1070	---	50.0	"	"	"	---	107	"	---	---	
2,2-Dichloropropane	1090	---	50.0	"	"	"	---	109	"	---	---	

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10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL XY C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C369 - EPA 5C45A						**Soil**						
LCS X7030962-BS1%					Prepareu: 03/2S/17 09:00		Analdzeu: 03/2S/17 10:3S					
5035/82z0B												
1,1-Dichloropropene	1130	---	50.0	Ng/kg %et	"	"	---	113	"	---	---	
cis-1,3-Dichloropropene	1070	---	50.0	"	"	"	---	107	"	---	---	
trans-1,3-Dichloropropene	1090	---	50.0	"	"	"	---	109	"	---	---	
Ethdlbenzene	10S0	---	25.0	"	"	"	---	10S	"	---	---	
HexachlorobNauiene	11S0	---	100	"	"	"	---	11S	"	---	---	
2-Hexanone	2020	---	500	"	"	2000	---	101	"	---	---	
Isopropdlbenzene	1050	---	50.0	"	"	1000	---	105	"	---	---	
S-IsopropdltolNene	1050	---	50.0	"	"	"	---	105	"	---	---	
S-Methdl-2-pentanone (MiBK)	2100	---	500	"	"	2000	---	105	"	---	---	
Methdl tert-bNdl ether (MTBE)	974	---	50.0	"	"	1000	---	94	"	---	---	
Methdlene chloriue	1030	---	250	"	"	"	---	103	"	---	---	
maphthalene	1030	---	100	"	"	"	---	103	"	---	---	
n-Propdlbenzene	1080	---	25.0	"	"	"	---	108	"	---	---	
Wdrene	10S0	---	50.0	"	"	"	---	10S	"	---	---	
1,1,1,2-Tetrachloroethane	1070	---	25.0	"	"	"	---	107	"	---	---	
1,1,2,2-Tetrachloroethane	977	---	50.0	"	"	"	---	94	"	---	---	
Tetrachloroethene (PCE)	1100	---	25.0	"	"	"	---	110	"	---	---	
TolNene	1050	---	50.0	"	"	"	---	105	"	---	---	
1,2,3-Trichlorobenzene	1050	---	250	"	"	"	---	105	"	---	---	
1,2,S-Trichlorobenzene	1030	---	250	"	"	"	---	103	"	---	---	
1,1,1-Trichloroethane	1080	---	25.0	"	"	"	---	108	"	---	---	
1,1,2-Trichloroethane	10S0	---	25.0	"	"	"	---	10S	"	---	---	
Trichloroethene (TCE)	1110	---	25.0	"	"	"	---	111	"	---	---	
TrichloroflNoro6 ethane	1490	---	100	"	"	"	---	149	"	---	---	EWT
1,2,3-Trichloropropane	1120	---	50.0	"	"	"	---	112	"	---	---	
1,2,S-Tri6 ethdlbenzene	10S0	---	50.0	"	"	"	---	10S	"	---	---	
1,3,5-Tri6 ethdlbenzene	1030	---	50.0	"	"	"	---	103	"	---	---	
Qindl chloriue	1170	---	25.0	"	"	"	---	117	"	---	---	
6 ,p-Vdlene	2070	---	50.0	"	"	2000	---	10S	"	---	---	
o-Vdlene	1080	---	25.0	"	"	1000	---	108	"	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 102 %* *Limits: 70-130 %* *Dilution: 1x*
Toluene-d8 (Surr) *101 %* *70-130 %* *"*
4-Bromofluorobenzene (Surr) *98 %* *70-130 %* *"*

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Kevin J. Friscia, Project Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL X) C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C325 - EPA 5C45A						**Soil**						
Blank X7030985-BLK1%					Prepareu: 03/28/17 09:30 Analdzeu: 03/28/17 12:10							
5035/82z0B												
Acetone	mD	---	887	Ng/kg %et	50	---	---	---	---	---	---	
Benzene	mD	---	8.87	"	"	---	---	---	---	---	---	
Bro6 obenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
Bro6 ochloro6 ethane	mD	---	33.3	"	"	---	---	---	---	---	---	
Bro6 ouichloro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	
Bro6 ofor6	mD	---	88.7	"	"	---	---	---	---	---	---	
Bro6 o6 ethane	mD	---	333	"	"	---	---	---	---	---	---	
2-BNanone (MEK)	mD	---	333	"	"	---	---	---	---	---	---	
n-BNdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
sec-BNdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
tert-BNdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloriue	mD	---	33.3	"	"	---	---	---	---	---	---	
Chlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
Chloroethane	mD	---	333	"	"	---	---	---	---	---	---	EWa
Chlorofor6	mD	---	33.3	"	"	---	---	---	---	---	---	
Chloro6 ethane	mD	---	187	"	"	---	---	---	---	---	---	
2-ChlorotolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
S-ChlorotolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibro6 o-3-chloropropane	mD	---	187	"	"	---	---	---	---	---	---	
Dibro6 ochloro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	
1,2-Dibro6 oethane (EDB)	mD	---	33.3	"	"	---	---	---	---	---	---	
Dibro6 o6 ethane	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
1,S-Dichlorobenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
DichlorouiflNoro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	mD	---	18.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	mD	---	18.7	"	"	---	---	---	---	---	---	
cis-1,2-Dichloroethene	mD	---	18.7	"	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	mD	---	18.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	mD	---	33.3	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	mD	---	33.3	"	"	---	---	---	---	---	---	

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503-718-2323 Phone
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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL XY C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C325 - EPA 5C45A						**Soil**						
Blank X7030985-BLK1%					Prepareu: 03/28/17 09:30 Analdzeu: 03/28/17 12:10							
5035/82z0B												
1,1-Dichloropropene	mD	---	33.3	Ng/kg %et	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	mD	---	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	mD	---	33.3	"	"	---	---	---	---	---	---	
Ethdlbenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
HexachlorobNauiene	mD	---	88.7	"	"	---	---	---	---	---	---	
2-Hexanone	mD	---	333	"	"	---	---	---	---	---	---	
Isopropdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
S-IsopropdltolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
S-Methdl-2-pentanone (MiBK)	mD	---	333	"	"	---	---	---	---	---	---	
Methdl tert-bNdl ether (MTBE)	mD	---	33.3	"	"	---	---	---	---	---	---	
Methdlene chloriue	mD	---	187	"	"	---	---	---	---	---	---	
maphthalene	mD	---	88.7	"	"	---	---	---	---	---	---	
n-Propdlbenzene	mD	---	18.7	"	"	---	---	---	---	---	---	
Wdrene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	mD	---	33.3	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	mD	---	18.7	"	"	---	---	---	---	---	---	
TolNene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	mD	---	187	"	"	---	---	---	---	---	---	
1,2,S-Trichlorobenzene	mD	---	187	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	mD	---	18.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	mD	---	18.7	"	"	---	---	---	---	---	---	
TrichloroflNoro6 ethane	mD	---	88.7	"	"	---	---	---	---	---	---	EWa
1,2,3-Trichloropropane	mD	---	33.3	"	"	---	---	---	---	---	---	
1,2,S-Tri6 ethdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Tri6 ethdlbenzene	mD	---	33.3	"	"	---	---	---	---	---	---	
Qindl chloriue	mD	---	18.7	"	"	---	---	---	---	---	---	
6 ,p-Vdlene	mD	---	33.3	"	"	---	---	---	---	---	---	
o-Vdlene	mD	---	18.7	"	"	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 102 %* *Limits: 70-130 %* *Dilution: 1x*
Toluene-d8 (Surr) *102 %* *70-130 %* *"*
4-Bromofluorobenzene (Surr) *101 %* *70-130 %* *"*

LCS X7030985-BS1% Prepareu: 03/28/17 09:30 Analdzeu: 03/28/17 11:17

Apex Laboratories

Kevin J. Friscia, Project Manager

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10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL X) C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C325 - EPA 5C45A						**Soil**						
LCS X7030985-BS1%					Prepareu: 03/28/17 09:30 Analdzeu: 03/28/17 11:17							
5035/82z0B												
Acetone	1850	---	1000	Ng/kg %et	50	2000	---	42	85-135X	---	---	
Benzene	1010	---	10.0	"	"	1000	---	101	"	---	---	
Bro6 obenzene	99S	---	25.0	"	"	"	---	99	"	---	---	
Bro6 ochloro6 ethane	1050	---	50.0	"	"	"	---	105	"	---	---	
Bro6 ouichloro6 ethane	998	---	100	"	"	"	---	100	"	---	---	
Bro6 ofor6	470	---	100	"	"	"	---	47	"	---	---	
Bro6 o6 ethane	1310	---	500	"	"	"	---	131	"	---	---	
2-BNanone (MEK)	1710	---	500	"	"	2000	---	45	"	---	---	
n-BNdlbenzene	1010	---	50.0	"	"	1000	---	101	"	---	---	
sec-BNdlbenzene	1020	---	50.0	"	"	"	---	102	"	---	---	
tert-BNdlbenzene	992	---	50.0	"	"	"	---	99	"	---	---	
Carbon tetrachloriue	1040	---	50.0	"	"	"	---	104	"	---	---	
Chlorobenzene	1010	---	25.0	"	"	"	---	101	"	---	---	
Chloroethane	19S0	---	500	"	"	"	---	19S	"	---	---	EWa
Chlorofor6	94S	---	50.0	"	"	"	---	94	"	---	---	
Chloro6 ethane	10S0	---	250	"	"	"	---	10S	"	---	---	
2-ChlorotolNene	1030	---	50.0	"	"	"	---	103	"	---	---	
S-ChlorotolNene	949	---	50.0	"	"	"	---	99	"	---	---	
1,2-Dibro6 o-3-chloropropane	432	---	250	"	"	"	---	43	"	---	---	
Dibro6 ochloro6 ethane	908	---	100	"	"	"	---	91	"	---	---	
1,2-Dibro6 oethane (EDB)	10S0	---	50.0	"	"	"	---	10S	"	---	---	
Dibro6 o6 ethane	973	---	50.0	"	"	"	---	97	"	---	---	
1,2-Dichlorobenzene	1010	---	25.0	"	"	"	---	101	"	---	---	
1,3-Dichlorobenzene	1000	---	25.0	"	"	"	---	100	"	---	---	
1,S-Dichlorobenzene	99S	---	25.0	"	"	"	---	99	"	---	---	
DichlorouiflNoro6 ethane	1010	---	100	"	"	"	---	101	"	---	---	
1,1-Dichloroethane	1050	---	25.0	"	"	"	---	105	"	---	---	
1,2-Dichloroethane (EDC)	10S0	---	25.0	"	"	"	---	10S	"	---	---	
1,1-Dichloroethene	1100	---	25.0	"	"	"	---	110	"	---	---	
cis-1,2-Dichloroethene	1040	---	25.0	"	"	"	---	104	"	---	---	
trans-1,2-Dichloroethene	10S0	---	25.0	"	"	"	---	10S	"	---	---	
1,2-Dichloropropane	1050	---	25.0	"	"	"	---	105	"	---	---	
1,3-Dichloropropane	1000	---	50.0	"	"	"	---	100	"	---	---	
2,2-Dichloropropane	1110	---	50.0	"	"	"	---	111	"	---	---	

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10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL X) C%Sv MPLI RI SULTS

Volatile Organic 7 o. pounds by EPA 29mCB

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C325 - EPA 5C45A						**Soil**						
LCS X7030985-BS1%					Prepareu: 03/28/17 09:30 Analdzeu: 03/28/17 11:17							
5035/82z0B												
1,1-Dichloropropene	1110	---	50.0	Ng/kg %et	"	"	---	111	"	---	---	
cis-1,3-Dichloropropene	10S0	---	50.0	"	"	"	---	10S	"	---	---	
trans-1,3-Dichloropropene	1070	---	50.0	"	"	"	---	107	"	---	---	
Ethdlbenzene	1000	---	25.0	"	"	"	---	100	"	---	---	
HexachlorobNauiene	1050	---	100	"	"	"	---	105	"	---	---	
2-Hexanone	17S0	---	500	"	"	2000	---	47	"	---	---	
Isopropdlbenzene	1010	---	50.0	"	"	1000	---	101	"	---	---	
S-IsopropdltolNene	948	---	50.0	"	"	"	---	99	"	---	---	
S-Methdl-2-pentanone (MiBK)	1430	---	500	"	"	2000	---	91	"	---	---	
Methdl tert-bNdl ether (MTBE)	921	---	50.0	"	"	1000	---	92	"	---	---	
Methdlene chloriue	1020	---	250	"	"	"	---	102	"	---	---	
maphthalene	958	---	100	"	"	"	---	98	"	---	---	
n-Propdlbenzene	1010	---	25.0	"	"	"	---	101	"	---	---	
Wdrene	94S	---	50.0	"	"	"	---	94	"	---	---	
1,1,1,2-Tetrachloroethane	1100	---	25.0	"	"	"	---	110	"	---	---	
1,1,2,2-Tetrachloroethane	980	---	50.0	"	"	"	---	98	"	---	---	
Tetrachloroethene (PCE)	1080	---	25.0	"	"	"	---	108	"	---	---	
TolNene	1000	---	50.0	"	"	"	---	100	"	---	---	
1,2,3-Trichlorobenzene	942	---	250	"	"	"	---	94	"	---	---	
1,2,S-Trichlorobenzene	974	---	250	"	"	"	---	94	"	---	---	
1,1,1-Trichloroethane	1050	---	25.0	"	"	"	---	105	"	---	---	
1,1,2-Trichloroethane	941	---	25.0	"	"	"	---	94	"	---	---	
Trichloroethene (TCE)	1070	---	25.0	"	"	"	---	107	"	---	---	
TrichloroflNoro6 ethane	1520	---	100	"	"	"	---	152	"	---	---	EWa
1,2,3-Trichloropropane	1030	---	50.0	"	"	"	---	103	"	---	---	
1,2,S-Tri6 ethdlbenzene	979	---	50.0	"	"	"	---	94	"	---	---	
1,3,5-Tri6 ethdlbenzene	974	---	50.0	"	"	"	---	94	"	---	---	
Qindl chloriue	1180	---	25.0	"	"	"	---	118	"	---	---	
6 ,p-Vdlene	1990	---	50.0	"	"	2000	---	99	"	---	---	
o-Vdlene	1010	---	25.0	"	"	1000	---	101	"	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 102 %* *Limits: 70-130 %* *Dilution: 1x*
Toluene-d8 (Surr) *99 %* *70-130 %* *"*
4-Bromofluorobenzene (Surr) *99 %* *70-130 %* *"*

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10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

) Uv LYTN COATROL X) C%Sv MPLI RI SULTS

Percent Dry Weight

Analdte	ResNt	MDL	Reporting Li6 it	Units	Dil.	Wpike A6 oNnt	WoNrce ResNt	XREC	XREC Li6 its	RPD	RPD Li6 it	motes
Batch 0C4C3m1 - Total Solids (Dry Weight)							**Soil**					

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Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

Sv MPLI PRI Pv Rv TYOA YAFORMv TYOA

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5C45A

Lab mN6 ber	Matrix	Methou	Wa6 pleu	Prepareu	Wa6 ple Initial/Final	DefaNt Initial/Final	RL Prep Factor
Batch: 7030942							
A7C0722-01	Woil	my TPH-Gx (MW)	03/22/17 20:00	03/23/17 18:35	5.S2g/56 L	5g/56 L	0.92
Batch: 7030985							
A7C0722-02RE1	Woil	my TPH-Gx (MW)	03/22/17 14:S5	03/23/17 18:35	S.9Sg/56 L	5g/56 L	1.01
A7C0722-03RE1	Woil	my TPH-Gx (MW)	03/22/17 20:29	03/23/17 18:35	5.13g/56 L	5g/56 L	0.94
A7C0722-0SRE1	Woil	my TPH-Gx (MW)	03/22/17 21:20	03/23/17 18:35	S.94g/56 L	5g/56 L	1.00
A7C0722-05RE1	Woil	my TPH-Gx (MW)	03/22/17 22:07	03/23/17 18:35	S.41g/56 L	5g/56 L	1.0S

Volatile Organic 7 o. pounds by EPA 29mCB

Prep: EPA 5C45A

Lab mN6 ber	Matrix	Methou	Wa6 pleu	Prepareu	Wa6 ple Initial/Final	DefaNt Initial/Final	RL Prep Factor
Batch: 7030942							
A7C0722-01	Woil	5035/4280B	03/22/17 20:00	03/23/17 18:35	5.S2g/56 L	5g/56 L	0.92
A7C0722-02	Woil	5035/4280B	03/22/17 14:S5	03/23/17 18:35	S.9Sg/56 L	5g/56 L	1.01
A7C0722-03	Woil	5035/4280B	03/22/17 20:29	03/23/17 18:35	5.13g/56 L	5g/56 L	0.94
Batch: 7030985							
A7C0722-03RE1	Woil	5035/4280B	03/22/17 20:29	03/23/17 18:35	5.13g/56 L	5g/56 L	0.94
A7C0722-0SRE1	Woil	5035/4280B	03/22/17 21:20	03/23/17 18:35	S.94g/56 L	5g/56 L	1.00
A7C0722-05RE1	Woil	5035/4280B	03/22/17 22:07	03/23/17 18:35	S.41g/56 L	5g/56 L	1.0S

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab mN6 ber	Matrix	Methou	Wa6 pleu	Prepareu	Wa6 ple Initial/Final	DefaNt Initial/Final	RL Prep Factor
Batch: 7030961							
A7C0722-01	Woil	EPA 4000C	03/22/17 20:00	03/2S/17 18:04	1m/A/1m/A	1m/A/1m/A	mA
A7C0722-02	Woil	EPA 4000C	03/22/17 14:S5	03/2S/17 18:04	1m/A/1m/A	1m/A/1m/A	mA
A7C0722-03	Woil	EPA 4000C	03/22/17 20:29	03/2S/17 18:04	1m/A/1m/A	1m/A/1m/A	mA
A7C0722-0S	Woil	EPA 4000C	03/22/17 21:20	03/2S/17 18:04	1m/A/1m/A	1m/A/1m/A	mA
A7C0722-05	Woil	EPA 4000C	03/22/17 22:07	03/2S/17 18:04	1m/A/1m/A	1m/A/1m/A	mA

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10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

Aotes and mefinitions

wNalifiers:

EWT	ResNt reporteu as an Esti6 ateu QalNe. Analdte faileu initial calibration criteria
EWTa	ResNt reporteu as an Esti6 ateu QalNe. Analdte faileu initial calibration criteria.
M-02	DNe to 6 atrix interference, this analdte cannot be accNrateld qNantifieu. The reporteu resNt is esti6 ateu.
R-02	The Reporting Li6 it for this analdte has been raiseu to accoNnt for interference fro6 coelNting organic co6 poNnus present in the sa6 ple.
W04	TPH-Gx WNrogate recoverd cannot be accNrateld qNantifieu uNe to interference fro6 coelNting organic co6 poNnus present in the sa6 ple extract. Wee 4280B resNts for accNrate WNrogate recoverd.
Q-15	Wa6 ple aliqNot %as sNbsa6 pleu fro6 the sa6 ple container. The sNbsa6 pleu aliqNot %as preserveu in the laboratord %ithin S4 hoNrs of sa6 pling.

motes anu Conventions:

DET	Analdte DETECTED
mD	Analdte mOT DETECTED at or above the reporting li6 it
mR	mot Reporteu
urd	Wa6 ple resNts reporteu on a urd %eight basis. ResNts listeu as '%et' or %ithoN 'urd'uesignation are not urd %eight correcteu.
RPD	Relative Percent Difference
MDL	If MDL is not listeu, uata has been evalNateu to the Methou Reporting Li6 it onld.
y MWC	y ater Miscible Wolvent Correction has been applieu to ResNts anu MRLs for volatiles soil sa6 ples per EPA 4000C.
Batch wC	Unless specificalld reqNesteu, this report contains onld resNts for Batch wC ueriveu fro6 client sa6 ples inclNueu in this report. All analdses %ere perfor6 eu %ith the appropriate Batch wC (inclNuing Wa6 ple DNplicates, Matrix Wpikes anu/or Matrix Wpike DNplicates) in oruer to 6 eet or exceeu 6 ethou anu regNatord reqNire6 ents. And exceptions to this %ill be qNalifieu in this report. Co6 plete Batch wC resNts are available Npon reqNest. In cases %here there is insNfficient sa6 ple proviueu for Wa6 ple DNplicates anu/or Matrix Wpikes, a Lab Control Wa6 ple DNplicate (LCWDNp) is analdzeu to ue6 onstrate accNracd anu precision of the extraction anu analdsis.
Blank Policd	Apex assesses blank uata for potential high bias uo%n to a level eqNal to ½ the 6 ethou reporting li6 it (MRL), except for conventional che6 istrd anu HCID analdses %hich are assesseu onld to the MRL. Wa6 ple resNts flaggeu %ith a B or B-02 qNalifier are potentialld biaseu high if thed are less than ten ti6 es the level foNnu in the blank for inorganic analdses or less than five ti6 es the level foNnu in the blank for organic analdses. For accNrate co6 parison of volatile resNts to the level foNnu in the blank; %ater sa6 ple resNts shoNu be uiviueu bd the uilNtion factor, anu soil sa6 ple resNts shoNu be uiviueu bd 1/50 of the sa6 ple uilNtion to accoNnt for the sa6 ple prep factor. ResNts qNalifieu as reporteu belo% the MRL 6 ad inclNue a potential high bias if associateu %ith a B or B-02 qNalifieu blank. B anu B-02 qNalifications are not applieu to J qNalifieu resNts reporteu belo% the MRL.
---	wC resNts are not applicable. For exa6 ple, X Recoveries for Blanks anu DNplicates, X RPD for Blanks, Blank Wpikes anu Matrix Wpikes, etc.
***	Useu to inuicate a possible uiscrepancd %ith the Wa6 ple anu Wa6 ple DNplicate resNts %hen the X RPD is not available. In this case, either the Wa6 ple or the Wa6 ple DNplicate has a reportable resNt for this analdte, %hile the other is mon Detect (mD).

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kevin J. Friscia, Project Manager

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNte 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

CHAIN OF CUSTODY

Lab # A7C0722 COC 1 of 1

Company: Point Source — Project Mgr: Gil Cobb — Project Name: German Auto — Project # OR1203-3C

Address: 10445 SW Canyon Rd Ste 115 — Phone: 503-780-1569 — Fax: — Email: Gil@pointsource

Sampled by: ATK — PO#

Site Location: OR (circled) WA Other:

ANALYSIS REQUEST

	SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	RCRA Metals (8)	TCLP Metals (8)	AL, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS TCLP	1200-COLS	1200-Z
1	~~SB22-S1-12~~		3/22	18:47	S	1			X	X												
2	ATK 3/22/17																					
3	SB22-S1-12		3/22	20:00	S	1			X	X												
4	SB23-S1-12			19:45	S	1			X	X												
5	SB24-S1-4.5			20:29	S	1			X	X												
6	SB24-S2-13.7			21:20	S	1			X	X												
7	SB25-S1-14			22:07	S	1			X	X												
8	Floor Sump Contents			22:30		1			H	H												
9																						
10																						

Normal Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day — 2 Day — 3 Day — 4 DAY — 5 DAY (circled) — Other:

SAMPLES ARE HELD FOR 30 DAYS — YES — NO

SPECIAL INSTRUCTIONS: check for stoddards. CC: Andy@pointsource ...

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [illegible] Date: 3/22	Signature: [illegible] Date: 3/22	Signature: Date:	Signature: Date:
Printed Name: Andy Hoffenstein Time: 3/23	Printed Name: [illegible] Time: 3/23/17	Printed Name: Time:	Printed Name: Time:
Company: Point Source	Company: Apex	Company:	Company:

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Point Source Solutions, LLC	Project: **GerE an v uto**	
10SS5 Wy Candon Roau WNite 115	Project mN6 ber: OR1203-3C	**Reported:**
Beaverton, OR 97005	Project Manager: Gil Cobb	03/30/17 18:35

APEX LABS COOLER RECEIPT FORM

Client: Point Source Element WO#: A7C0722

Project/Project #: Germann Auto /

Delivery info:

Date/Time Received: 15:22 @ 3/23/17 By: [illegible]

Delivered by: Apex___ Client X ESS___ FedEx___ UPS___ Swift___ Senvoy___ SDS___ Other___

Cooler Inspection Inspected by: [illegible] : 3/23/17 @ 15:23

Chain of Custody Included? Yes X No___ Custody Seals? Yes___ No X

Signed/Dated by Client? Yes X No___

Signed/Dated by Apex? Yes___ No X

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	2.6						
Received on Ice? (Y/N)	Y						
Temp. Blanks? (Y/N)	N						
Ice Type: (Gel/Real/Other)	G						
Condition:	Good						

Cooler out of temp? (Y/N) Possible reason why:

If some coolers are in temp and some out, were green dot applied to out of temperature samples? Yes/No/NA

Samples Inspection: Inspected by: JS : 3/23/17 @ 1555

All Samples Intact? Yes X No___ Comments:

Bottle Labels/COCs agree? Yes X No___ Comments:

Containers/Volumes Received Appropriate for Analysis? Yes X No___ Comments:

No info on floor sump contents cont. info on bag. No T on all cont.

Do VOA Vials have Visible Headspace? Yes___ No___ NA X

Comments

Water Samples: pH Checked and Appropriate (except VOAs): Yes___ No___ NA X

Comments:

Additional Information:

Labeled by: KJ Witness: JM Cooler Inspected by: Client See Project Contact Form: Y

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kevin J. Friscia, Project Manager

CORRESPONDANCE

From:	Kevin Friscia
To:	Andy Klopfenstein; Gil Cobb
Subject:	7-Eleven---Gx/VOCs Draft Report---A7C0451
Date:	Wednesday, March 22, 2017 10:46:15 AM
Attachments:	A7C0451 DRAFT 03 22 17 1035---PSS---7-Eleven.pdf

Good Morning,

Your Gx/VOCs Draft results are enclosed for review.

Sample SB20-S1-10(A7C0451-03) carbon range is consistent with Stoddard Solvents on the Chromatograph.

Please feel free to contact me with any questions or requests.

Thank you,

Kevin Friscia
Project Manager & Sample Control Supervisor
APEX Laboratories
Main: 503-718-2323
Fax: 503-718-0333

From:	Kevin Friscia
To:	Andy Klopfenstein; Gil Cobb
Subject:	German Auto---Full Draft Report---A7C0722
Date:	Thursday, March 30, 2017 4:31:05 PM
Attachments:	A7C0722 DRAFT 03 30 17 1508---PSS---German Auto.pdf

Good Afternoon,

Your Draft results are enclosed for review.

The samples carbon ranges are consistent with Stoddard Solvents on the Chromatograph.

Please feel free to contact me with any questions or requests.

Thank you,

Kevin Friscia
Project Manager & Sample Control Supervisor
APEX Laboratories
Main: 503-718-2323
Fax: 503-718-0333

APPENDIX III

POINT SOURCE OCTOBER 2016 PHASE II ESA

PHASE II ENVIRONMENTAL SITE ASSESSMENT

7-ELEVEN PROPERTY
1024 SE GRAND AVENUE
PORTLAND, MULTNOMAH COUNTY, OREGON

Report Prepared for and Reliance Provided to:

CALDWELL PROPERTIES LLC C/O
WYSE REAL ESTATE ADVISORS
810 SE BELMONT STREET
PORTLAND, OREGON 97214

Point Source Solutions Project No: OR160930-4A
February 21, 2017

Field Work Conducted and Report Prepared in Accordance with the following:

ASTM Standard Practice E1903-11

Oregon State Board of Geologist Examiners Professional Practices Guideline (May 2014)

Point Source Solutions LLC (Point Source) is pleased to provide the results of the Environmental Subsurface Investigation performed at the 7-Eleven property located at 1024 SE Grand Avenue, Portland, Oregon 97214 ("Property"). This investigation was performed in accordance with Point Source's Proposal OR161202.3 as authorized by Wyse Real Estate Advisors on December 7, 2016.

PURPOSE

The purpose of this investigation is to assess recognized environmental conditions (RECs) identified in a Phase I Environmental Site Assessment (Project OR160930-4) for the Property prepared by Point Source for Caldwell Properties c/o Wyse Real Estate Advisors in October 2016.

The information provided in this report describes the work performed and provides documentation of the data and evaluation that constitutes the factual findings of the investigation. This investigation is not intended to satisfy the level of inquiry that may be necessary to support remedial solutions or determine migration pathways related to a release from the RECs.

BACKGROUND INFORMATION

Point Source performed a Phase I ESA on the property located at 1024 SE Grand Avenue, Portland, Oregon in general conformance with the scope and limitations of ASTM Practice E 1527-13.

This assessment revealed environmental concerns in connection with the Property.

- The Property is listed as an EDR Historical Auto Station in 1935 under the name Miller Fender Shop (type: automobile repairing). Sanborn Maps have the Property building labeled as Auto Repairing & Top Shop in 1924, Used Cars in 1950 and Auto Sales & Service in 1969. The historical use of the Property as an automobile repairing facility from 1924 through 1969 may have impacted the Property.

- The north adjoining property (1006 SE Grand Avenue) is listed as an EDR US Historic Cleaners facility. This facility was occupied by Allyn's Cleaning and Dyeing from 1935 to 1960. The 1924 and 1950 Sanborn Maps indicated that the dry cleaning room was located immediately adjoining the northeast side of the Property building. This facility is located in a hydrogeologically cross-gradient location relative to the Property. Adverse environmental impact to the Property from this site may have occurred.

- The east adjoining property (1025 SE 6th Avenue) is listed in the EDR report as an EDR Historical Auto Station site. This database indicates that the Property was listed under the names Home Service CO in 1935, Homnie Service Garage in 1940, and Japanese Auto Repair from 2001 through 2012. Sanborn Maps and city directories review by Point Source Solutions also indicated that this property is currently and had historically been occupied by auto repair businesses. This property is located in a hydrogeologically up-gradient location relative to the Property. The historical use of this property as an auto repair facility as noted in the EDR Report, city directories, and the Sanborn Maps may have impacted the Property.

Based on the findings of this assessment, Point Source recommended conducting a subsurface investigation to test for potential contamination associated with the historical use of the Property as an auto repair/service facility, the historical use of the north adjoining property as a dry cleaning facility and historical and current use of the east adjoining property as an auto repair facility.

The investigation should include soil (and shallow groundwater if present) sampling in targeted areas on the Property and an evaluation of findings as they relate to the most recent revision of Risk-Based Concentrations for Individual Chemicals issued by the Oregon Department of Environmental Quality on November 1, 2015.

ENVIRONMENTAL SETTING

The Property is situated in the Willamette Valley (Orr, Orr, Baldwin, 1992). Sediments collected in this area record multiple Ice Age floods that originated in Montana, poured through the Cascades via the Columbia River, and backed up in the valley before eventually draining to the Pacific Ocean. The Property is located at approximately 55 feet above mean sea level. No bedrock was observed in the vicinity of the Property. The estimated depth to bedrock at the Property is greater than 200 feet below the ground surface.

Site soils were observed predominately as silts and clays, with some fine sand, gravel, weathered brick, weathered concrete, and other materials indicative of urban fill.

Groundwater was not encountered in borings advanced on site to a maximum depth of 17 feet below ground surface (bgs). According to a well log search conducted on the Oregon Water Resources Department (OWRD) website, no significant shallow groundwater resources have been encountered in wells advanced in the Property vicinity. Resource protection wells advanced in properties located within the same township, range, section and quarter/quarter section as the Property encountered groundwater at approximately 13.1 to 37 feet bgs. No springs were observed during the Property reconnaissance. Domestic water is supplied to the Property from the City of Portland.

The USEPA Ground Water Handbook, Vol.1 Ground Water and Contamination, September 1990, indicates that the water table typically conforms to surface topography. Based on a review of the Portland Quadrangle 7.5 minute series topographic map, the inferred groundwater flow at the Property is to the west toward the Willamette River (approximately 0.36 miles to the west at its closest point)This means the direction of flow for shallow groundwater is generally from higher elevations to lower elevations. Localized flow direction may vary as a result of tide, rainfall, development, geologic characteristics, nearby surface water bodies, underground utilities such as storm drains, septic systems and sewers, or other influences such as the presence of high volume wells.

SCOPE OF WORK

The purpose of the subsurface environmental investigation is to collect soil and groundwater samples on the Property to confirm the presence or absence of contaminants related to past use of the Property.

Areas of Potential Concern, Proposed Borings and Analysis

Based upon the past and current configuration and use of the Property, the following areas were identified for investigation. Boring locations are depicted on Figure 4.

Area of Potential Concern	Borings
Store room near NE corner of the Property - Historical records indicate that a dry cleaner was previously located on the north adjoining property.	SB16, SB18
Parking lot - Historical records indicate that an auto repair facility was previously located on the Property.	SB15, SB17

Boring	Media	Analytical Methods	Detection Limit
SB15-17	Soil	NWTPH-Gx/Dx, EPA 8260B (VOCs), TCLP Lead	Applicable Oregon DEQ RBCs

Task 1 – Project Coordination

Point Source confirmed utility locations, developed a site specific health and safety plan for the proposed sampling activities and coordinated the efforts of subcontract services including geophysical surveys, environmental drilling and analytical laboratory services.

Task 2 – Geophysical Investigation

Point Source conducted a subsurface mapping survey of selected portions of the Property to clear boring locations.

Task 3 – Subsurface Investigation

Point Source conducted the subsurface investigation as follows:

- Two borings were advanced through the parking lot of the 7-Eleven Property to a depth of up to 12 feet below ground surface, to groundwater, or refusal on the Property for the purpose of collecting soil and/or groundwater (if groundwater is encountered) samples to characterize if the Property's historic use as an auto repair facility has impacted the sub-surface environment.

- One boring was advanced through the building floor of the Property store-room to a depth of up to 10 feet below ground surface, to groundwater, or refusal on the Property for the purpose of collecting soil and/or groundwater (if groundwater is encountered) samples to characterize if the north-adjoining property's historic use as a dry cleaner has impacted the sub-surface environment.

- All soil and groundwater samples were analyzed for petroleum hydrocarbons by NWTPH-Dx, NWTPH-Gx, and VOCs by EPA 8260b. If initial laboratory testing indicates the presence of contaminants, follow-up testing for PAHs by EPA Method 8270 SIM, or TCLP lead will be ordered as necessary. Soil samples collected for VOC analysis will be preserved in methanol per EPA Method 5035 which allows for a 14-day hold time.

Task 4 – Analytical Services

Point Source Solutions transported soil and groundwater samples to Wy'East Laboratories, an Oregon licensed laboratory, for all required analyses.

UTILITY LOCATING

Oregon law requires that, at least 48 hours prior to the initiation of any subsurface work (drilling, backhoe operation, etc.), a utility inspection be performed at the Property. This inspection consists of the marking of underground utility locations by authorized utility locating personnel. The ticket number for the utility inspection is 16310898.

SAMPLING METHODOLOGY and QA/QC

Soil Borings SB15 and SB17 were advanced using a geoprobe Macrocore MC5 sampler with a 4 foot disposable acetate liner, which was advanced by a truck-mounted direct push drill rig using 4 foot long

by 1.25 inch diameter drill rods. The sampler was driven into the subsurface to allow undisturbed soil to enter the open sampler barrel and retrieved in 4 foot intervals to recover the soil-filled liners.

Soil Borings SB16 and SB18 were advanced using a geoprobe large bore sampler with an acetate liner, which was advanced by an electric jack hammer using 2, 3, and 4 foot long by 1.25 inch diameter drill rods. The sampler was driven into the subsurface to allow undisturbed soil to enter the open sampler barrel and retrieved in 2 to 3 foot intervals to recover the soil-filled liners.

Soils were field-screened using visual, sheen, and olfactory observations, and for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). Headspace vapor screening was conducted at representative intervals. The tip of a PID was inserted into a depression in the soil core through a hole in the acetate liner. The presence of VOCs was measured after sealing the hole. Readings are collected in parts per million (ppm). Notes on visual appearance, odor, and PID readings were recorded on the field boring logs.

Soil samples were collected in 4-ounce glassware with Teflon-lined lids. Each sample was labeled for identification and stored in an iced cooler. Soil cuttings generated during the advancement of the borings were visually inspected for discoloration, and monitored for odors.

Groundwater samples were not collected during project activities, as shallow groundwater was not encountered above the refusal depth for borings SB15 through SB18.

Direct push tooling was decontaminated in a water and detergent solution and rinsed in tap water between samples and boring locations. A clean pair of Nitrile gloves was worn by field personnel for the collection of each sample.

Upon collection, all samples were chilled. Chain of Custody was maintained for all samples.

HEALTH AND SAFETY PLAN

A toolbox safety meeting was conducted at the site prior to the commencement of the fieldwork. Topics included potential exposure to contaminants of interest, personal protective equipment (drilling and media contact), location of first aid kit, and location/directions to closest emergency medical facility.

SUBSURFACE INVESTIGATION

The subsurface investigation was conducted on January 6, 2017.

Geophysical Investigation

Pacific Geophysics conducted a limited geophysical survey for the purpose of clearing boring locations. No features of interest or safety concerns were identified during the geophysical survey.

Sampling

The soil borings were advanced in locations determined by Point Source based on the findings of the previously prepared Phase I Environmental Site Assessment, the geophysical survey, and marked utility locations.

- Borings SB15 through SB17 were advanced in the 7-Eleven parking lot. Borings were advanced to a depth of 12.0 feet bgs. Soil was screened continuously and no olfactory or visual indication of

petroleum hydrocarbon contamination were noted in samples collected from these borings. Field screening with a photoionization detector (PID) did not indicate VOC readings above background levels for the area.

- SB16 was advanced in the northeast corner of the store room located in the 7-Eleven building. This boring was advanced to hard refusal on a tight confining layer located at 16.5 feet bgs. Soil was screened continuously from ground surface, and stained soil with a solvent odor was observed from 9.0 feet to 16.0 feet bgs. Field screening with a photoionization detector (PID) indicated VOC readings as high as 1,192 parts per million (ppm). Soil staining abruptly terminated at the confining layer encountered slightly above the refusal depth. Unstained soil from 16.0 to 16.5 feet bgs retained a slight odor of solvents. No groundwater was encountered in this boring.

- SB18 was advanced in the store room located in the 7-Eleven building, approximately 15 feet south of SB16. This boring was advanced to progress refusal on a tight confining layer located at 17.0 feet bgs. Soil was screened continuously starting at 7.0 feet bgs, and soil with a light solvent odor was observed starting at 9.0 feet bgs. Soil staining was observed in a narrow band from 9.5 to 10.0 feet bgs. No staining was observed from 11.0 to 14.0 feet bgs, however soils within this interval retained a light solvent odor. Stained soils with a heavy odor of solvents were observed again starting at 13.0 feet bgs, and continued to the refusal depth of 17.0 feet bgs. Contamination at refusal appeared moderate when compared to heavy contamination observed in earlier runs. Field screening with a photoionization detector (PID) indicated VOC readings as high as 1,508 parts per million (ppm). No groundwater was encountered in this boring.

Soil encountered in these borings consisted predominantly of silts and clays.

The boring locations are illustrated on Figure 4.

Laboratory Analytical Results

The sample analytical results are summarized in Tables 1, 2 and 3 below.

TABLE 1- SOIL SAMPLES
LABORATORY ANALYTICAL RESULTS – NWTPH-GX/DX/VOCS (MG/KG)

Sample #	Depth	Date	Location	NWTPH - GX	NWTPH - DX	VOCs EPA 8260 / PAHs EPA 8270 SIM / TCLP Lead
SB15-S1	12’	1/06/17	7-Eleven Parking Lot – East	not detected	not detected	not detected
SB16-S1	11’	1/06/17	Store Room – Northeast Corner	**21,800**	not detected	TCLP lead – not detected benzene – **1.27** ethylbenzene – **17.9** isopropylbenzene – 13.9 naphthalene – **13.8** 1,2,4-trimethylbenzene - **152** 1,3,5- trimethylbenzene - 44.0 total xylenes – 59.4
SB16-S2	16.5’	1/06/17	Store Room – Northeast Corner – Vertical Delineation Sample	79	not detected	1,2,4-trimethylbenzene - .410
SB17-S1	12’	1/06/17	7-Eleven Parking Lot – West	not detected	not detected	not detected
SB18-S1	9.5’	1/06/17	Store Room – South lateral Sample	73	not detected	1,2,4-trimethylbenzene - .478
SB18-S2	17’	1/06/17	Store Room – South lateral –	**6,540**	not detected	ethylbenzene - .442 isopropylbenzene - .437

TABLE 1- SOIL SAMPLES LABORATORY ANALYTICAL RESULTS – NWTPH-GX/DX/VOCS (MG/KG)						
Sample #	**Depth**	**Date**	**Location**	**NWTPH - GX**	**NWTPH - DX**	**VOCs EPA 8260 / PAHs EPA 8270 SIM / TCLP Lead**
			Vertical Delineation Sample			naphthalene – **3.76** 1,2,4-trimethylbenzene - **48.3** 1,3,5- trimethylbenzene - 17.4 total xylenes – 6.8
Soil Leaching to Groundwater- Occupational Receptors				**Gx - 63**	**Not Applicable**	**benzene – 0.10** **ethylbenzene –0 .90** **naphthalene – 0.34** **1,2,4-trimethylbenzene - 15**

Notes:

BOLD – Indicates concentration above applicable ODEQ RBCs.

Cleanup criteria for compounds noted in Table 1 are established in the manual titled *"Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites"* prepared by the Oregon Department of Environmental Quality revised November 1, 2015. These scenarios are the most stringent cleanup levels likely applicable to the Property.

Concentrations are only presented for regulated VOCs. Compounds without corresponding RBCs detected in these samples include n-butylbenze, sec-butylbenzene, n-propylbenzene, p-Isopropyltoluene,

The laboratory analytical reports and chain-of-custody forms are included as Appendix I of this report.

Quality Assurance/Quality Control Review

Laboratory QA/QC measures were performed through data validation of available analytical data generated as part of these sampling events. Data validation considered the following:

- Method Detection and/or Reporting Limits
- Laboratory Matrix Blanks
- Sample Holding Times
- Surrogate and Matrix Spike Recoveries, and
- Laboratory Duplicate Analysis Results

The laboratories did not report qualifiers that would indicate problems with the sample results. According to the lab reports all analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Exceptions are qualified in the analytical report.

Exceptions to the Scope of Work

The proposed scope of work for this project was substantially completed.

FINDINGS

The investigation, field screening of samples, and laboratory analytical results indicated the following:

- **Soil samples in 7-Eleven Parking Lot (SB15 and SB17)** – Did not detect petroleum hydrocarbons or volatile organic compounds above applicable Oregon DEQ Risk-Based Cleanup Levels for Occupational receptors.

- **Soil samples in NE Corner of Store (SB16 and SB18)** – Detected petroleum hydrocarbons and volatile organic compounds. Gasoline and several VOCs were detected above Oregon DEQ Risk-Based Soil Leaching to Groundwater cleanup levels for occupational receptors. Ethylbenzene was detected above Oregon DEQ Risk-Based Soil Vapor Intrusion cleanup levels for occupational receptors.

CONCLUSIONS

The laboratory analytical results indicate that targeted regulated contaminants were detected at concentrations above applicable regulatory action limits.

While it is likely that the soil contamination beneath the building is from an off-site source, petroleum hydrocarbons and VOCs were detected in soil at concentrations that represent a potential risk to human health for building occupants. The majority of compounds in excess of a relevant ODEQ RBC exceeded only for the leaching to groundwater exposure pathway. Leaching to groundwater can typically be ruled out as a complete exposure pathway by demonstrating a 10 foot separation between the water table and the deepest soil contamination on site, or by collecting a groundwater sample and comparing the laboratory analytical results to ODEQ RBCs.

Ethylbenzene was encountered at a concentration that exceeds the ODEQ RBC for the vapor intrusion pathway for occupation receptors.

In order to determine if this concentration represents a risk to human health and to collect additional samples to support closure of this release through the Oregon Department of Environmental Quality Voluntary Cleanup Program with a Risk-Based Corrective Action determination, further investigation in is recommended. Additional sampling should include characterization of the extent of contamination on the Property, determination of separation distance between contaminated soil and groundwater and soil vapor sampling.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Reviewed By:
Andy Klopfenstein, E.I.T.

Prepared by:
Gil Cobb, Registered Geologist (Oregon #G1440)

Expires 12/31/2017

Point Source Solutions, LLC
10445 SW Canyon Road, Suite 115
Beaverton, Oregon 97005

Phone: 503.236.5885
Fax: 503.224.0449

www.pointsourcesolutions.com

FIGURES

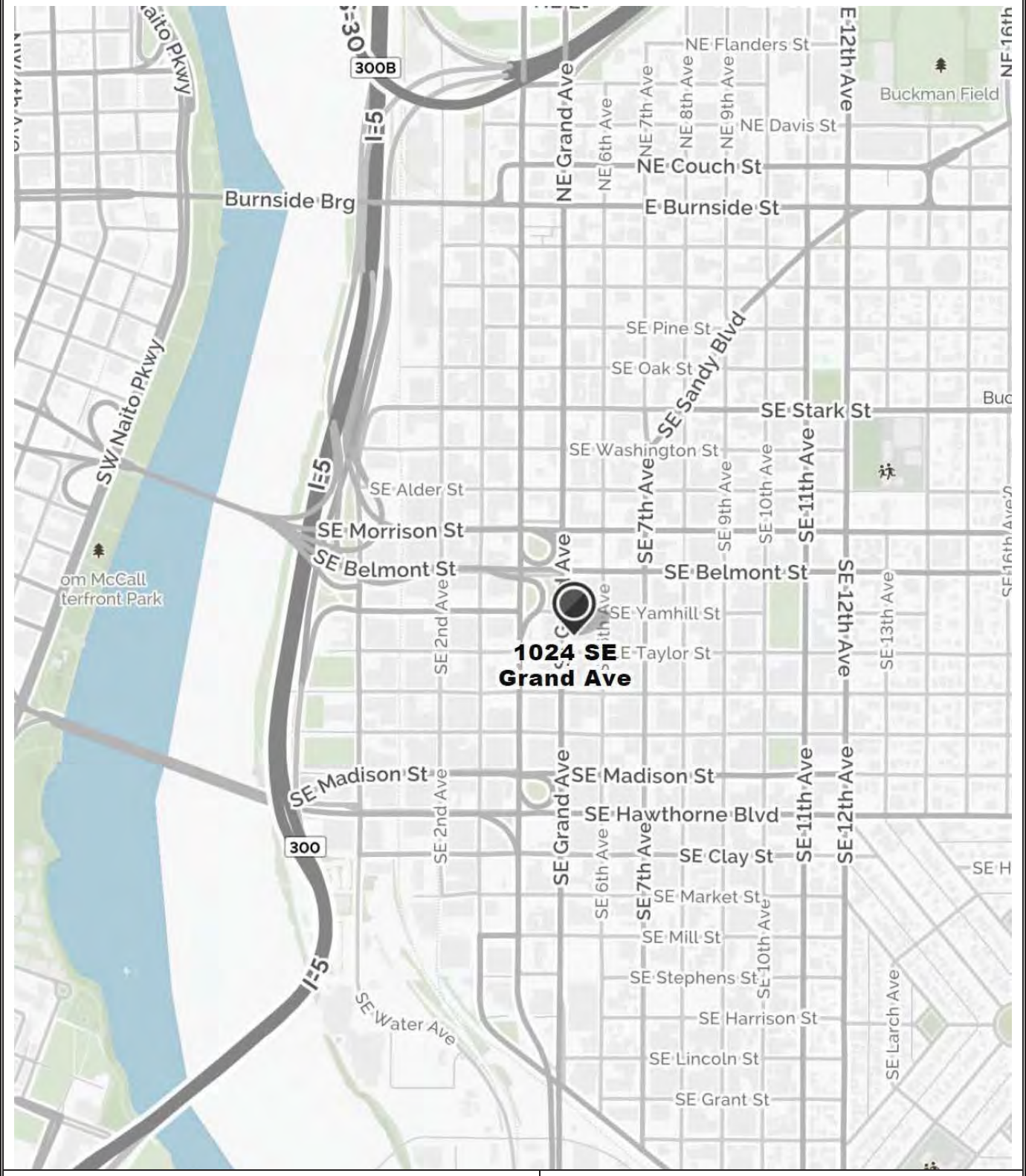

FIGURE 1: SITE LOCATION MAP

Map from MapQuest N↑

point source solutions, llc
ENGINEERING • ENVIRONMENTAL • SAFETY

Site Name: 7-Eleven Property
1024 SE Grand Avenue
Portland, Oregon, 97214

Project Number: OR160930-4A

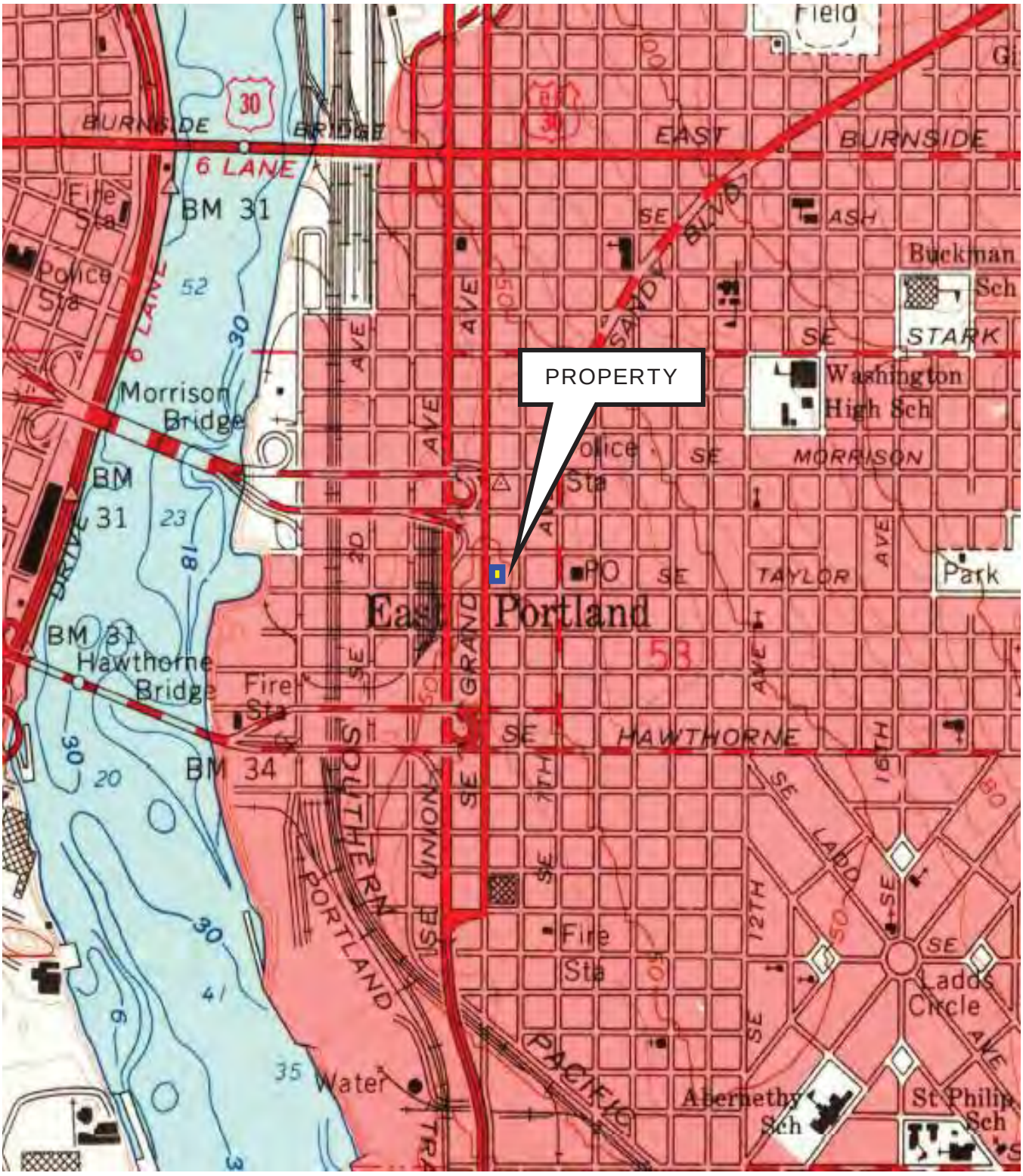

FIGURE 2: TOPOGRAPHIC MAP	**DRAWING NOT TO SCALE** Source: USGS 7.5 Minute Topographic Map Portland, OR Quadrangle 1990 **N↑**
point source solutions, llc ENGINEERING • ENVIRONMENTAL • SAFETY	**Site Name: 7-Eleven Property** **1024 SE Grand Avenue** **Portland, Oregon, 97214** **Project Number: OR160930-4A**

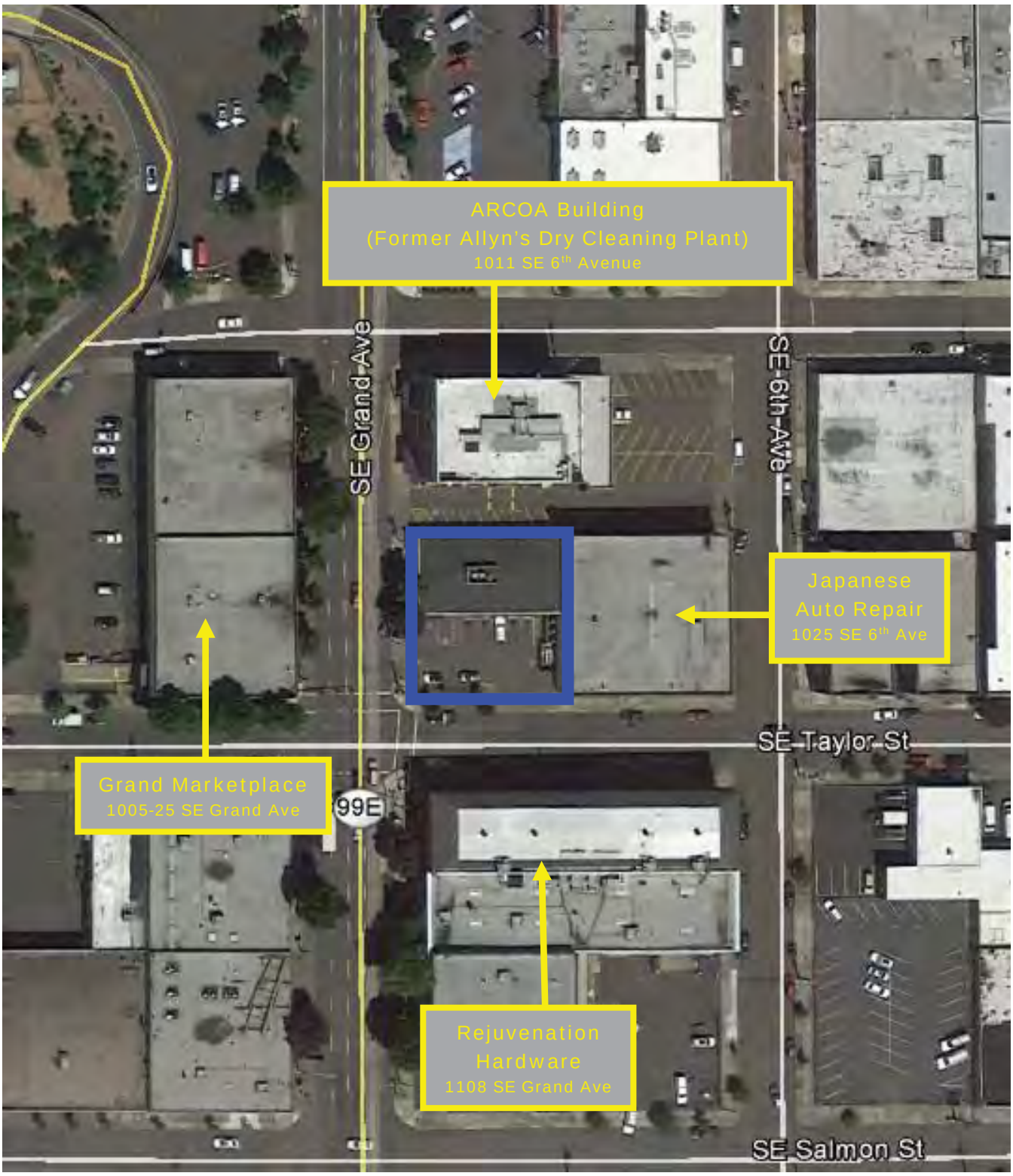

FIGURE 3 - SITE PLAN

From Google Earth 2016 **N↑**

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ENGINEERING • ENVIRONMENTAL • SAFETY

Site Name: 7-Eleven Property
1024 SE Grand Avenue
Portland, Oregon 97214

Project Number: OR160930-4A

FIGURE 4: SAMPLE LOCATION DIAGRAM

N↑

Notes:
Sample results in mg/kg
VOCs not listed were not detected above relevant ODEQ RBCs for occupational receptors.

Site Boundary

Sample Location (No Contamination)

Sample Location (Contamination)

Scale in Feet (Approximate)

10 20

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Site Name: **7-Eleven Property**
1024 SE Grand Avenue
Portland, OR 97214

Project Number: OR160930-4A

APPENDICES

APPENDIX I

LABORATORY ANALYTICAL REPORTS

1/9/17

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

Re: OR161203-3b

Dear Point Source Solutions

Enclosed are the results of analysis for samples received by the laboraory on 1/6/2017
The results related only to the samples included in this report.
The project was assigned a report number of 87034

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

CY Chan
QA Officer

NW-TPHDx LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

SITE NAME: **C.O.C. NUMBER:** 87034
SITE LOCATION: 1024 SE Grand Ave **REPORT DATE:** 1/10/17
PROJECT NUMBER: OR161203-3b

Analytical Method: NWTPH-Dx **Preparation Method: EPA3545A**
Analytes: Total Diesel and Heavy Oil range petroleum in Soil. Calculated on a dry-weight basis.

Field ID	LAB ID	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	Analytical Batch	Prepared Batch	Sampling Date
SB18-S1-9.5	L3578	**ND**	**ND**	**95%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB18-S2-17	L3579	**ND**	**ND**	**101%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB16-S1-11	L3580	**ND**	**ND**	**93%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB15-S1-12	L3581	**ND**	**ND**	**91%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB16-S2-16.5	L3582	**ND**	**ND**	**91%**	**78FL1701091**	**D170109-1**	**1/6/2017**
SB17-S1-12	L3583	**ND**	**ND**	**92%**	**78FL1701091**	**D170109-1**	**1/6/2017**
Reporting Limit:	--	25	100				
Surrogate Limit:				50%-150%			

Surrogate is 1-ChloroOctadecane
ND = Not Detected at or below the Reporting Limit

Results relate only to samples

Chemist Initials: CY Chan **Reviewed By:**

PERCENT MOISTURE REPORT

REPORT NUMBER: 87034
REPORT DATE: 1/10/17

ASTM D2974-07a

Analytes: Percent Moisture in Sample

LAB ID	Moisture(%)	Date Analyzed
L3578	25.9	1/6/17
L3579	24.6	1/6/17
L3580	26.6	1/6/17
L3581	24.1	1/6/17
L3582	27.4	1/6/17
L3583	24.7	1/6/17

Report Narrative

Method: NWTHP-Dx **Report No.** 87034

Client: Point Source Solutions **Date:** 1/9/2017

Sample Condition

6 Sample(s) were analyzed for NWTPH-Dx. Sample(s)were received in acceptable condition

Sample Temperature

Sample(s) arrived within acceptable temperature range

Sample Hold time

Sample(s) were analyzed within hold time

Initial Calibration

All criteria were within acceptable limits

Continuing Calibration Check (CCV)

All criteria were within method limits

Method Blank

Method Blank meets method limit

Laboratory Control Sample (LCS)

All criteria were within method limits

Duplicate Sample

All criteria were within method limits

Matrix Spike

All criteria were within method limits

Matrix Spike Duplicate

No Matrix Spike Duplicate was run on this batch

Non-Conformance

No non-conformances were associated with this request except noticed below

Quality Control for NWTPH-Dx

Batch Date: 1/9/2017

Units: Soil Blank (mg/Kg) Water Blank (mg/L) CCV & LCS (ug/mL)

Blank Number	PB	Diesel Result	Oil Result	Limits Diesel	Limits Oil	Blank Control	Surr. Recovery	Surr. Limits	Surr. Control
SBK01091	D170109-1	2	0	50	100	PASS	97%	50%-150%	PASS

Diesel LCS Number	PB	Diesel in Extract	Expected Conc.	LCS Recovery (%)	LCS Control Limits	LCS Control	Surr. Recovery	Surr. Limits	Surr. Control
SLC01091	D170109-1	545.84	500.00	109%	±30%	PASS	81%	50%-150%	PASS

Oil LCS Number	PB	Oil in Extract	Expected Conc.	LCS Recovery (%)	LCS Control Limits	LCS Control	Surr. Recovery	Surr. Limits	Surr. Control
SLC01091	D170109-1	501.34	500.00	100%	±30%	PASS	81%	50%-150%	PASS

Diesel Dupl. Number	PB	Sample in Extract	Duplicate In Extract	RPD (%)	Control Limits	Duplicate Control
L3574	D170109-1	17.91233071	2.328113498	0%	±30%	PASS

Oil Dupl. Number	PB	Sample in Extract	Duplicate in Extract	RPD (%)	Control Limits	Duplicate Control
L3574	D170109-1	0	0	0%	±30%	PASS

Diesel MS Number	PB	Sample in Extract	Diesel MS Result	MS Recovery (%)	MS Control Limits	MS Control
L3575MS	D170109-1	3.837275883	639.6959339	95%	70%-130%	PASS

Oil MS Number	PB	Sample in Extract	Oil MS Result	MS Recovery (%)	MS Control Limits	MS Control
L3575MS	D170109-1	0	552.4817328	83%	70%-130%	PASS

NW-TPHGx LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b

C.O.C. NUMBER: 87034
REPORT DATE: 1/9/2017

Analytical Method: NW-TPHGx Preparation Method: EPA 5035
Analytes: Gasoline in Soil. Calculated on a dry-weight basis.

Field ID	LAB ID	Gasoline (mg/Kg)	Surrogate Recov.(%)	Analytical Batch	Preperation Batch	Sampling Date
SB18-S1-9.5	L3578	73	106%	58PI170109-1	G170109-1	1/6/2017
SB18-S2-17	L3579	6540	126%	58PI170109-1	G170109-1	1/6/2017
SB16-S1-11	L3580	21800	108%	58PI170109-1	G170109-1	1/6/2017
SB15-S1-12	L3581	ND	102%	58PI170109-1	G170109-1	1/6/2017
SB16-S2-16.5	L3582	79	108%	58PI170109-1	G170109-1	1/6/2017
SB17-S1-12	L3583	ND	108%	58PI170109-1	G170109-1	1/6/2017
Reporting Limit:	--	20				

Surrogate is p-Bromofluorobenzene
ND = Not Detected (Below Reporting or Detection Limit)

Chemist Initials: CY Chan **Reviewer Initials:**

PERCENT MOISTURE REPORT

REPORT NUMBER: 87034
REPORT DATE: 1/9/2017

ASTM D2974-07a
Analytes: Percent Moisture in Sample

LAB ID	Moisture (%)	Date Analyzed
L3578	26	1/6/2017
L3579	25	1/6/2017
L3580	27	1/6/2017
L3581	24	1/6/2017
L3582	27	1/6/2017
L3583	25	1/6/2017

2415 SE 11th Ave.
Portland, OR 97214

These parameters are accredited in accordance with NELAP-OR100011

Phone (503) 231-9320
FAX (503) 231-9344

Report Narrative

Method: NWTHP-Gx **Report No.** 87034

Client: Point Source Solutions **Date:** 1/9/2017

Sample Condition
6 sample(s) were analyzed for NWTPH-Gx. Sample(s)were received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
sample(s) were analyzed within hold time

Initial Calibration

All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts

Method Blank
Method Blank meets method limt

Laboratory Control Sample (LCS)
All criteria were within method limts

Duplicate Sample
No duplicate was run with this batch

Matrix Spike
All MS criteria were within method limts
All MSD criteria were within method limts

Matrix Spike Duplicate RPD
All criteria were within method limts

Non-Conformance
No non-conformances were associated with this request except noticed below

Quality Control for Gasoline in Soil by NWTPH-Gx

Batch Date: 1/9/2017

Blank	Prep. Batch	Result(mg/Kg)	Accep. Range	Sur. % Recovery	% Accep.
GBK01091	G170109-1	0.73	<20	99%	50%-150%

Spike	Prep. Batch	Result (mg/Kg)	Expected (mg/Kg)	spike % Recovery	% Accep.
GLC01091	G170109-1	99.22	100.3	99%	70%-130%

MS	A. Batch	Spike (mg/Kg)	Sample(mg/Kg)	Spike % Recovery	% Accep.
BLK57MS	G170109-1	99	1	98%	70%-130%
BLK57MSD	G170109-1	98	1	97%	70%-130%

MSD	A. Batch	MSD (mg/Kg)	MS(mg/Kg)	RPD	% Accep.
BLK57MSD	58PI170109-1	98	99	-2%	±30%

2415 SE 11th Ave.
Portland, OR 97214

These parameters are accredited in accordance with NELAP-OR100011

Phone (503) 231-9320
FAX (503) 231-9344

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

		INSTRUMENT	SolaTek
PROJECT NAME:		**REPORT NUMBER:**	87034
SITE LOCATION:	1024 SE Grand Ave	**REPORT DATE:**	1/10/17
PROJECT NUMBER:	OR161203-3b	**ACQ. ON**	9Jan20173:30pm
ANALYST		**PREP. BATCH**	V170109
FIELD ID:	SB18-S1-9.5	**LAB ID:**	L3578

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**

Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	200		50
bromobenzene	ND	200		50
bromochloromethane	ND	200		50
bromodichloromethane	ND	200		50
bromoform	ND	200		50
n-butylbenzene	ND	200		50
sec-butylbenzene	ND	200		50
tert-butylbenzene	ND	200		50
chlorobenzene	ND	200		50
chloroform	ND	200		50
2-chlorotoluene	ND	200		50
4-chlorotoluene	ND	200		50
dibromochloromethane	ND	200		50
1,2dibromo3-chloropropane	ND	200		50
1,2-dibromoethane	ND	200		50
dibromomethane	ND	200		50
1,2-dichlorobenzene	ND	200		50
1,3-dichlorobenzene	ND	200		50
1,4-dichlorobenzene	ND	200		50
1,1-dichloroethane	ND	200		50
1,2-dichloroethane	ND	200		50
1,1-dichloroethene	ND	200		50
cis-1,2-dichloroethene	ND	200		50
trans-1,2-dichloroethene	ND	200		50
1,2-dichloropropane	ND	200		50
1,3-dichloropropane	ND	200		50
1,1-dichloropropene	ND	200		50
cis-1,3-dichloropropene	ND	200		50
trans-1,3-dichloropropene	ND	200		50
ethylbenzene	ND	200		50
hexachlorobutadiene	ND	200		50
isopropylbenzene	ND	200		50
p-Isopropyltoluene	ND	200		50
methyl-tert-butylether(MTBE)	ND	200		50
naphthalene	ND	200		50
n-propyl-benzene	ND	200		50
styrene	ND	200		50
1,1,1,2-tetrachloroethane	ND	200		50
1,1,2,2-tetrachloroethane	ND	200		50
tetrachloroethylene	ND	200		50
toluene	ND	200		50
1,2,3-trichlorobenzene	ND	200		50
1,2,4-trichlorobenzene	ND	200		50
1,1,1-trichloroethane	ND	200		50
1,1,2-trichloroethane	ND	200		50
trichloroethene	ND	200		50
1,2,3-trichloropropane	ND	200		50
1,2,4-trimethlybenzene	478	200		50
1,3,5-trimethylbenzene	ND	200		50
xylene(m&p)	ND	200		50
o-xylene	ND	200		50
total xylenes	ND	200		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	108	101	106

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB18-S2-17

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/10/17
ACQ. ON 9Jan20176:27pm
PREP. BATCH V170109
LAB ID: L3579

Analytical Method: EPA 8260C
Preparation Method: EPA 5035A
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	204		50
bromobenzene	ND	204		50
bromochloromethane	ND	204		50
bromodichloromethane	ND	204		50
bromoform	ND	204		50
n-butylbenzene	5851	204		500
sec-butylbenzene	5606	204		500
tert-butylbenzene	ND	204		50
chlorobenzene	ND	204		50
chloroform	ND	204		50
2-chlorotoluene	ND	204		50
4-chlorotoluene	ND	204		50
dibromochloromethane	ND	204		50
1,2dibromo3-chloropropane	ND	204		50
1,2-dibromoethane	ND	204		50
dibromomethane	ND	204		50
1,2-dichlorobenzene	ND	204		50
1,3-dichlorobenzene	ND	204		50
1,4-dichlorobenzene	ND	204		50
1,1-dichloroethane	ND	204		50
1,2-dichloroethane	ND	204		50
1,1-dichloroethene	ND	204		50
cis-1,2-dichloroethene	ND	204		50
trans-1,2-dichloroethene	ND	204		50
1,2-dichloropropane	ND	204		50
1,3-dichloropropane	ND	204		50
1,1-dichloropropene	ND	204		50
cis-1,3-dichloropropene	ND	204		50
trans-1,3-dichloropropene	ND	204		50
ethylbenzene	4420	204		500
hexachlorobutadiene	ND	204		50
isopropylbenzene	4371	204		500
p-Isopropyltoluene	7556	204		500
methyl-tert-butylether(MTBE)	ND	204		50
naphthalene	3764	204		500
n-propyl-benzene	7259	204		500
styrene	ND	204		50
1,1,1,2-tetrachloroethane	ND	204		50
1,1,2,2-tetrachloroethane	ND	204		50
tetrachloroethylene	ND	204		50
toluene	ND	204		50
1,2,3-trichlorobenzene	ND	204		50
1,2,4-trichlorobenzene	ND	204		50
1,1,1-trichloroethane	ND	204		50
1,1,2-trichloroethane	ND	204		50
trichloroethene	ND	204		50
1,2,3-trichloropropane	ND	204		50
1,2,4-trimethlybenzene	48284	204		2500
1,3,5-trimethylbenzene	17360	204		500
xylene(m&p)	6487	404		500
o-xylene	315	204		50
total xylenes	6802	204		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	82	84	96

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB16-S1-11

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/12/17
ACQ. ON 9Jan20176:57pm
PREP. BATCH V170109
LAB ID: L3580

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	1274	200		50
bromobenzene	ND	200		50
bromochloromethane	ND	200		50
bromodichloromethane	ND	200		50
bromoform	ND	200		50
n-butylbenzene	13671	200		2500
sec-butylbenzene	12540	200		2500
tert-butylbenzene	ND	200		50
chlorobenzene	ND	200		50
chloroform	ND	200		50
2-chlorotoluene	ND	200		50
4-chlorotoluene	ND	200		50
dibromochloromethane	ND	200		50
1,2dibromo3-chloropropane	ND	200		50
1,2-dibromoethane	ND	200		50
dibromomethane	ND	200		50
1,2-dichlorobenzene	ND	200		50
1,3-dichlorobenzene	ND	200		50
1,4-dichlorobenzene	ND	200		50
1,1-dichloroethane	ND	200		50
1,2-dichloroethane	ND	200		50
1,1-dichloroethene	ND	200		50
cis-1,2-dichloroethene	ND	200		50
trans-1,2-dichloroethene	ND	200		50
1,2-dichloropropane	ND	200		50
1,3-dichloropropane	ND	200		50
1,1-dichloropropene	ND	200		50
cis-1,3-dichloropropene	ND	200		50
trans-1,3-dichloropropene	ND	200		50
ethylbenzene	17895	200		2500
hexachlorobutadiene	ND	200		50
isopropylbenzene	13908	200		2500
p-Isopropyltoluene	14649	200		2500
methyl-tert-butylether(MTBE)	ND	200		50
naphthalene	13844	200		2500
n-propyl-benzene	23113	200		2500
styrene	ND	200		50
1,1,1,2-tetrachloroethane	ND	200		50
1,1,2,2-tetrachloroethane	ND	200		50
tetrachloroethylene	ND	200		50
toluene	ND	200		50
1,2,3-trichlorobenzene	ND	200		50
1,2,4-trichlorobenzene	ND	200		50
1,1,1-trichloroethane	ND	200		50
1,1,2-trichloroethane	ND	200		50
trichloroethene	ND	200		50
1,2,3-trichloropropane	ND	200		50
1,2,4-trimethlybenzene	152401	200		5000
1,3,5-trimethylbenzene	43953	200		2500
xylene(m&p)	41917	200		2500
o-xylene	17436	200		2500
total xylenes	59353	200		2500

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	81	77	98

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB15-S1-12

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/10/17
ACQ. ON 9Jan20174:57pm
PREP. BATCH V170109
LAB ID: L3581

Analytical Method: EPA 8260C
Preparation Method: EPA 5035A
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	202		50
bromobenzene	ND	202		50
bromochloromethane	ND	202		50
bromodichloromethane	ND	202		50
bromoform	ND	202		50
n-butylbenzene	ND	202		50
sec-butylbenzene	ND	202		50
tert-butylbenzene	ND	202		50
chlorobenzene	ND	202		50
chloroform	ND	202		50
2-chlorotoluene	ND	202		50
4-chlorotoluene	ND	202		50
dibromochloromethane	ND	202		50
1,2dibromo3-chloropropane	ND	202		50
1,2-dibromoethane	ND	202		50
dibromomethane	ND	202		50
1,2-dichlorobenzene	ND	202		50
1,3-dichlorobenzene	ND	202		50
1,4-dichlorobenzene	ND	202		50
1,1-dichloroethane	ND	202		50
1,2-dichloroethane	ND	202		50
1,1-dichloroethene	ND	202		50
cis-1,2-dichloroethene	ND	202		50
trans-1,2-dichloroethene	ND	202		50
1,2-dichloropropane	ND	202		50
1,3-dichloropropane	ND	202		50
1,1-dichloropropene	ND	202		50
cis-1,3-dichloropropene	ND	202		50
trans-1,3-dichloropropene	ND	202		50
ethylbenzene	ND	202		50
hexachlorobutadiene	ND	202		50
isopropylbenzene	ND	202		50
p-Isopropyltoluene	ND	202		50
methyl-tert-butylether(MTBE)	ND	202		50
naphthalene	ND	202		50
n-propyl-benzene	ND	202		50
styrene	ND	202		50
1,1,1,2-tetrachloroethane	ND	202		50
1,1,2,2-tetrachloroethane	ND	202		50
tetrachloroethylene	ND	202		50
toluene	ND	202		50
1,2,3-trichlorobenzene	ND	202		50
1,2,4-trichlorobenzene	ND	202		50
1,1,1-trichloroethane	ND	202		50
1,1,2-trichloroethane	ND	202		50
trichloroethene	ND	202		50
1,2,3-trichloropropane	ND	202		50
1,2,4-trimethlybenzene	ND	202		50
1,3,5-trimethylbenzene	ND	202		50
xylene(m&p)	ND	404		50
o-xylene	ND	202		50
total xylenes	ND	202		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	110	100	91

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

PROJECT NAME:
SITE LOCATION: 1024 SE Grand Ave
PROJECT NUMBER: OR161203-3b
ANALYST
FIELD ID: SB16-S2-16.5

INSTRUMENT SolaTek
REPORT NUMBER: 87034
REPORT DATE: 1/10/17
ACQ. ON 9Jan20175:27pm
PREP. BATCH V170109
LAB ID: L3582

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**
Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	200		50
bromobenzene	ND	200		50
bromochloromethane	ND	200		50
bromodichloromethane	ND	200		50
bromoform	ND	200		50
n-butylbenzene	ND	200		50
sec-butylbenzene	ND	200		50
tert-butylbenzene	ND	200		50
chlorobenzene	ND	200		50
chloroform	ND	200		50
2-chlorotoluene	ND	200		50
4-chlorotoluene	ND	200		50
dibromochloromethane	ND	200		50
1,2dibromo3-chloropropane	ND	200		50
1,2-dibromoethane	ND	200		50
dibromomethane	ND	200		50
1,2-dichlorobenzene	ND	200		50
1,3-dichlorobenzene	ND	200		50
1,4-dichlorobenzene	ND	200		50
1,1-dichloroethane	ND	200		50
1,2-dichloroethane	ND	200		50
1,1-dichloroethene	ND	200		50
cis-1,2-dichloroethene	ND	200		50
trans-1,2-dichloroethene	ND	200		50
1,2-dichloropropane	ND	200		50
1,3-dichloropropane	ND	200		50
1,1-dichloropropene	ND	200		50
cis-1,3-dichloropropene	ND	200		50
trans-1,3-dichloropropene	ND	200		50
ethylbenzene	ND	200		50
hexachlorobutadiene	ND	200		50
isopropylbenzene	ND	200		50
p-Isopropyltoluene	ND	200		50
methyl-tert-butylether(MTBE)	ND	200		50
naphthalene	ND	200		50
n-propyl-benzene	ND	200		50
styrene	ND	200		50
1,1,1,2-tetrachloroethane	ND	200		50
1,1,2,2-tetrachloroethane	ND	200		50
tetrachloroethylene	ND	200		50
toluene	ND	200		50
1,2,3-trichlorobenzene	ND	200		50
1,2,4-trichlorobenzene	ND	200		50
1,1,1-trichloroethane	ND	200		50
1,1,2-trichloroethane	ND	200		50
trichloroethene	ND	200		50
1,2,3-trichloropropane	ND	200		50
1,2,4-trimethlybenzene	410	200		50
1,3,5-trimethylbenzene	ND	200		50
xylene(m&p)	ND	400		50
o-xylene	ND	200		50
total xylenes	ND	200		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	118	100	104

Analyst: C Y Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

LABORATORY REPORT

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

		INSTRUMENT	SolaTek
PROJECT NAME:		**REPORT NUMBER:**	87034
SITE LOCATION:	1024 SE Grand Ave	**REPORT DATE:**	1/10/17
PROJECT NUMBER:	OR161203-3b	**ACQ. ON**	9Jan20175:57pm
ANALYST		**PREP. BATCH**	V170109
FIELD ID:	SB17-S1-12	**LAB ID:**	L3583

Analytical Method: EPA 8260C **Preparation Method: EPA 5035A**

Analyte: Volatile Organics in Soil

Compound	Sample (ug/Kg)	Quant. Limit (ug/Kg)	Qualifier	Dilution Factor
benzene	ND	202		50
bromobenzene	ND	202		50
bromochloromethane	ND	202		50
bromodichloromethane	ND	202		50
bromoform	ND	202		50
n-butylbenzene	ND	202		50
sec-butylbenzene	ND	202		50
tert-butylbenzene	ND	202		50
chlorobenzene	ND	202		50
chloroform	ND	202		50
2-chlorotoluene	ND	202		50
4-chlorotoluene	ND	202		50
dibromochloromethane	ND	202		50
1,2dibromo3-chloropropane	ND	202		50
1,2-dibromoethane	ND	202		50
dibromomethane	ND	202		50
1,2-dichlorobenzene	ND	202		50
1,3-dichlorobenzene	ND	202		50
1,4-dichlorobenzene	ND	202		50
1,1-dichloroethane	ND	202		50
1,2-dichloroethane	ND	202		50
1,1-dichloroethene	ND	202		50
cis-1,2-dichloroethene	ND	202		50
trans-1,2-dichloroethene	ND	202		50
1,2-dichloropropane	ND	202		50
1,3-dichloropropane	ND	202		50
1,1-dichloropropene	ND	202		50
cis-1,3-dichloropropene	ND	202		50
trans-1,3-dichloropropene	ND	202		50
ethylbenzene	ND	202		50
hexachlorobutadiene	ND	202		50
isopropylbenzene	ND	202		50
p-Isopropyltoluene	ND	202		50
methyl-tert-butylether(MTBE)	ND	202		50
naphthalene	ND	202		50
n-propyl-benzene	ND	202		50
styrene	ND	202		50
1,1,1,2-tetrachloroethane	ND	202		50
1,1,2,2-tetrachloroethane	ND	202		50
tetrachloroethylene	ND	202		50
toluene	ND	202		50
1,2,3-trichlorobenzene	ND	202		50
1,2,4-trichlorobenzene	ND	202		50
1,1,1-trichloroethane	ND	202		50
1,1,2-trichloroethane	ND	202		50
trichloroethene	ND	202		50
1,2,3-trichloropropane	ND	202		50
1,2,4-trimethlybenzene	ND	202		50
1,3,5-trimethylbenzene	ND	202		50
xylene(m&p)	ND	404		50
o-xylene	ND	202		50
total xylenes	ND	202		50

Surrogate:	1,2-dichloroethane-d4	toluene-d8	p-bromofluorobenzene
Percent Recovery	124	100	89

Analyst: CY Chan **Reviewer Initials:**

Report Narrative

Method: 8260
Client: Point Source Solutions

Report No. 87034
Date: 1/9/2017

Sample Condition
Sample was analyzed for 8260. Sample was received in acceptable condition

Sample Temperature
Sample(s) arrived within acceptable temperature range

Sample Hold time
Sample was analyzed within hold time

Initial Calibration
All criteria were within acceptable limits

Continuing Calibration Check (CCV)
All criteria were within method limts. Any exceptions are qualified in the body of the report

Method Blank
Method Blank meets method limt. Any exceptions are qualified in the body of the report

Laboratory Control Sample (LCS)
All criteria were within method limts, Any exceptions are qualified in the body of the report

Duplicate Sample
No Duplicate was run on this batch

Matrix Spike
All criteria were within method limts

Matrix Spike Duplicate
1 compounds of Matrix Spike Duplicate were outside method limts as flagged in the MSD QC report

Non-Conformance
No non-conformances were associated with this request except noticed below

QUALITY CONTROL REPORT (EPA 8260C)

Run Date: 1/9/2017 **Prep batch:** P1-9-17
Report Date: 1/10/2017 **Analytical batch:** STRA170109

Analyte	BLANK (ug/Kg)	LCS (ug/Kg)	Expected (ug/Kg)	Recovery %
benzene	<4	17	16	105
bromobenzene	<4	19	16	119
bromochloromethane	<4	15	16	93
bromodichloromethane	<4	16	16	101
bromoform	<4	19	16	116
n-butylbenzene	<4	14	16	89
sec-butylbenzene	<4	19	16	120
tert-butylbenzene	<4	20	16	122
chlorobenzene	<4	18	16	111
chloroform	<4	16	16	100
2-chlorotoluene	<4	18	16	114
4-chlorotoluene	<4	19	16	116
dibromochloromethane	<4	15	16	95
1,2dibromo3-chloropropane	<4	17	16	104
1,2-dibromoethane	<4	15	16	93
dibromomethane	<4	17	16	107
1,2-dichlorobenzene	<4	14	16	89
1,3-dichlorobenzene	<4	14	16	91
1,4-dichlorobenzene	<4	15	16	95
1,1-dichloroethane	<4	16	16	97
1,2-dichloroethane	<4	16	16	100
1,1-dichloroethene	<4	16	16	100
cis-1,2-dichloroethene	<4	15	16	93
trans-1,2-dichloroethene	<4	16	16	98
1,2-dichloropropane	<4	16	16	101
1,3-dichloropropane	<4	15	16	92
1,1-dichloropropene	<4	15	16	91
cis-1,3-dichloropropene	<4	13	16	82
trans-1,3-dichloropropene	<4	14	16	89
ethylbenzene	<4	17	16	109
hexachlorobutadiene	<4	15	16	92
isopropylbenzene	<4	19	16	116
p-Isopropyltoluene	<4	17	16	106
methyl-tert-butylether(MTBE)	<4	14	16	85
naphthalene	<4	18	16	114
n-propyl-benzene	<4	20	16	122
styrene	<4	17	16	108
1,1,1,2-tetrachloroethane	<4	19	16	119
1,1,2,2-tetrachloroethane	<4	20	16	128
tetrachloroethylene	<4	16	16	100
toluene	<4	16	16	103
1,2,3-trichlorobenzene	<4	20	16	127
1,2,4-trichlorobenzene	<4	16	16	101
1,1,1-trichloroethane	<4	17	16	106
1,1,2-trichloroethane	<4	16	16	102
trichloroethene	<4	16	16	97
1,2,3-trichloropropane	<4	17	16	105
1,2,4-trimethlybenzene	<4	18	16	110
1,3,5-trimethylbenzene	<4	19	16	117
xylene(m&p)	<8	36	32	114
o-xylene	<4	17	16	108

Control: 70%-130%

DUPLICATE / MATRIX SPIKE REPORT (EPA 8260C)

Run Date:	1/9/2017	**Prep batch:**	P1-9-17	**MSD ID:**	SBK33MSD
Report Date:	1/10/2017	**Analytical batch:**	STRA170109	**MS ID**	SBK33MS

Analyte	Sample (ug/Kg)	MSD (ug/Kg)	Recovery (%)	Sample (ug/Kg)	Spike (ug/Kg)	Recovery (%)
benzene	0	15	96	0	17	105
bromobenzene	0	15	93	0	19	119
bromochloromethane	0	15	96	0	15	93
bromodichloromethane	0	16	101	0	16	101
bromoform	0	16	97	0	19	116
n-butylbenzene	0	15	95	0	14	89
sec-butylbenzene	0	15	92	0	19	120
tert-butylbenzene	0	15	93	0	20	122
chlorobenzene	0	15	95	0	18	111
chloroform	0	14	90	0	16	100
2-chlorotoluene	0	17	105	0	18	114
4-chlorotoluene	0	15	91	0	19	116
dibromochloromethane	0	17	103	0	15	95
1,2dibromo3-chloropropane	0	15	96	0	17	104
1,2-dibromoethane	0	17	104	0	15	93
dibromomethane	0	16	102	0	17	107
1,2-dichlorobenzene	0	16	99	0	14	89
1,3-dichlorobenzene	0	14	88	0	14	91
1,4-dichlorobenzene	0	16	98	0	15	95
1,1-dichloroethane	0	15	96	0	16	97
1,2-dichloroethane	0	15	91	0	16	100
1,1-dichloroethene	0	15	93	0	16	100
cis-1,2-dichloroethene	0	15	95	0	15	93
trans-1,2-dichloroethene	0	15	95	0	16	98
1,2-dichloropropane	0	16	98	0	16	101
1,3-dichloropropane	0	16	100	0	15	92
1,1-dichloropropene	0	15	95	0	15	91
cis-1,3-dichloropropene	0	16	99	0	13	82
trans-1,3-dichloropropene	0	17	106	0	14	89
ethylbenzene	0	15	94	0	17	109
hexachlorobutadiene	0	15	96	0	15	92
isopropylbenzene	0	15	94	0	19	116
p-Isopropyltoluene	0	14	90	0	17	106
methyl-tert-butylether(MTBE)	0	16	98	0	14	85
naphthalene	0	18	110	0	18	114
n-propyl-benzene	0	15	93	0	20	122
styrene	0	15	93	0	17	108
1,1,1,2-tetrachloroethane	0	15	97	0	19	119
1,1,2,2-tetrachloroethane	0	15	93	0	20	128
tetrachloroethylene	0	16	99	0	16	100
toluene	0	16	97	0	16	103
1,2,3-trichlorobenzene	0	16	103	0	20	127
1,2,4-trichlorobenzene	0	16	97	0	16	101
1,1,1-trichloroethane	0	16	99	0	17	106
1,1,2-trichloroethane	0	16	102	0	16	102
trichloroethene	0	15	95	0	16	97
1,2,3-trichloropropane	0	16	99	0	17	105
1,2,4-trimethlybenzene	0	14	90	0	18	110
1,3,5-trimethylbenzene	0	15	93	0	19	117
xylene(m&p)	0	30	94	0	36	114
o-xylene	0	15	95	0	17	108
Control:			70%-130%			70%-130%

MATRIX SPIKE / MATRIX SPIKE DUPLICATE REPORT (EPA 8260C)

Run Date:	1/9/2017	**Prep batch:**	P1-9-17	**MS ID:**	SBK33MS
Report Date:	1/10/2017	**Analytical batch:**	STRA170109	**MSD ID:**	SBK33MSD

Analyte	**MS** (ug/Kg)	**MSD** (ug/Kg)	**RPD** (%)
benzene	17	15	9
bromobenzene	19	15	25
bromochloromethane	15	15	3
bromodichloromethane	16	16	0
bromoform	19	16	18
n-butylbenzene	14	15	6
sec-butylbenzene	19	15	26
tert-butylbenzene	20	15	28
chlorobenzene	18	15	16
chloroform	16	14	10
2-chlorotoluene	18	17	9
4-chlorotoluene	19	15	24
dibromochloromethane	15	17	9
1,2dibromo3-chloropropane	17	15	8
1,2-dibromoethane	15	17	11
dibromomethane	17	16	5
1,2-dichlorobenzene	14	16	10
1,3-dichlorobenzene	14	14	3
1,4-dichlorobenzene	15	16	3
1,1-dichloroethane	16	15	2
1,2-dichloroethane	16	15	9
1,1-dichloroethene	16	15	7
cis-1,2-dichloroethene	15	15	2
trans-1,2-dichloroethene	16	15	4
1,2-dichloropropane	16	16	3
1,3-dichloropropane	15	16	8
1,1-dichloropropene	15	15	3
cis-1,3-dichloropropene	13	16	19
trans-1,3-dichloropropene	14	17	17
ethylbenzene	17	15	14
hexachlorobutadiene	15	15	4
isopropylbenzene	19	15	21
p-Isopropyltoluene	17	14	17
methyl-tert-butylether(MTBE)	14	16	14
naphthalene	18	18	3
n-propyl-benzene	20	15	28
1,1,1,2-tetrachloroethane	17	15	14
1,1,2,2-tetrachloroethane	19	15	20
tetrachloroethylene	20	15	31*
toluene	16	16	1
1,2,3-trichlorobenzene	16	16	6
1,2,4-trichlorobenzene	20	16	21
1,1,1-trichloroethane	16	16	3
1,1,2-trichloroethane	17	16	7
trichloroethene	16	16	0
trichlorofluoromethane	16	15	2
1,2,3-trichloropropane	17	16	6
1,2,4-trimethlybenzene	18	14	19
1,3,5-trimethylbenzene	19	15	23
xylene(m&p)	36	30	19
o-xylene	17	15	13
Control:			30

* - QC fails on this compound

Laboratory Report

Point Source Solutions
10445 SW Canyon Rd Suite 115
Portland, OR 97214

Project Name:
Project Location: 1024 SE Grand Ave
Project Number: OR161203-3b
Report Number: 87034
Report Date: 1/16/17
Date Sampled: 1/6/17
Date received: 1/6/17

TCLP-Pb Toxicity Characteristic Leaching Procedure for Lead

EPA 1311- Extraction; EPA 700-Analysis

Field ID	Lab ID	Result mg/L(ppm)	Detection Limit mg/L(ppm)
SB16-S1-11	L3580	<0.2	0.2

Quality Control Report: Lead (Pb)

PB1701161	Measured Conc. (mg/L)	Expected Concentration (mg/L)	Recovery (%)	Lower Limit	Upper Limit	
ICV	5.2	5.0	104%	80%	120%	PASS
Prep Blank	0.0	0.0	--	0.5 mg/L	--	PASS
LCS	3.1	2.7	113%	70%	130%	PASS
QC Blank	0.0	0.0	--	0.5 mg/L	--	PASS
QC Check	5.3	5.0	105%	80%	120%	PASS
Calibration R^2 :	*1.*	*(Lower Limit: 0.990)*				*PASS*

Wy'East
Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214

CHAIN OF CUSTODY

Report Number 87034

Phone(503) 231-9320 FAX(503) 231-9344

Company: Point Source Solutions	Phone: (503) 422-2675		
Project #: ORI61203-36	FAX:		
Project Name:	Purchase Order #:		
Site: 1024 SE Grand Ave	Report Attention:	Collected By:	
Samples: Temperature 1.5 °C On Ice? (Yes) / No	Turnaround Time: ☒ Regular ☐ 3-5 Business Days		

LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B	Analysis Requested
L35578	SB18-S1-9.5	1-6-17		S	1	4oz	X	X				X	
L35579	SB18-S2-17	"		S	2	"	X	X				X	
L35580	SB16-S1-11	"		S	2	"	X	X				X	
L35581	SB15-S1-12	"		S	1	"	X	X				X	
L35582	SB16-S2-16.5	"		S	1	"	X	X				X	
L35583	SB17-S1-12	"		S	1	"	X	X				X	

Comments: Andy
cc: Johnny & Gil

Pg. 26 of 27

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
Jake Rau	PSS	1-6-17					
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
						1/6/17	2035

Wy'East
Environmental Sciences Inc.

2415 SE 11th Ave
Portland, OR 97214
Ph: 503-231-9320
Fax: 503-231-9344

Sample Condition Check List

Customer Name : Point Source **COC # :** 87034

Method of Delivery: courier (client) other

Type of ice: (Ice) Blue None **Cooler Temperature:** 1.5°C

Matrix : (Soil) Water Other_____

	Yes	No	NA	Comments
Relinquish signed on Chain of Custody.	/			*
Received by signed on Chain of Custody.	/			*
Chain of Custody filled out.	/			*
Were samples Arrived within Hold Time.	/			* Same day
Rush Trun Around Time Requested. *If yes, how many days* ____			/	* Regular
Temperatures measured and written in correct place on COC.	/			* 1.5°C
Correct containers used.	/			* 40z
Sufficient Volume.	/			*
ID on COC and Sample labels match.	/			*
Duplicate jars and vials labeled with a, b, c, d etc.			/	* NO Dup Jar
All tests logged in checked against the COC.	/			*
The COC scanned into the main office computer.	/			*

FOR WATER SAMPLES:

Trip Blank: Yes Waiver on file Submitted by: _____
No

	Yes	No	Comments
Was sufficient volume provided for analysis.			*
Was sufficient volume provided for QC samples (at least two).			*
HCL Preserved vials.			*
HCL LOT Number: _____			
Were duplicate jars and vials labeled with a, b, c, d etc.			*
Headspace in VOA Vials (>6mm).			*

Client Notification/Resolution: _____

Comments: _____

Reviewed: _____ **Date:** 1/6/17

CSF-0004

APPENDIX IV

WELL LOGS

North Adjoining Property

MULT 111727

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

12/12/2012

(1) OWNER/PROJECT

Hole Number SB-1

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other _____

(5) USE OF HOLE

COLLECT SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] Attach copy)
Depth of Completed Hole 20.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	20	Bentonite Chips	0	20	1	S

Backfill placed from 0 ft to 20 ft Material BENTONITE
Filter pack from _____ ft to _____ ft Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or 45.51547800 DMS or DD
Long ° ' " or -122.66041000 DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE, PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening			[ ]	
Completed Well			[ ]	

Flowing Artesian? [ ]
WATER BEARING ZONES Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
					[ ]	
					[ ]	
					[ ]	
					[ ]	
					[ ]	

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn Sand w/Gravel	0	7
Grey Med-Fine Sand	7	16
Brn Sand w/Gravel	16	20

Date Started 12/5/2012 Completed 12/5/2012

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Bentonite Chips	0	20	1	S

Date Started 12/5/2012 Completed 12/5/2012

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 12/12/2012

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 111726

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

12/12/2012

(1) OWNER/PROJECT

Hole Number SB-2

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other: _____

(5) USE OF HOLE

COLLECT SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] (Attach copy)

Depth of Completed Hole 22.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	22	Bentonite Chips	0	22	1	S

Backfill placed from 0 ft. to 22 ft. Material BENTONITE
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or 45.51549200 DMS or DD
Long ° ' " or -122.66022000 DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE, PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening			[ ]	
Completed Well			[ ]	

Flowing Artesian? [ ]
WATER BEARING ZONES Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
					[ ]	
					[ ]	
					[ ]	
					[ ]	
					[ ]	

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn Sand w/Gravel	0	5
Grey Med-Fine Sand	5	17
Brn Sand w/Gravel	17	22

Date Started 12/5/2012 Completed 12/5/2012

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Bentonite Chips	0	22	1	S

Date Started 12/5/2012 Completed 12/5/2012

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 12/12/2012

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 111728

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

12/12/2012

(1) OWNER/PROJECT

Hole Number SB-3

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other: _____

(5) USE OF HOLE

COLLECT SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] (Attach copy)

Depth of Completed Hole 20.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	20	Bentonite Chips	0	20	1	S

Backfill placed from 0 ft. to 20 ft. Material BENTONITE
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____ _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat _____ ° _____ ' _____ " or 45.51549000 DMS or DD
Long _____ ° _____ ' _____ " or -122.66007900 DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE, PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well				

Flowing Artesian? [ ]
Depth water was first found _____

WATER BEARING ZONES

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn Sand w/Gravel	0	1
Grey Med-Fine Sand	1	16
Brn Sand w/Gravel	16	20

Date Started 12/5/2012 Completed 12/5/2012

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Bentonite Chips	0	20	1	S

Date Started 12/5/2012 Completed 12/5/2012

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 12/12/2012

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 111729

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

12/12/2012

(1) OWNER/PROJECT

Hole Number SB-4

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other: _____

(5) USE OF HOLE

COLLECT SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] Attach copy)

Depth of Completed Hole 16.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	16	Bentonite Chips	0	16	0.75	S

Backfill placed from 0 ft. to 16 ft. Material BENTONITE
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or 45.51546900 DMS or DD
Long ° ' " or -122.65986700 DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE, PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening			[ ]	
Completed Well			[ ]	

Flowing Artesian? [ ]

WATER BEARING ZONES

Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
					[ ]	
					[ ]	
					[ ]	
					[ ]	
					[ ]	

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn Sand w/Gravel	0	1
Grey Med-Fine Sand	1	15
Brn Sand w/Gravel	15	16

Date Started 12/5/2012 Completed 12/5/2012

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Bentonite Chips	0	16	0.75	S

Date Started 12/5/2012 Completed 12/5/2012

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 12/12/2012

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 111730

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

12/12/2012

(1) OWNER/PROJECT

Hole Number SB-5

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other _____

(5) USE OF HOLE

COLLECT SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] Attach copy)

Depth of Completed Hole 16.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	sacks/ Amt	lbs
2.25	0	16	Bentonite Chips	0	16	0.75	S

Backfill placed from 0 ft. to 16 ft. Material BENTONITE
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or 45.51564500 DMS or DD
Long ° ' " or -122.65988100 DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE, PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening			[ ]	
Completed Well			[ ]	

Flowing Artesian? [ ]

WATER BEARING ZONES

Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
					[ ]	
					[ ]	
					[ ]	
					[ ]	
					[ ]	

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn Sand w/Gravel	0	1
Grey Med-Fine Sand	1	14
Brn Sand w/Gravel	14	16

Date Started 12/5/2012 Completed 12/5/2012

(12) ABANDONMENT LOG:

Material	From	To	sacks/ Amt	lbs
Bentonite Chips	0	16	0.75	S

Date Started 12/5/2012 Completed 12/5/2012

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 12/12/2012

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 111731

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

12/12/2012

(1) OWNER/PROJECT

Hole Number SB-6

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other _____

(5) USE OF HOLE

COLLECT SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] Attach copy

Depth of Completed Hole 16.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	16	Bentonite Chips	0	16	0.75	S

Backfill placed from 0 ft. to 16 ft. Material BENTONITE
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]
( )	( )		[ ]				( )	( )	[ ]	[ ]

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or 45.51566200 DMS or DD
Long ° ' " or -122.66008000 DMS or DD

(•) Street address of hole ( ) Nearest address

1006 SE GRAND AVE, PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well				

Flowing Artesian? [ ]

WATER BEARING ZONES

Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn Sand w/Gravel	0	1
Grey Med-Fine Sand	1	15
Brn Sand w/Gravel	15	16

Date Started 12/5/2012 Completed 12/5/2012

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Bentonite Chips	0	16	0.75	S

Date Started 12/5/2012 Completed 12/5/2012

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 12/12/2012

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

GEOTECHNICAL HOLE REPORT - Map with location identified must be attached and shall include an approximate scale and north arrow

MULT 111731

12/12/2012

Map of Hole

MULT 112526

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

3/13/2013

(1) OWNER/PROJECT

Hole Number SB-2B

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other _____

(5) USE OF HOLE

COLLECT SOIL & WATER SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] (Attach copy)
Depth of Completed Hole 32.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	32	Bentonite Chips	0	32	1.5	S

Backfill placed from 0 ft. to 32 ft. Material BENTONITE CHIPS
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
•		0.75		0	27	80		•		X
	•	0.75		27	32	80		•		X

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature 49 °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer Chugwater

Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or 45.51550400 DMS or DD
Long ° ' " or -122.66031000 DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE. PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well				

Flowing Artesian? [ ]

WATER BEARING ZONES
Depth water was first found 28.40

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
2/15/2013	28.4	32				28.4

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn med sand w/ gravel	0	24
Brn gravely sand	24	32

Date Started 2/15/2013 Completed 2/15/2013

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Bentonite Chips	0	32	1.5	S

Date Started 2/15/2013 Completed 2/15/2013

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 3/13/2013

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 112527

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

3/13/2013

(1) OWNER/PROJECT

Hole Number SB-8

PROJECT NAME/NBR: CHUGWATER

First Name _____ Last Name _____

Company HUFFCO PORTLAND LLC

Address 15019 S. RIVERSHORE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other: _____

(5) USE OF HOLE

COLLECT SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] Attach copy

Depth of Completed Hole 21.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	21	Bentonite Chips	0	21	1	S

Backfill placed from 0 ft. to 21 ft. Material BENTONITE CHIPS
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		
( )	( )		[ ]				( )	( )		

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 SW 1/4 of the NW 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or 45.51549700 DMS or DD
Long ° ' " or -122.66017600 DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE, PORTLAND, OR 97214

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well				

Flowing Artesian? [ ]
WATER BEARING ZONES Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
Brn med sand w/ gravel	0	4
Brn fine sand	4	11
Grey fine sand	11	15
Brn/grey gravely sand	15	21

Date Started 2/15/2013 Completed 2/15/2013

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Bentonite Chips	0	21	1	S

Date Started 2/15/2013 Completed 2/15/2013

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10615 Date 3/13/2013

First Name MARTIN Last Name HAUN

Affiliation ESN-NW

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version:

GEOTECHNICAL HOLE REPORT - Map with location identified must be attached and shall include an approximate scale and north arrow

MULT 112527

3/13/2013

Map of Hole

MULT 113474

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

7/19/2013

(1) OWNER/PROJECT

Hole Number B-1

PROJECT NAME/NBR: P3146

First Name _____ Last Name _____
Company HUFFCO
Address 15019 SW RIVERSIDE DR
City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other: _____

(5) USE OF HOLE

SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] (Attach copy)
Depth of Completed Hole 34.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	34	Other	0	2	0.1	S
			Bentonite Chips	2	34	1.5	S

Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis [ ] Yes By _____
Supervising Geologist/Engineer _____
Water quality concerns? [ ] Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 NW 1/4 of the SE 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or _____ DMS or DD
Long ° ' " or _____ DMS or DD
(•) Street address of hole ( ) Nearest address
1006 SE GRAND AVE,
PORTLAND, OR 97215

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well				

Flowing Artesian? [ ]
WATER BEARING ZONES
Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
asphalt	0	0.33
fine silt	0.33	19
gravel	19	34

Date Started 5/20/2013 Completed 5/20/2013

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Other	0	2	0.1	S
Bentonite Chips	2	34	1.5	S

Date Started 5/20/2013 Completed 5/20/2013

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10586 Date 7/19/2013
First Name TYLER Last Name DAY
Affiliation CASCADE DRILLING

ORIGINAL - WATER RESOURCES DEPARTMENT
THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 113473

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

7/19/2013

(1) OWNER/PROJECT

Hole Number B-1B

PROJECT NAME/NBR: P3146

First Name _____ Last Name _____

Company HUFFCO

Address 15019 SW RIVERSIDE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

[X] New [ ] Deepening [X] Abandonment
[ ] Alteration (repair/recondition)

(3) CONSTRUCTION

[ ] Rotary Air [ ] Hand Auger [ ] Hollow stem auger
[ ] Rotary Mud [ ] Cable [X] Push Probe
[ ] Other _____

(4) TYPE OF HOLE:

(•) Uncased Temporary ( ) Cased Permanent
( ) Uncased Permanent ( ) Slope Stablity
( ) Other
Other: _____

(5) USE OF HOLE

SOIL AND WATER SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard [ ] Attach copy

Depth of Completed Hole 36.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	36	Other	0	2	0.1	S
			Bentonite Chips	2	36	1.5	S

Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd

(8) WELL TESTS

( ) Pump ( ) Bailer ( ) Air ( ) Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature 58 °F Lab analysis [ ] Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? [ ] Yes (describe below) TDS amount _____ _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 NW 1/4 of the SE 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or _____ DMS or DD
Long ° ' " or _____ DMS or DD
(•) Street address of hole ( ) Nearest address

1006 SE GRAND AVE.
PORTLAND, OR 97215

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well	5/20/2013			31

Flowing Artesian? [ ]

WATER BEARING ZONES

Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
5/20/2013	30	36				31

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
asphalt	0	0.33
fine silt	0.33	19
gravel	19	36

Date Started 5/20/2013 Completed 5/20/2013

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Other	0	2	0.1	S
Bentonite Chips	2	36	1.5	S

Date Started 5/20/2013 Completed 5/20/2013

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10586 Date 7/19/2013

First Name TYLER Last Name DAY

Affiliation CASCADE DRILLING

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version:

MULT 113471

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

7/19/2013

(1) OWNER/PROJECT

Hole Number B-2

PROJECT NAME/NBR: P3146

First Name _____ Last Name _____

Company HUFFCO

Address 15019 SW RIVERSIDE DR

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

☒ New ☐ Deepening ☒ Abandonment
☐ Alteration (repair/recondition)

(3) CONSTRUCTION

☐ Rotary Air ☐ Hand Auger ☐ Hollow stem auger
☐ Rotary Mud ☐ Cable ☒ Push Probe
☐ Other _____

(4) TYPE OF HOLE:

◉ Uncased Temporary ○ Cased Permanent
○ Uncased Permanent ○ Slope Stablity
○ Other
Other: _____

(5) USE OF HOLE

SOIL AND WATER SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard ☐ (Attach copy)

Depth of Completed Hole 31.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	31	Other	0	2	0.1	S
			Bentonite Chips	2	31	1.5	S

Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐

(8) WELL TESTS

○ Pump ○ Bailer ○ Air ○ Flowing Artesian

Yield gal/min	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature 58 °F Lab analysis ☐ Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? ☐ Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 NW 1/4 of the SE 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or _____ DMS or DD
Long ° ' " or _____ DMS or DD
◉ Street address of hole ○ Nearest address

1006 SE GRAND AVE,
PORTLAND, OR 97215

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening				
Completed Well	5/20/2013			30.5

Flowing Artesian? ☐

WATER BEARING ZONES

Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
5/20/2013	30	31				30.5

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
asphalt	0	0.33
fine silt	0.33	19
gravel	19	31

Date Started 5/20/2013 Completed 5/20/2013

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Other	0	2	0.1	S
Bentonite Chips	2	31	1.5	S

Date Started 5/20/2013 Completed 5/20/2013

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10586 Date 7/19/2013

First Name TYLER Last Name DAY

Affiliation CASCADE DRILLING

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 113472

STATE OF OREGON
GEOTECHNICAL HOLE REPORT
(as required by OAR 690-240-0035)

7/19/2013

(1) OWNER/PROJECT

Hole Number B-3

PROJECT NAME/NBR: P3146

First Name _____ Last Name _____

Company HUFFCO

Address 15019 SW RIVERSIDE DR.

City VANCOUVER State WA Zip 98683

(2) TYPE OF WORK

☒ New ☐ Deepening ☒ Abandonment
☐ Alteration (repair/recondition)

(3) CONSTRUCTION

☐ Rotary Air ☐ Hand Auger ☐ Hollow stem auger
☐ Rotary Mud ☐ Cable ☒ Push Probe
☐ Other _____

(4) TYPE OF HOLE:

◉ Uncased Temporary ○ Cased Permanent
○ Uncased Permanent ○ Slope Stablity
○ Other
Other _____

(5) USE OF HOLE

SOIL SAMPLES

(6) BORE HOLE CONSTRUCTION

Special Standard ☐ (Attach copy)

Depth of Completed Hole 20.00 ft.

BORE HOLE Dia	From	To	SEAL Material	From	To	Amt	sacks/ lbs
2.25	0	20	Other	0	2	0.1	S
			Bentonite Chips	2	20	1.5	S

Backfill placed from _____ ft. to _____ ft. Material _____
Filter pack from _____ ft. to _____ ft. Material _____ Size _____

(7) CASING/SCREEN

Casing	Screen	Dia	+	From	To	Gauge	Stl	Plstc	Wld	Thrd
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐
○	○		☐				○	○	☐	☐

(8) WELL TESTS

○ Pump ○ Bailer ○ Air ○ Flowing Artesian

Yield gal/mm	Drawdown	Drill stem/Pump depth	Duration(hr)

Temperature _____ °F Lab analysis ☐ Yes By _____

Supervising Geologist/Engineer _____

Water quality concerns? ☐ Yes (describe below) TDS amount _____

From	To	Description	Amount	Units

(9) LOCATION OF HOLE (legal description)

County MULTNOMAH Twp 1.00 S N/S Range 1.00 E E/W WM
Sec 2 NW 1/4 of the SE 1/4 Tax Lot 1300
Tax Map Number _____ Lot _____
Lat ° ' " or _____ DMS or DD
Long ° ' " or _____ DMS or DD

◉ Street address of hole ○ Nearest address

1006 SE GRAND AVE,
PORTLAND, OR 97215

(10) STATIC WATER LEVEL

	Date	SWL(psi)	+	SWL(ft)
Existing Well / Predeepening			☐	
Completed Well			☐	

Flowing Artesian? ☐

WATER BEARING ZONES

Depth water was first found _____

SWL Date	From	To	Est Flow	SWL(psi)	+	SWL(ft)
					☐	
					☐	
					☐	
					☐	
					☐	

(11) SUBSURFACE LOG

Ground Elevation _____

Material	From	To
asphalt	0	0.33
fine silt	0.33	19
gravel	19	20

Date Started 5/20/2013 Completed 5/20/2013

(12) ABANDONMENT LOG:

Material	From	To	Amt	sacks/ lbs
Other	0	2	0.1	S
Bentonite Chips	2	20	1.5	S

Date Started 5/20/2013 Completed 5/20/2013

Professional Certification

(to be signed by an Oregon licensed water or monitoring well constructor, Oregon registered geologist or professional engineer)

I accept responsibility for the construction, deepening, alteration, or abandonment work performed during the construction dates reported above. All work performed during this time is in compliance with Oregon geotechnical hole construction standards. This report is true to the best of my knowledge and belief.

License/Registration Number 10586 Date 7/19/2013

First Name TYLER Last Name DAY

Affiliation CASCADE DRILLING

ORIGINAL - WATER RESOURCES DEPARTMENT

THIS REPORT MUST BE SUBMITTED TO THE WATER RESOURCES DEPARTMENT WITHIN 30 DAYS OF COMPLETION OF WORK

Form Version

MULT 113471

7/19/2013

GEOTECHNICAL HOLE REPORT - Map with location identified must be attached and shall include an approximate scale and north arrow

Map of Hole

OREGON SITE MAP

Cascade Project No. P3146

Bid Number 7718

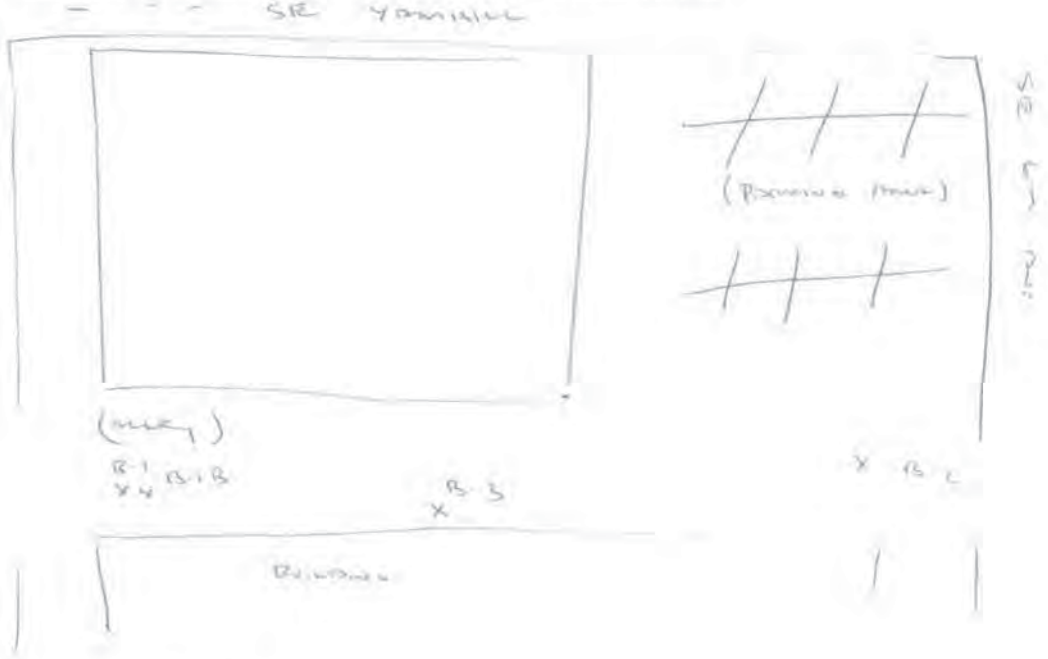
Oregon Water Resources Department (OWRD) requires completion of a Geotechnical Hole Report if any of the following apply:

- Geotechnical hole is greater than 18 feet deep;
- Within 50 feet of a water supply or monitoring well;
- Used to make a determination of water quality;
- Constructed in an area of known or reasonably suspected contamination.

In order to comply with OWRD requirements, please provide a Site Map.

Map shall include an approximate scale, north arrow. Upon completion of well activities, a site map with each well location clearly identified must be filed with each Geotechnical Hole Report (OR 690-240-035).

Thank You for your information and assistance on compliance with Oregon Administrative Rules.



MUST PROVIDE SCALE

Site Address: 1006 SE GRAND AVENUE, PORTLAND, OR

Client: CHUGWATER, LLC

Date: 5/22/13