Underground Storage Tank Decommissioning, Site Assessment, Characterization, and Cleanup Report
Factoria Service Center Facility
Bellevue, Washington

January 6, 2020

Prepared for

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LIST OF ABBREVIATIONS AND ACRONYMS

µg/L ..... micrograms per liter
APS ..... Applied Professional Services, Inc.
bgs ..... below ground surface
BTEX ..... benzene, toluene, ethylbenzene, and xylenes
CUL ..... cleanup level
DRO ..... diesel-range organics
Ecology ..... Washington State Department of Ecology
EDB 1,2-dibromomethane
EDC 1,2-dichloroethane
EPA ..... US Environmental Protection Agency
ERTS ..... Ecology's Environmental Report Tracking System
ft ..... feet
GRO ..... gasoline-range organic
IDW ..... investigation-derived waste
LAI ..... Landau Associates, Inc.
MarVac ..... Marine Vacuum Services, Inc.
MTBE ..... methyl-tert-butyl ether
MTCA ..... Model Toxics Control Act
ORO ..... oil-range organics
PID ..... photoionization detector
PSE ..... Puget Sound Energy
PVC ..... polyvinyl chloride
RCRA ..... Resource Conservation Recovery Act
UST ..... underground storage tank
VOC ..... volatile organic compound
WAC ..... Washington Administrative Code
Wyser ..... Wyser Construction Company, Inc

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1.0 INTRODUCTION

At the request of Puget Sound Energy (PSE), Landau Associates, Inc. (LAI) prepared this underground storage tank (UST) decommissioning, site assessment, characterization, and cleanup report has been prepared on behalf of PSE's Factoria Service Center facility located at 13230 32nd Street, in Bellevue, Washington (site). Figure 1 shows the location of the site. The locations of the USTs and other site features are shown on Figure 2.

1.1 Purpose of Report

This report documents UST decommissioning, site assessment, and site characterization and cleanup activities for two USTs. Decommissioning and site assessment activities were conducted in accordance with the requirements of the Washington State Department of Ecology (Ecology) UST regulations (Chapter 173-360A of the Washington Administrative Code [WAC], including WAC 173-360-385), and Ecology's Guidance for Site Checks and Site Assessments for Underground Storage Tanks (Ecology 2003).[1] Immediately following the site assessment, site characterization and cleanup activities were conducted in accordance with WAC 173-340-450.

Prior to UST decommissioning and site assessment activities, soil and groundwater sampling and analysis were conducted to evaluate the potential for releases associated with the USTs (Section 2.0). After UST decommissioning and site assessment activities (Section 3.0), and soil characterization and cleanup (Sections 4.1 and 4.2), a groundwater characterization investigation was conducted to confirm the effectiveness of the cleanup (Section 4.3). The results of both the pre-decommissioning investigation and groundwater characterization investigation are also documented in this report.

1.2 Site Conditions

The following subsections provide information pertaining to the physical, geologic, and hydrogeologic setting of the site and results of previous site investigations.

1.2.1 Physical Setting

The site is approximately 4 acres in size and includes an office building, garage buildings, a storage yard, and the former fueling station. The site is bordered by commercial properties to the east and west. It is bordered to the north by SE 30th Street, followed by additional commercial properties, and to the south by SE 32nd Street.

1.2.2 Geologic and Hydrogeologic Setting

The Puget Sound region is underlain by Quaternary sediments deposited by numerous glacial episodes, the most recent of which is termed the Vashon Stade of the Fraser Glaciation. Deposition of

[1] Ecology. 2003. Guidance for Site Checks and Site Assessment for Underground Storage Tanks. Publication No. 90-52. Underground Storage Tank Program, Washington State Department of Ecology. Revised April. https://fortress.wa.gov/ecy/publications/documents/9052.pdf.

these sediments occurred during a number of glacial advances and retreats that created the existing subsurface conditions and surface topography. The native soils observed during site characterization work (interpreted to be Vashon Glacial Outwash) generally correspond to the mapped unit and consisted of fine to medium sand with varying amounts of silt and gravel.

Groundwater flow direction was not determined during this investigation; however, it was assumed to be approximately west-southwest toward Sunset Creek, which runs north-south approximately 200 feet (ft) to the west of the former fueling station. Groundwater was encountered during the site assessment at approximately 10 ft below ground surface (bgs).

1.2.3 Underground Storage Tanks

Two double-walled, fiberglass USTs with continuous-automatic interstitial space were present at the site and decommissioned as a part of activities documented in this report. As shown on Figure 2, the decommissioned USTs were located within a fueling station near the center of the facility. Each tank had a capacity of 10,000 gallons; the eastern tank contained diesel fuel (identified by PSE and Ecology as Tank No. 281) and the western tank contained unleaded gasoline (identified by PSE and Ecology as Tank No. 282). The USTs were installed on June 28, 1994 and were operational until just prior to decommissioning activities.

A 600-gallon oil/water separator was also present approximately 2 ft north of the USTs, as shown on Figure 2. This oil/water separator was removed as a part of the UST removal activities; however, per WAC 173-360A-0110, the oil/water separator is exempt from regulations set forth in the cited chapter and is not discussed further in this report.

2.0 PRE-DECOMMISSIONING SUBSURFACE INVESTIGATION

A pre-decommissioning subsurface investigation was completed on August 15, 2019. To evaluate the potential for spills or releases associated with the USTs prior to decommissioning activities, the pre-decommissioning assessment sampling occurred during the decommissioning process after the USTs were cleaned (see Section 3.3), but before removal of the USTs. The assessment was completed to plan for any potential remedial activities to be completed during tank removal.

Pre-decommissioning investigation samples were collected from seven soil borings in the area of the USTs. Prior to the start of drilling activities, all locations were determined to be clear of utilities through a public utility locate and a private utility locate conducted by Applied Professional Services, Inc. (APS). Borings were advanced around and in between the USTs and dispensers; boring locations are shown on Figure 3.

Pre-decommissioning assessment investigation activities were conducted by a certified Washington State Site Assessor[2] using direct-push drilling equipment operated by ESN Drilling of Olympia, Washington. Six borings were advanced around the outside of the anticipated area of excavation required for removal of the USTs (PSE-B01 through PSE-B06). An additional boring was advanced between the USTs (beneath the fuel island [PSE-B08][3]); borings were advanced to depths between 15 and 20 ft bgs. Borings were located such that there was at least one boring on all four sides of each UST.

2.1 Soil Classification and Field Screening

Soil samples collected at each boring location were visually classified for soil type. Soil and groundwater samples were field-screened for evidence of potential contamination. Field-screening techniques included sheen tests, volatile organic compound (VOC) headspace analysis using a photoionization detector (PID), and visual and olfactory indications of contamination. Field-screening evidence (including odor, sheen, and VOC detections using the PID) indicated potentially contaminated soil and groundwater at boring PSE-B08. No evidence of soil or groundwater contamination was observed in the six borings located outside the UST area. As mentioned previously, groundwater was encountered in all of the borings at approximately 10 ft bgs. Exploration logs are provided in Appendix A.

2.2 Soil Sampling and Analysis

For the pre-decommissioning investigation, soil samples were collected based on the results of field screening and depth relative to the USTs. One soil sample was collected at each boring from the depth of the observed water table. An additional deeper soil sample was collected at PSE-B08 (approximately 16 to 17 ft bgs) beneath the observed impacted depth. One duplicate soil sample was

[2] LAI staff member Andrey J. Huerta-Avila, UST Washington State Site Assessment #873126
[3] Boring PSE-B07 was not completed.

also collected for quality assurance and quality control purposes. All samples analyzed for volatile constituents were collected using US Environmental Protection Agency (EPA) Method 5035 sampling procedures. Soil samples were appropriately preserved and submitted for laboratory analysis to TestAmerica Laboratories, Inc. located in Fife, Washington.

Soil analyses were selected based on the known tank contents in accordance with Ecology's Guidance for USTs (Ecology 2003). Lead was not analyzed due to detailed information regarding UST content history. Pre-decommissioning investigation soil samples were analyzed for the following:

- Soil samples primarily associated with the gasoline tank (PSE-B01 through PSE-B03) were analyzed for gasoline-range organics (GRO); 1,2-dibromomethane (EDB); 1,2-dichloroethane (EDC); methyl-tert-butyl ether (MTBE); and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8260C.[4]
- Soil samples primarily associated with the diesel tank (PSE-B04 through PSE-B06) were analyzed for diesel-range organics (DRO) and oil-range organics (ORO) by the Northwest diesel-range total petroleum hydrocarbon extended method and BTEX by EPA Method 8260C.
- The soil samples collected from between the USTs (two samples at PSE-B08) were analyzed for GRO, DRO, ORO, MTBE, EDB, EBC, and BTEX.

Pre-decommissioning investigation soil sampling locations are shown on Figure 3.

2.3 Groundwater Sampling and Analysis

For the pre-decommissioning investigation, three groundwater samples were collected from dedicated, temporary polyvinyl chloride (PVC) wells. As mentioned previously, groundwater flow direction was not determined during the investigation, but assumed to be west-southwest toward Sunset Creek. One sample was collected at an assumed upgradient location (PSE-B05); one sample was collected at a downgradient location (PSE-B02); one sample was collected from between the USTs (PSE-B08).

Groundwater samples were collected using low-flow sampling techniques and procedures as follows:

- Prior to sampling, each well was purged using a peristaltic pump and dedicated tubing.
- Field parameters, including pH, temperature, specific conductance, dissolved oxygen, oxidation reduction potential, and turbidity, were monitored and recorded every 3 minutes during purging using an in-line flow-through cell. Purging of the well was considered complete when all field parameters became stable for three successive readings or if purging activities had reached a maximum of 12 minutes. The successive readings would be within +/– 0.1 pH units for pH, +/– 3 percent for conductivity, and +/– 10 percent for dissolved oxygen and turbidity.

[4] Based on the age of the fueling station and review of available historical information, the UST never contained leaded gasoline. Therefore, lead was not included in the analytical suite.

- After readings had stabilized or maximum purging time had completed, tubing was disconnected from the in-line flow-through cell, the end trimmed, and samples were collected.

Groundwater analyses, like soil samples, were selected based on known tank contents in accordance with Ecology's Guidance for USTs (Ecology 2003); pre-decommissioning investigation groundwater samples were analyzed for the following:

- GRO, DRO, ORO, MTBE, EDC, and BTEX by the methods listed above
- EDB by EPA Method 8011.

Pre-decommissioning investigation groundwater sampling locations are shown on Figure 3.

2.4 Applicable Cleanup Levels and Analytical Results

To allow for unrestricted future land use, the Model Toxics Control Act (MTCA; WAC 173-340) Method A soil cleanup levels (CULs) for unrestricted land use were used to evaluate analytical data generated during the pre-decommissioning assessment activities.

Soil analytical results did not indicate the presence of GRO, DRO, ORO, EDB, EDC, MTBE, or BTEX at concentrations above laboratory reporting limits at any sampling location. The groundwater analytical results indicated the presence of ORO at a concentration above the MTCA Method A CUL (500 micrograms per liter [µg/L]) in the sample collected from PSE-B02 (550 µg/L) and GRO above the MTCA Method A CUL (800 µg/L) in the sample collected from PSE-B08 (2,200 µg/L). The soil analytical results from the pre-decommissioning assessment are presented in Table 1 and the groundwater analytical results are presented in Table 2. Investigation-derived waste (IDW) analytical results from the pre-decommissioning assessment are presented in Table 3. The laboratory analytical reports are provided in Appendix B. These data are considered final and have undergone quality assurance review.

3.0 UNDERGROUND STORAGE TANK DECOMMISSIONING AND SITE ASSESSMENT

This section describes the UST decommissioning and site assessment activities for the two site USTs. The tanks were decommissioned and removed during the weeks of November 4 and 11, 2019. UST decommissioning activities were conducted by registered personnel certified by the International Code Council for UST Decommissioning removal procedures presented in Ecology's UST Guidance (Ecology 2003). An LAI field representative, certified as a UST Site Assessor, was on site during the UST decommissioning and site assessment activities.[2]

3.1 Notifications and Permits

Prior to decommissioning the USTs, PSE submitted a 30-Day Notice of Intent to Decommission USTs form to Ecology, as required by WAC 173-360-385. A copy of the 30-Day Notice (one form for both tanks) is included in Appendix C.

3.2 Site Reconnaissance

In advance of UST decommissioning, a site reconnaissance was conducted on August 8, 2019 by a UST Site Assessor. The site reconnaissance included:

- Reviewing UST construction and features, including opening all manhole covers
- Reviewing the fill status of the USTs
- Reviewing information previously identified regarding the locations of underground utilities and the USTs using a private conductible utility locating and ground-penetrating radar service.
- Inspecting the site for evidence of a release.

3.3 Underground Storage Tank Decommissioning

UST decommissioning activities including cleaning, removal, and disposal are documented in the following subsections.

3.3.1 Underground Storage Tank Cleaning

Prior to the pre-decommissioning assessment sampling, the USTs and associated piping were cleaned and triple-rinsed on August 1, 2019. Cleaning and rinsing were completed by Marine Vacuum Services (MarVac), using the existing hatches on top of the USTs for access. A total of 600 gallons of rinse solution was generated. The internal components of the USTs were then dismantled (including manholes and turbines).

The residual fuel mixed with rinse solution was transported by MarVac to its Seattle facility for permitted disposal. Records of disposal of removed products and rinse water and rinse certificates are provided in Appendix D.

3.3.2 Underground Storage Tank Removal

The USTs were decommissioned and removed during the weeks of November 4 and 11, 2019 by Wyser Construction Company, Inc. (Wyser). Wyser completed all demolition of the fueling station including the canopy, fuel island concrete, fuel pumps, and pipelines. Prior to removal, a marine chemist certified the USTs to be free of all flammable and combustible residues. A copy of the certificate is provided in Appendix D.

One excavation was completed for removal of both USTs. The soil excavated from above and the sides of the USTs (approximately 0 to 12 ft bgs) was removed, field-screened and presumed clean, and stockpiled on site immediately south of the excavation. The tanks were then removed from the excavation and temporarily stored on site; the bottom of the USTs were at approximately 12 ft bgs. Groundwater was observed in the excavation following removal of the USTs at approximately 10 ft bgs. Groundwater management and sampling are discussed further in Sections 3.3.4 and 4.3.

Before removing the USTs, the tanks were observed to be fully intact, with no punctures or holes and no evidence of leakage, and leak detection brine solution was detected in the interstitial space of both USTs. During the removal of the USTs, the interstitial space of the USTs was punctured; the leak detection brine solution drained into the excavation prior to removing the USTs. Leak detection brine consists of a dyed saline solution that is not considered to be a potential environmental concern.

3.3.3 Underground Storage Tank Disposal

The USTs were broken down into smaller sections and transported by Wyser for disposal at Republic Services' Renton Service Station. Records of disposal are provided in Appendix D.

3.3.4 Groundwater Management

Groundwater was encountered at approximately 10 ft bgs during the excavation and removal of the USTs. After removal of the USTs, approximately 6,000 gallons of water was pumped out of the excavation by MarVac. It is assumed that most of the leak detection brine solution was also removed at this time. The water was transported by MarVac to its Seattle facility for permitted disposal. Records of disposal are provided in Appendix E.

Removal of this volume of water resulted in only minor changes to the water level in the excavation and it was determined that the water in the excavation was the regional shallow groundwater table. Ecology's Guidance for Site Checks and Site Assessments requires that groundwater samples be collected during an investigation where field screening indicates a potential release and the UST is located within 2 ft of the seasonal high water table (Ecology 2003). Therefore, a follow-up groundwater characterization investigation was completed, as detailed in Section 4.0.

3.4 Underground Storage Tank Site Assessment

As mentioned previously, a site assessment was conducted in accordance with WAC 173-360-385. The site check/site assessment checklist is provided in Appendix F. Prior to site assessment activities, a pre-demolition investigation was conducted, which indicated concentrations of GRO and ORO exceeding MTCA Method A CULs in groundwater. UST site assessment sampling also included field screening of soil excavated from around the former USTs during removal, and collection of confirmation soil samples from the margins of the excavation and soil stockpiles.

Soil samples were collected and field-screened at each soil excavation confirmation and soil stockpile location, and during excavation of soil during UST removal. Field-screening techniques included sheen tests, VOC headspace analysis using a PID, and visual and olfactory indications of contamination. Field screening of soil encountered in the excavation below the tanks indicated potential contamination and the site assessment was considered complete. A release was reported to Ecology's Environmental Report Tracking System (ERTS) on September 5, 2019. The report was assigned Incident No. 692851.

4.0 UNDERGROUND STORAGE TANK SITE CHARACTERIZATION AND CLEANUP

Following the confirmation of a release to soil and groundwater as indicated by the site assessment, site characterization and cleanup were conducted to address impacted soil in the excavation area and local groundwater.

4.1 Soil Characterization and Cleanup

During removal of the USTs, soil was field-screened for contamination. Potentially impacted soil was identified, excavated, and disposed of at Waste Management's Alaska Street Facility as a Class 3 soil on November 12 and 13, 2019. Based on the field-screening results, all potentially contaminated soil was removed from the site, totaling approximately 120 tons. Export logs and soil disposal tickets are provided in Appendix E.

4.1.1 Characterization/Cleanup Confirmation Sampling and Analysis

Following excavation of all potentially contaminated soil from the UST excavation as determined by field screening, site characterization/cleanup confirmation soil samples were collected from the margins of the excavation and from the soil stockpile. Seven soil samples were collected from the excavation in accordance with Ecology's Guidance for Site Checks and Site Assessments (Ecology 2003): one from each sidewall (two from the southern wall) and one from below each tank. Confirmation soil sampling locations are shown on Figure 4. An excavator bucket was used to collect confirmation soil samples from the limits of the excavation. The excavator removed soil from the requested sampling location, and then a stainless-steel spoon was used to collect a soil grab sample for laboratory analysis from material that had not contacted the excavator bucket.

The soil stockpile was approximately 650 cubic yards in size; therefore, seven soil samples were collected from the soil stockpile for laboratory analysis. A groundwater sample was also collected from the water encountered in the excavation for characterization purposes; odor and sheen were observed in water collected from the base of the excavation.

4.1.1.1 Excavation Soil Sample Analysis

Excavation soil samples were analyzed for GRO, DRO, ORO, and BTEX. All samples analyzed for volatile constituents were collected using EPA Method 5035 sampling procedures. Soil samples were appropriately preserved and submitted for laboratory analysis to ALS Laboratories, Inc. located in Everett, Washington. EDB, EDC, and MTBE were not detected in pre-decommissioning investigation groundwater samples (Section 2.3); therefore, analysis of these compounds was not required under Ecology's Guidance for Site Checks and Site Assessments (Ecology 2003). Excavation soil sampling locations are shown on Figure 4. Soil sample depths and analytical results are presented in Table 4.

4.1.1.2 Stockpile Soil Sample Analysis

Seven soil samples were collected from the clean overburden stockpile and analyzed for GRO, DRO, ORO, and BTEX. Analytical results for the soil stockpile samples are provided in Table 4.

Stockpiled soil field-screened as potentially contaminated (soil in contact with potentially contaminated groundwater) was disposed of at the Waste Management Alaska Street Facility as a Class 3 soil. Approximately 120 tons of potentially contaminated soil was removed. Export logs and soil disposal tickets are provided in Appendix E.

4.1.2 Soil Cleanup Analytical Results

As described in Section 2.4, MTCA Method A soil CULs for unrestricted land use were used to evaluate analytical data generated during the decommissioning activities. Soil analytical results from the excavation samples and stockpile did not indicate the presence of GRO, DRO, ORO, or BTEX at concentrations greater than laboratory reporting limits at any sampling location. Soil analytical results from the excavation and stockpile soil sampling are presented in Table 4. Along with field screening (which did not indicate remaining impacted soil), all available results indicate that contaminated soil was removed during decommissioning and removal activities.

4.2 Site Restoration

Upon completion of UST removal activities and subsequent site cleanup, the excavation was backfilled with imported clean fill material and excavation overburden material (stockpile). The surface was restored with hot-patch asphalt mix.

4.3 Groundwater Characterization Investigation

To characterize the groundwater contamination indicated by the analytical results of the groundwater sample collected from the UST excavation, a groundwater characterization investigation was completed on November 22, 2019. The groundwater characterization investigation occurred after the decommissioning of the USTs and site restoration activities were completed. Groundwater sampling was completed from the bottom of the excavation and from five temporary direct-push probe borings advanced within and around the former excavation area. The following subsections describe the site groundwater characterization activities.

4.3.1 Excavation Groundwater Sample Analysis

As mentioned previously, one groundwater sample was collected from the groundwater encountered in the excavation and was analyzed for the same constituents as were the soil samples. The analytical results for the groundwater sample are presented in Table 5.

4.3.2 Field Screening

Soil samples were not collected for analytical testing; however, continuous soil samples were obtained during the installation of the temporary wells and field-screened. Field-screening techniques included sheen tests, VOC headspace analysis using a PID, and visual and olfactory indications of contamination. Field screening did not indicate evidence of contaminated soil or groundwater in any of the boring locations. Exploration logs are provided in Appendix A.

4.3.3 Groundwater Sampling and Analysis

Groundwater collected from the excavation indicated concentrations of GRO, DRO, and ORO (55,000 µg/L, 12,000 µg/L, and 870 µg/L, respectively) above their MTCA Method A CULs. Groundwater analytical results from the excavation are presented in Table 5.

Groundwater characterization investigation samples were collected from soil borings using dedicated, temporary, PVC wells installed around the limits of the excavation as well as one soil boring in the area of the former USTs. Prior to the start of drilling activities, all locations were determined to be clear of utilities through utility locates conducted by APS. Soil boring locations are shown on Figure 5.

Groundwater characterization investigation activities were conducted by a certified Washington State UST Site Assessor.[2] Temporary PVC wells were installed to a depth of 15 ft bgs by ESN of Olympia, Washington. Groundwater samples were collected from each of the five borings. Groundwater samples were collected using low-flow sampling techniques and procedures as described in Section 2.3.

Groundwater samples were analyzed for GRO, DRO, ORO, and BTEX. Groundwater characterization investigation sampling locations are shown on Figure 5.

4.3.4 Analytical Results

Groundwater analytical results indicated the presence of ORO at a concentration above the MTCA Method A CUL in sample PSE-GW-E (980 µg/L). Based on the assumed groundwater flow direction, this boring is located upgradient of the excavation. All other sample results were either below the laboratory reporting limits or below the MTCA Method A CULs for GRO, DRO, ORO, and BTEX. The analytical results from the post-decommissioning assessment are provided in Table 6. The laboratory analytical reports are provided in Appendix **B**. These data are considered final and have undergone quality assurance review.

5.0 INVESTIGATION-DERIVED WASTE AND CHARACTERIZATION

IDW soil generated as part of the pre-decommissioning and groundwater characterization investigations was contained in separate storage drums (two 16-gallon drums of soil and two 16-gallon drums of decontamination water and purged groundwater), properly labeled, and stored on site. One composite soil sample was collected from the soil drum filled during the pre-decommissioning investigation and analyzed for Resource Conservation and Recovery Act (RCRA) 8 metals[5] by EPA Method 6010 or 6020/7470 for IDW characterization, as shown in Table 3. IDW soil and groundwater were disposed of as non-hazardous waste.

[5] RCRA 8 Metals are arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

6.0 SUMMARY AND CONCLUSIONS

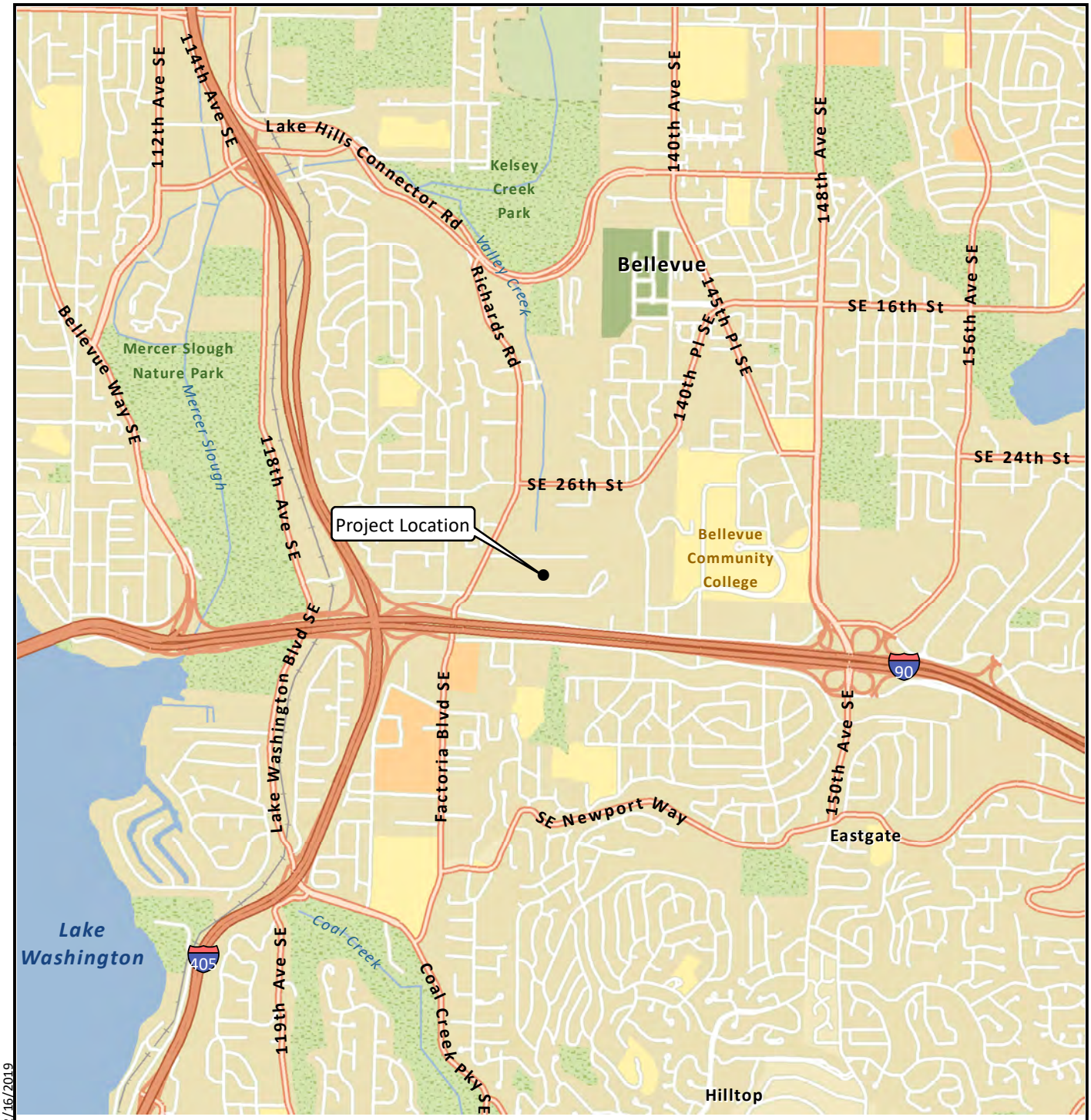
This report documents the decommissioning and removal of one 10,000-gallon gasoline and one 10,000-gallon diesel UST at the PSE Factoria Service Center site in accordance with the requirements of WAC 173-360-385. Pre-decommissioning investigation, cleanup, and groundwater characterization investigation activities included the following:

- A pre-decommissioning investigation conducted by LAI, which included collection and laboratory analysis of soil and/or groundwater samples collected from seven locations around the former USTs.
  - Soil analytical results indicated that no contaminants were present at concentrations above MTCA Method A CULs.
  - Groundwater analytical results indicated contaminant concentrations below MTCA Method A CULs except for an exceedance of ORO (550 µg/L) in groundwater sample PSE-B02 and an exceedance of GRO (2,200 µg/L) in groundwater sample PSE-B08.
- The two USTs were decommissioning and removed from the site. The USTs were observed to be in good condition with their leak detection fluid intact at the time of decommissioning. A site assessment was conducted by LAI, which included observation of all UST decommissioning activities, and collection and laboratory analysis of confirmation soil samples.
- Pre-decommissioning investigation analytical results and field screening associated with the site assessment conducted during and after UST decommissioning indicated evidence of a release. The release was reported to Ecology on September 5, 2019, and was assigned ERTS Incident No. 692851.
  - Subsequent site characterization and cleanup activities included removal and disposal of approximately 120 tons of potentially contaminated soil and approximately 6,000 gallons of potentially contaminated groundwater, and collection of soil characterization/cleanup samples. The analytical results indicated that contaminant concentrations from soil samples collected at the excavation bottom and sidewalls were below MTCA Method A CULs, and soil cleanup is complete. A groundwater sample collected from the base of the excavation indicated concentrations of GRO, DRO, ORO, ethylbenzene, and total xylenes above MTCA Method A CULs.
  - A groundwater characterization investigation was conducted after completion of the soil characterization and cleanup. The groundwater characterization investigation analytical results indicated contaminant concentrations below MTCA Method A CULs for all analytes except for one detection of ORO in sample PSE-GW-E (980 µg/L). This sample was collected from a temporary well located on the assumed upgradient side of the UST area.

UST decommissioning, site assessment, and cleanup are complete. A copy of the completed Ecology UST Site Assessment Checklist is provided in Appendix F. The Ecology Permanent Closure Notice is provided in Appendix C.

7.0 USE OF THIS REPORT

This report has been prepared for the exclusive use of PSE and applicable regulatory agencies for specific application to the Factoria Service Center UST site. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of LAI. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by LAI, shall be at the user's sole risk. LAI warrants that within the limitations of scope, schedule, and budget, these services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. LAI makes no other warranty, either express or implied.



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Puget Sound Energy Factoria Service Center Bellevue, Washington	**Vicinity Map**	Figure 1

Legend

- Property Boundary
- 10,000-Gallon Gasoline/Diesel UST
- 600-Gallon Oil/Water Separator

0 125 250

Scale in Feet

Note

1. UST = underground storage tank.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: King County, WA; Esri

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Puget Sound Energy Factoria Service Center Bellevue, Washington	**Site Plan**	Figure 2

Legend

- Soil Sampling Location
- Soil and Groundwater Sampling Location
- 10,000-Gallon Gasoline/Diesel UST
- 600-Gallon Oil/Water Separator
- Excavation Area

0 30 60

Scale in Feet

Source: King County, WA

Notes

1. UST = underground storage tank.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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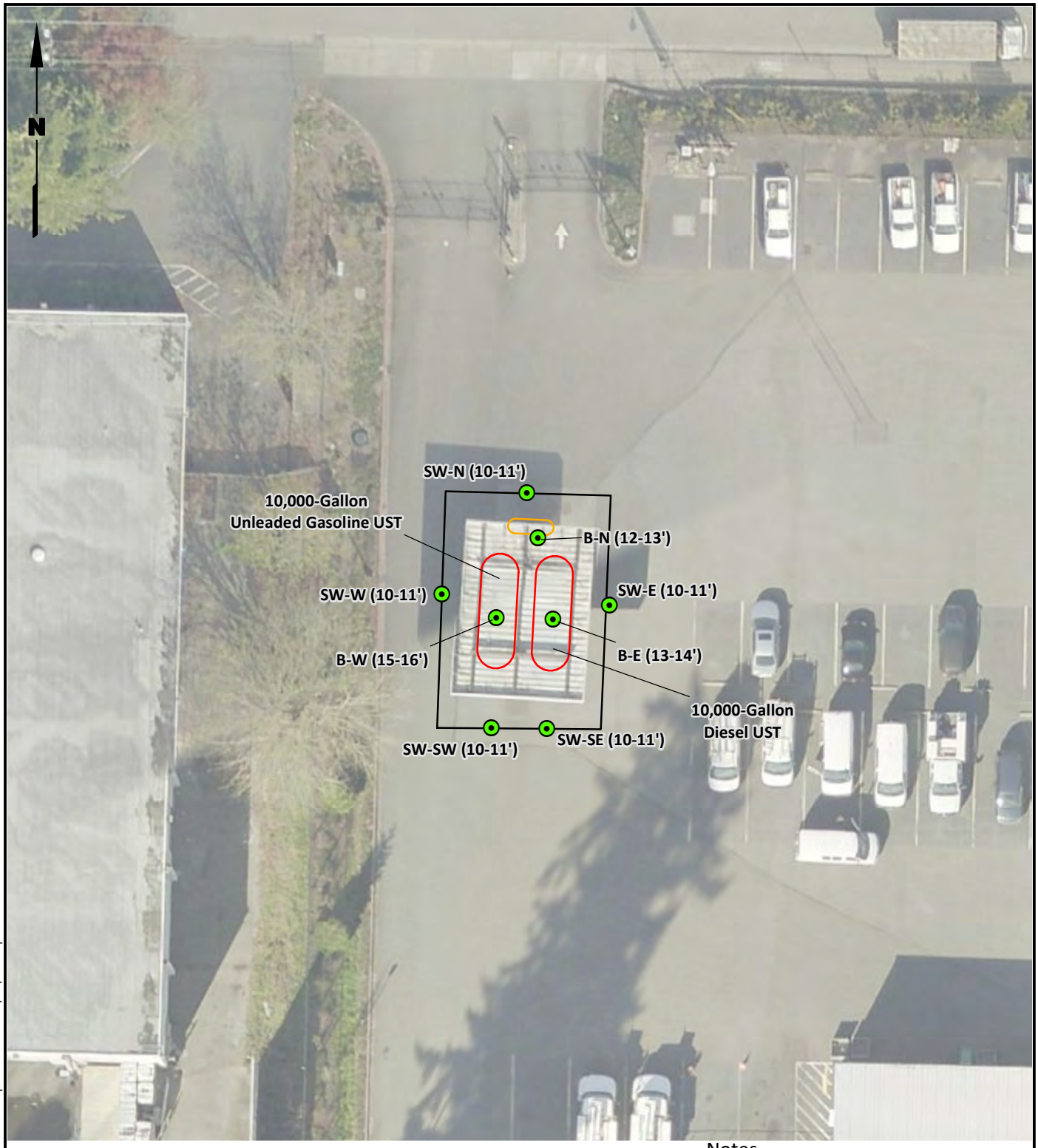
Puget Sound Energy Factoria Service Center Bellevue, Washington	**Pre-Decommissioning Investigation Exploration Locations**	Figure 3



Legend

- Confirmation Soil Sample Below CUL (depth bgs, ft)
- 10,000-Gallon Gasoline/Diesel UST
- 600-Gallon Oil/Water Separator
- Excavation Area

0 30 60

Scale in Feet

Source: King County, Washington

Notes

1. bgs = below ground surface.
2. CUL = cleanup level.
3. UST = underground storage tank.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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Puget Sound Energy Factoria Service Center Bellevue, Washington	**Confirmation Soil Sampling Locations**	Figure 4

Legend

- Groundwater Sample Below CUL
- Groundwater Sample Above CUL
- 10,000-Gallon Gasoline/Diesel UST
- 600-Gallon Oil/Water Separator
- Excavation Area

0 30 60

Scale in Feet

Source: King County, Washington

Notes

1. CUL = cleanup level.
2. UST = underground storage tank.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

G:\Projects\130\027\010\014\F05PostDecomGWInvest.mxd 12/23/2019 | SMonson

LANDAU ASSOCIATES

Puget Sound Energy Factoria Service Center Bellevue, Washington	**Groundwater Characterization Investigation Sampling Locations**	Figure 5

Table 1
Pre-Decommissioning Subsurface Investigation Soil Analytical Results
Puget Sound Energy Factoria Service Center
Bellevue, Washington

Analyte	MTCA Method A CULs for Unrestricted Uses	Sampling Location, Sample Depth, Sampling Date, Sample Type, Laboratory Sample ID								
		PSE-B01 10-11 8/15/2019 N 580-88480-6	PSE-B02 10-11 8/15/2019 N 580-88480-9	PSE-B03 10-11 8/15/2019 N 580-88480-11	PSE-B04 10-11 8/15/2019 N 580-88480-5	PSE-B05 12-13 8/15/2019 N 580-88480-3	PSE-B06 10-11 8/15/2019 N 580-88480-12	PSE-B08 11-12 8/15/2019 N 580-88480-7	PSE-B08 11-12 8/15/2019 FD 580-88480-1	PSE-B08 16-17 8/15/2019 N 580-88480-10
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx, -Dx)										
Gasoline-Range Organics	30/100[a]	3.9 UJ	4.7 UJ	3.5 UJ	--	--	--	**85**	**61**	6.2 U
Diesel-Range Organics	2,000	--	--	--	**20**	11 U	11 U	**11**	**18**	11 U
Oil-Range Organics	2,000	--	--	--	**140**	29 U	28 U	29 U	28 U	28 U
Volatile Organic Compounds (mg/kg; SW-846 8260C)										
1,2-Dibromoethane (EDB)	0.005	0.00081 UJ	0.00091 UJ	0.00068 UJ	--	--	--	0.017 UJ	0.022 UJ	0.0012 UJ
1,2-Dichloroethane	N/A	0.00081 UJ	0.00091 UJ	0.00068 UJ	--	--	--	0.017 UJ	0.022 UJ	0.0012 UJ
Methyl-tert-butyl ether	0.1	0.0016 UJ	0.0018 UJ	0.0014 UJ	--	--	--	0.034 UJ	0.044 UJ	0.0024 UJ
Benzene	0.03	0.0016 UJ	0.0018 UJ	0.0014 UJ	0.0018 UJ	0.0019 UJ	0.0017 UJ	0.026 UJ	0.033 UJ	0.0024 UJ
Toluene	7	0.0081 UJ	0.0091 UJ	0.0068 UJ	0.0088 UJ	0.0095 UJ	0.0084 UJ	0.13 UJ	0.16 UJ	0.012 UJ
Ethylbenzene	6	0.0016 UJ	0.0018 UJ	0.0014 UJ	0.0018 UJ	0.0019 UJ	0.0017 UJ	**0.8 J**	**0.99 J**	0.0024 UJ
m-&p-Xylenes	N/A	0.0081 UJ	0.0091 UJ	0.0068 UJ	0.0088 UJ	0.0095 UJ	0.0084 UJ	**2.4 J**	**2.9 J**	0.012 UJ
o-Xylene	N/A	0.0040 UJ	0.0045 UJ	0.0034 UJ	0.0044 UJ	0.0047 UJ	0.0042 UJ	**0.32 J**	**0.32 J**	0.0059 UJ
Total Xylenes	9	0.0040 UJ	0.0045 UJ	0.0034 UJ	0.0044 UJ	0.0047 UJ	0.0042 UJ	**2.72 J**	**3.22 J**	0.0059 UJ

Notes:

[a] MTCA Method A cleanup level is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture; otherwise the cleanup level is 30 mg/kg.

Bold text indicates detected analyte

Green shading indicates detected analyte exceeds applicable cleanup level

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Acronyms/Abbreviations:

CUL = cleanup level

FD = field duplicate

ID = Identification

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act

N = primary sample

-- = not analyzed

N/A = not applicable

Table 2
Pre-Decommissioning Subsurface Investigation Groundwater Analytical Results
Puget Sound Energy Factoria Service Center
Bellevue, Washington

Analyte	MTCA Method A CULs	Sampling Location, Sample Date, Sample Type, Laboratory Sample ID			
		PSE-B02 8/15/2019 N 580-88480-14	PSE-B05 8/15/2019 N 580-88480-4	PSE-B08 8/15/2019 N 580-88480-8	PSE-B08 8/15/2019 FD 580-88480-2
Petroleum Hydrocarbons (µg/L; NWTPH-Gx, -Dx)					
Gasoline-Range Organics	800/1,000[a]	250 U	250 U	**2,200**	**2,300**
Diesel-Range Organics	500	**260**	240 U	**390**	**440**
Oil-Range Organics	500	**550**	400 U	400 U	400 U
Volatile Organic Compounds (µg/L; SW-846 8011, 8260C)					
1,2-Dibromoethane (EDB)	0.01	0.010 UJ	0.0099 UJ	0.010 UJ	0.010 UJ
1,2-Dichloroethane	5	0.20 U	0.20 U	0.20 U	0.20 U
Methyl-tert-butyl ether	20	0.30 U	0.30 U	0.30 U	0.30 U
Benzene	5	**0.20**	0.20 U	**0.26**	**0.27**
Toluene	1,000	0.20 U	0.20 U	**1.1**	**1.1**
Ethylbenzene	700	0.20 U	0.20 U	**39**	**45**
m-&p-Xylenes	N/A	0.50 U	0.50 U	**150**	**170**
o-Xylene	N/A	0.50 U	0.50 U	**41**	**39**
Total Xylenes	1,000	0.50 U	0.50 U	**191**	**209**

Notes:

[a] MTCA Method A cleanup level is 1,000 µg/L if benzene is not present; otherwise the cleanup levels is 800 µg/L.

Bold text indicates detected analyte

Green shading indicates detected analyte exceeds applicable cleanup level

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Acronyms/Abbreviations:

CUL = cleanup level
FD = field duplicate
ID = Identification
µg/L = micrograms per liter
MTCA = Model Toxics Control Act
N = primary sample
N/A = not applicable

Table 3
Investigation-Derived Waste Analytical Results
Puget Sound Energy Factoria Service Center
Bellevue, Washington

Analyte	MTCA Method A CULs for Unrestricted Uses	Field Sample ID, Sampling Date, Sample Type, Laboratory Sample ID IDW-SOIL-COMP 8/15/2019 IDW 580-88480-13
Total Metals (mg/kg; SW-846 6010C/7471A)		
Arsenic	20	**4.4**
Barium	N/A	**48**
Cadmium	2	0.81 U
Chromium, Total	2,000[a]	**32**
Lead	250	**2.8**
Mercury	2	0.026 U
Selenium	N/A	4.0 U
Silver	N/A	2.0 U

Notes:

[a] MTCA Method A cleanup level for chromium III.

Bold text indicates detected analyte

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

Acronyms/Abbreviations:

CUL = cleanup level

ID = Identification

IDW = investigation-derived waste

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act

N/A = not applicable

Table 4
Confirmation Soil Analytical Results
Puget Sound Energy Factoria Service Center
Bellevue, Washington

Analyte	MTCA Method A CULs for Unrestricted Uses	Sampling Location, Sample Depth, Sampling Date, Sample Type, Laboratory Sample ID							
		B-E 13-14 11/11/2019 N	B-W 15-16 11/11/2019 N	B-N 12-13 11/11/2019 N	SW-N 10-11 11/8/2019 N	SW-E 10-11 11/8/2019 N	SW-SE 10-11 11/11/2019 N	SW-SW 10-11 11/11/2019 N	SW-W 10-11 11/8/2019 N
		EV19110072-03	EV19110072-04	EV19110073-01	EV19110065-01	EV19110065-04	EV19110072-01	EV19110072-02	EV19110065-07
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx, -Dx)									
Gasoline-Range Organics	30/100[a]	3.0 U	**5.6**	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Diesel-Range Organics	2,000	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Oil-Range Organics	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Volatile Organic Compounds (mg/kg; SW-846 8260)									
Benzene	0.03	0.005 U	**0.0089**	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Toluene	7	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylbenzene	6	0.01 U	**0.730**	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
m-&p-Xylenes	9[b]	0.02 U	**0.360**	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
o-Xylene	9[b]	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Table 4
Confirmation Soil Analytical Results
Puget Sound Energy Factoria Service Center
Bellevue, Washington

Analyte	MTCA Method A CULs for Unrestricted Uses	Sampling Location, Sample Depth, Sampling Date, Sample Type, Laboratory Sample ID						
		SP-1 11/8/2019 N EV19110065-02	SP-2 11/8/2019 N EV19110065-03	SP-3 11/8/2019 N EV19110065-05	SP-4 11/8/2019 N EV19110065-06	SP-5 11/11/2019 N EV19110072-05	SP-6 11/11/2019 N EV19110072-06	SP-7 11/11/2019 N EV19110072-06
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx, -Dx)								
Gasoline-Range Organics	30/100[a]	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Diesel-Range Organics	2,000	25 U	**28**	25 U	**37**	25 U	25 U	**160**
Oil-Range Organics	2,000	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Volatile Organic Compounds (mg/kg; SW-846 8260)								
Benzene	0.03	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Toluene	7	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylbenzene	6	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
m-&p-Xylenes	9[b]	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
o-Xylene	9[b]	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Notes:

[a] MTCA Method A cleanup level is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture; otherwise the cleanup level is 30 mg/kg.

[b] MTCA Method A cleanup level for total xylenes.

Bold text indicates detected analyte.

Green shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

Acronyms/Abbreviations:

CUL = cleanup level

ID = Identification

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act

N = primary sample

Table 5
Confirmation Groundwater Analytical Results
Puget Sound Energy Factoria Service Center
Bellevue, Washington

Analyte	MTCA Method A CULs	Sampling Location, Sampling Date, Sample Type, Laboratory Sample ID Tankpit - H2O 11/11/2019 N EV19110073-02
Petroleum Hydrocarbons (µg/L; NWTPH-Gx, -Dx)		
Gasoline-Range Organics	800/1,000[a]	**55,000**
Diesel-Range Organics	500	**12,000**
Oil-Range Organics	500	**870**
Volatile Organic Compounds (µg/L; SW-846 8260)		
Benzene	5	400 U
Toluene	1,000	400 U
Ethylbenzene	700	**1,100**
m-&p-Xylenes	1,000[b]	**4,700**
o-Xylene	1,000[b]	**1,400**

Notes:

[a] MTCA Method A cleanup level is 1,000 µg/L if benzene is not present; otherwise the cleanup levels is 800 µg/L.

[b] MTCA Method A cleanup level for total xylenes.

Bold text indicates detected analyte.

Green shading indicates detected analyte exceeds applicable cleanup level.

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

Acronyms/Abbreviations:

CUL = cleanup level

ID = Identification

µg/L = micrograms per liter

MTCA = Model Toxics Control Act

N = primary sample

Table 6
Post-Decommissioning Groundwater Analytical Results
Puget Sound Energy Factoria Service Center
Bellevue, Washington

Analyte	MTCA Method A CULs	Sampling Location, Sampling Date, Sample Type, Laboratory Sample ID				
		PSE-GW-Pit 11/22/2019 N EV19110177-01	PSE-GW-N 11/22/2019 N EV19110177-02	PSE-GW-W 11/22/2019 N EV19110177-03	PSE-GW-S 11/22/2019 N EV19110177-04	PSE-GW-E 11/22/2019 N EV19110177-05
Petroleum Hydrocarbons (µg/L; NWTPH-Gx, -Dx)						
Gasoline-Range Organics	800/1,000[a]	**690**	50 U	50 U	50 U	50 U
Diesel-Range Organics	500	**460**	**150**	130 U	130 U	**220**
Oil-Range Organics	500	250 U	**470**	**250**	250 U	**980**
Volatile Organic Compounds (µg/L; SW-846 8260)						
Benzene	5	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Toluene	1,000	**5.3**	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	700	**14**	2.0 U	2.0 U	2.0 U	2.0 U
m-&p-Xylenes	N/A	**99**	4.0 U	4.0 U	4.0 U	4.0 U
o-Xylene	N/A	**40**	2.0 U	2.0 U	2.0 U	2.0 U
Total Xylenes	1,000	**139**	ND	ND	ND	ND

Notes:

[a] MTCA Method A cleanup level is 1,000 µg/L if benzene is not present; otherwise the cleanup levels is 800 µg/L.

Bold text indicates detected analyte.

Green shading indicates detected analyte exceeds applicable cleanup level

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

Acronyms/Abbreviations:

CUL = cleanup level

ID = Identification

µg/L = micrograms per liter

MTCA = Model Toxics Control Act

N = primary sample

N/A = not applicable

ND = not detected

APPENDIX A

Exploration Logs

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS [2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30% - "gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15% - "with gravel," "with sand," "with silt," etc.
	≤ 5% - "with trace gravel," "with trace sand," "with trace silt," etc., or not noted.

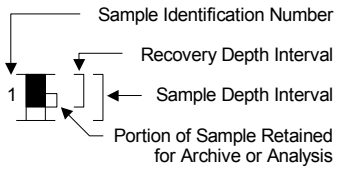
4. Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key

SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Single-Tube Core Barrel
f	Double-Tube Core Barrel
g	2.50-inch O.D., 2.00-inch I.D. WSDOT
h	3.00-inch O.D., 2.375-inch I.D. Mod. California
i	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Vibrocore (Rotosonic/Geoprobe)
5	Other - See text if applicable

SAMPLE NUMBER & INTERVAL



Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

Groundwater

▽ Approximate water level at time of drilling (ATD)

▼ Approximate water level at time after drilling/excavation/well

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PSE Factoria Service Center
Bellevue, Washington

Soil Classification System and Key

Figure
A-1

PSE-B01

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: Geoprobe™

Ground Elevation (ft): Not determined

Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	USCS Symbol	Description
0				AC	**(ASPHALT)**
			0.0	SP	Gray with black staining, gravelly, fine to medium SAND with trace silt; no odor, no sheen (medium dense, damp)
			0.0		**(FILL)**
		i3	0.0		-turns brown and gray at 1.1 ft bgs
					-0.1' thick, silt lense at 1.9 ft bgs
5					
		i3	0.0		
10	PSE-B01-S(10-11)		0.0	ML	**Soil Sample: PSE-B01-S(10-11)**
			0.0	GP	Gray and brown, sandy SILT with trace gravel; no odor, no sheen (medium stiff, moist)
		i3			Brown, sandy GRAVEL with silt; no odor, no sheen (medium dense, moist to wet)
					(GLACIAL OUTWASH)
					-becomes wet at 11.5 ft bgs
15					
20					
25					

ATD

Boring Completed 08/15/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ SOIL BORING LOG

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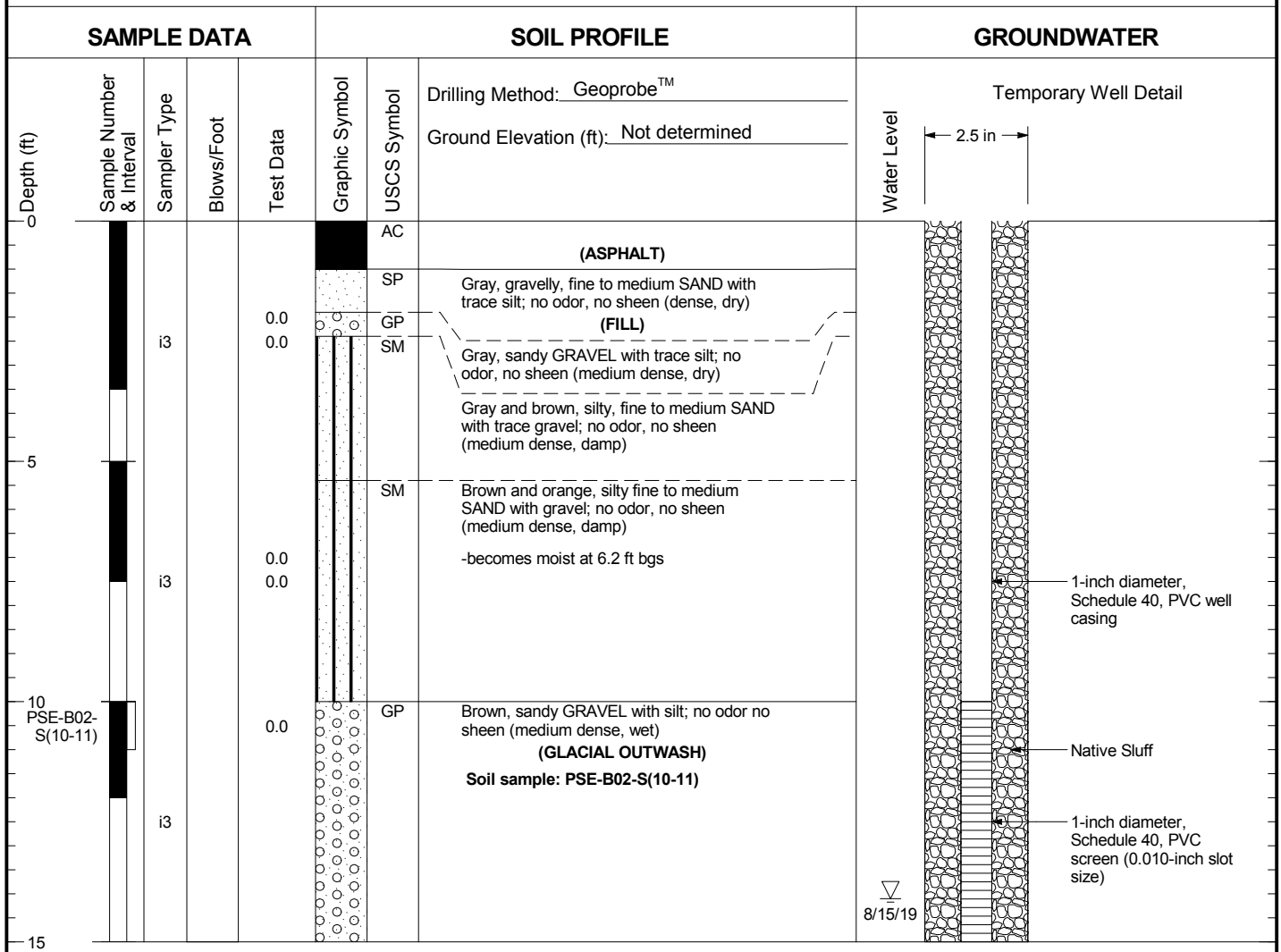
PSE Factoria Service Center
Bellevue, Washington

Log of Boring PSE-B01

Figure
A-2

PSE-B02



Boring Completed 08/15/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Temporary Well PSE-B02

Figure
A-3

PSE-B03

SAMPLE DATA | **SOIL PROFILE** | **GROUNDWATER**

Drilling Method: Geoprobe™

Ground Elevation (ft): Not determined

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Profile	Water Level
0						AC	**(ASPHALT)**	
				0.0		SP	Gray and brown, gravelly, fine to medium SAND with trace silt: no odor, no sheen (loose, dry)	
		i3		0.0			**(FILL)**	
5						SM	Brown, silty, fine to medium SAND with gravel; no odor, no sheen (medium dense, damp to moist)	
		i3		0.0				
							-becomes wet at 9.5 ft bgs	ATD
10	PSE-B03-S(10-11)			0.0		GP-GM	Brown, sandy GRAVEL with silt; no odor, no sheen (medium dense, wet)	
				0.0			**Soil sample: PSE-B03-S(10-11)**	
						SM	Brown, silty, fine to medium SAND with trace gravel; no odor, no sheen (medium dense, wet)	
		i3						
15								
20								
25								

Boring Completed 08/15/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ SOIL BORING LOG

LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Boring PSE-B03

Figure
A-4

PSE-B04

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: Geoprobe™

Ground Elevation (ft): Not determined

Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	USCS Symbol	Description
0				AC	
			0.0	GP	**(ASPHALT)**
			0.0	SM	Gray and brown, sandy GRAVEL with trace silt; no odor, no sheen (medium dense, damp)
		i3	0.0		**(FILL)**
					Gray and brown silty, fine to medium SAND; no odor, slight sheen (medium dense, damp)
					-black staining at 1.9 ft bgs
5					-turns to a brown and orange color at 2.2 ft bgs
			0.0	SP	Brown, gravelly, fine to medium SAND with trace silt; no odor, no sheen (medium dense, damp)
		i3	0.0		
10	PSE-B04-S(10-11)		0.0		**Soil Sample: PSE-B04-S(10-11)**
			0.0	GP-GM	Brown, sandy GRAVEL with silt; no odor, very faint sheen (medium dense, wet)
		i3	0.0		**(GLACIAL OUTWASH)**
15					
20					
25					

▽ ATD

Boring Completed 08/15/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ SOIL BORING LOG

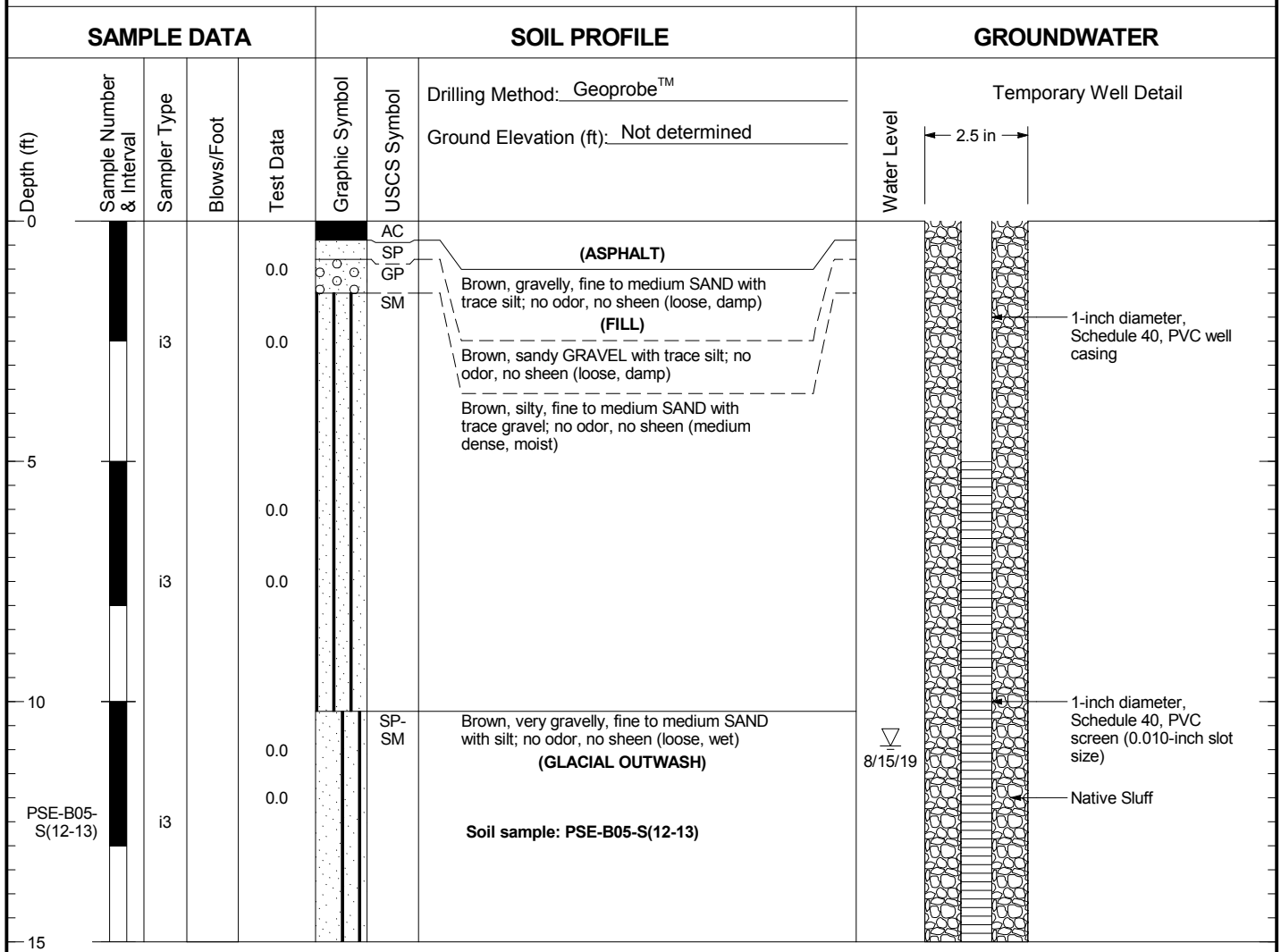
LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Boring PSE-B04

Figure
A-5

PSE-B05



Boring Completed 08/15/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Temporary Well PSE-B05

Figure
A-6

PSE-B06

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: Geoprobe™

Ground Elevation (ft): Not determined

Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	USCS Symbol	Description
0				AC	**(ASPHALT)**
				SP	Gray and brown, gravelly, fine to medium SAND with trace silt; no odor, no sheen (loose, dry)
			0.0	GW	
		i3	0.0		**(FILL)**
					Pea Gravel (loose, damp)
					-textile above and below pea gravel
5				SM	Brown, silty, fine to medium SAND with gravel (loose, moist)
			0.0		
		i3	0.0	SP	Brown, gravelly, fine to medium sand with trace silt; no odor, no sheen (loose, moist)
					ATD
10	PSE-B06-S(10-11)		0.0	SM	Brown, silty, fine to medium SAND with gravel; no odor, no sheen (loose, wet)
					Soil Sample: PSE-B06-S(10-11)
		i3	0.0		
			0.0		
			0.0		
15					
20					
25					

Boring Completed 08/15/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ SOIL BORING LOG

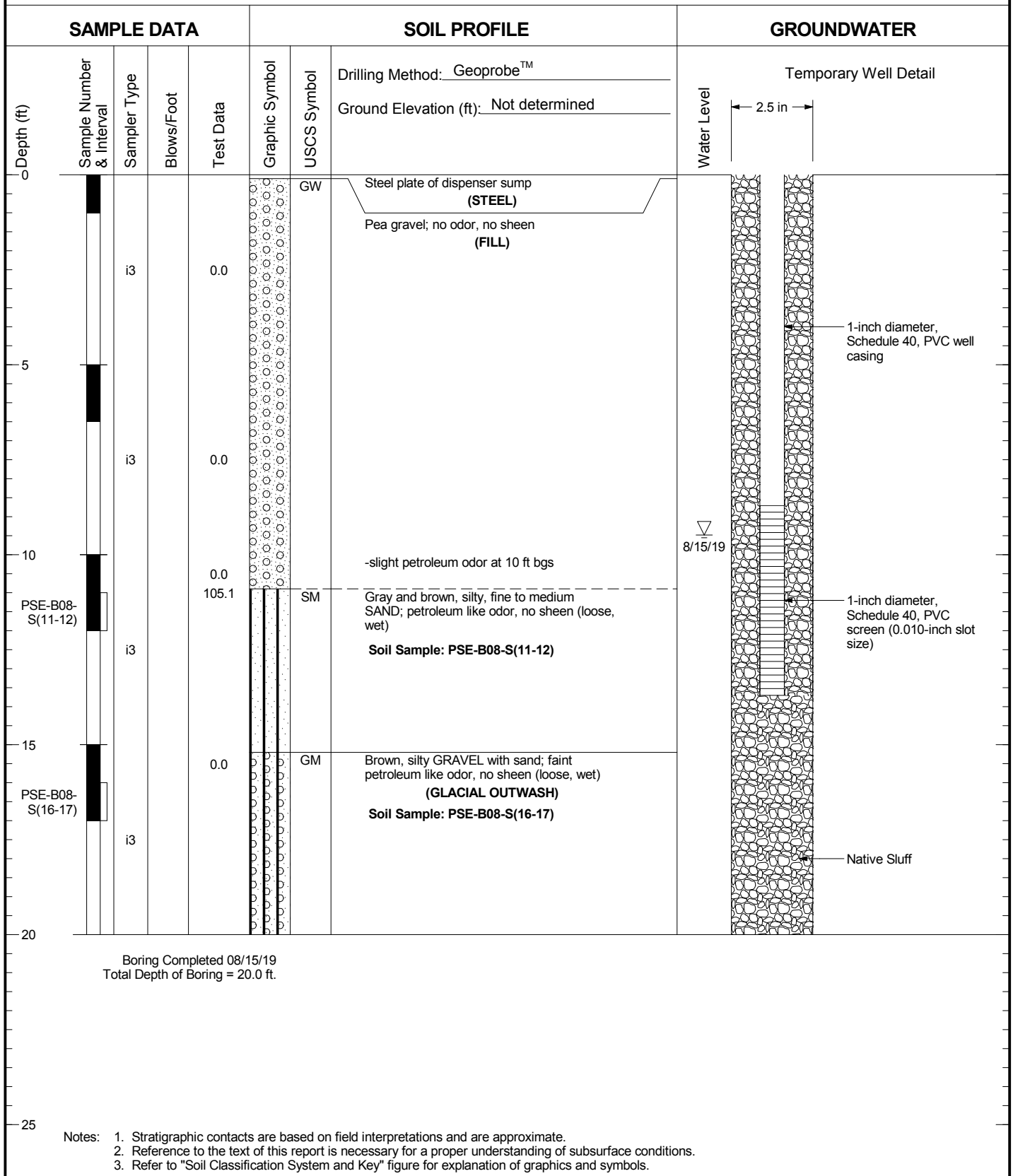
LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Boring PSE-B06

Figure
A-7

PSE-B08



Boring Completed 08/15/19
Total Depth of Boring = 20.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

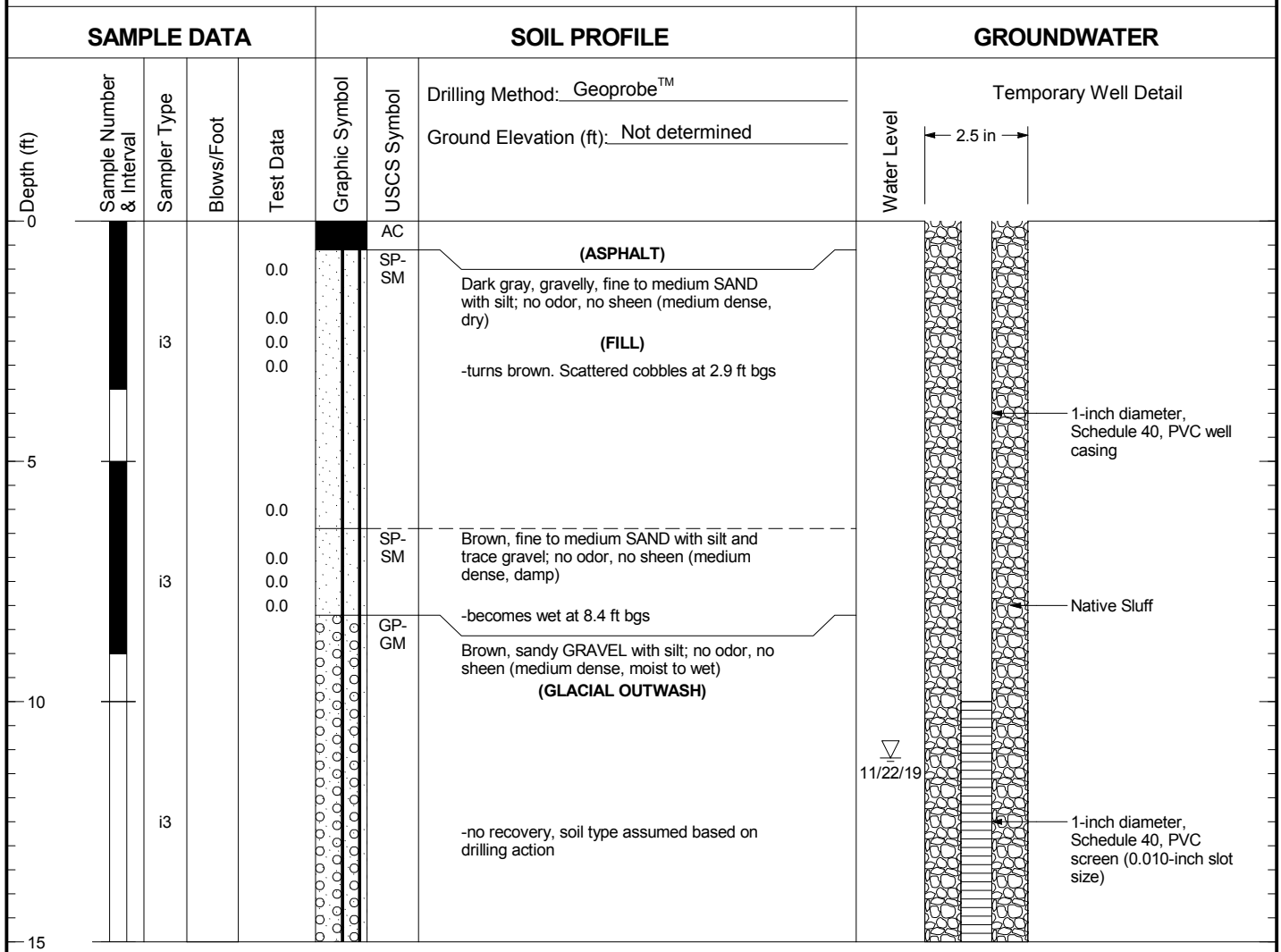
LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Temporary Well PSE-B08

Figure
A-8

PSE-GW-N



Boring Completed 11/22/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

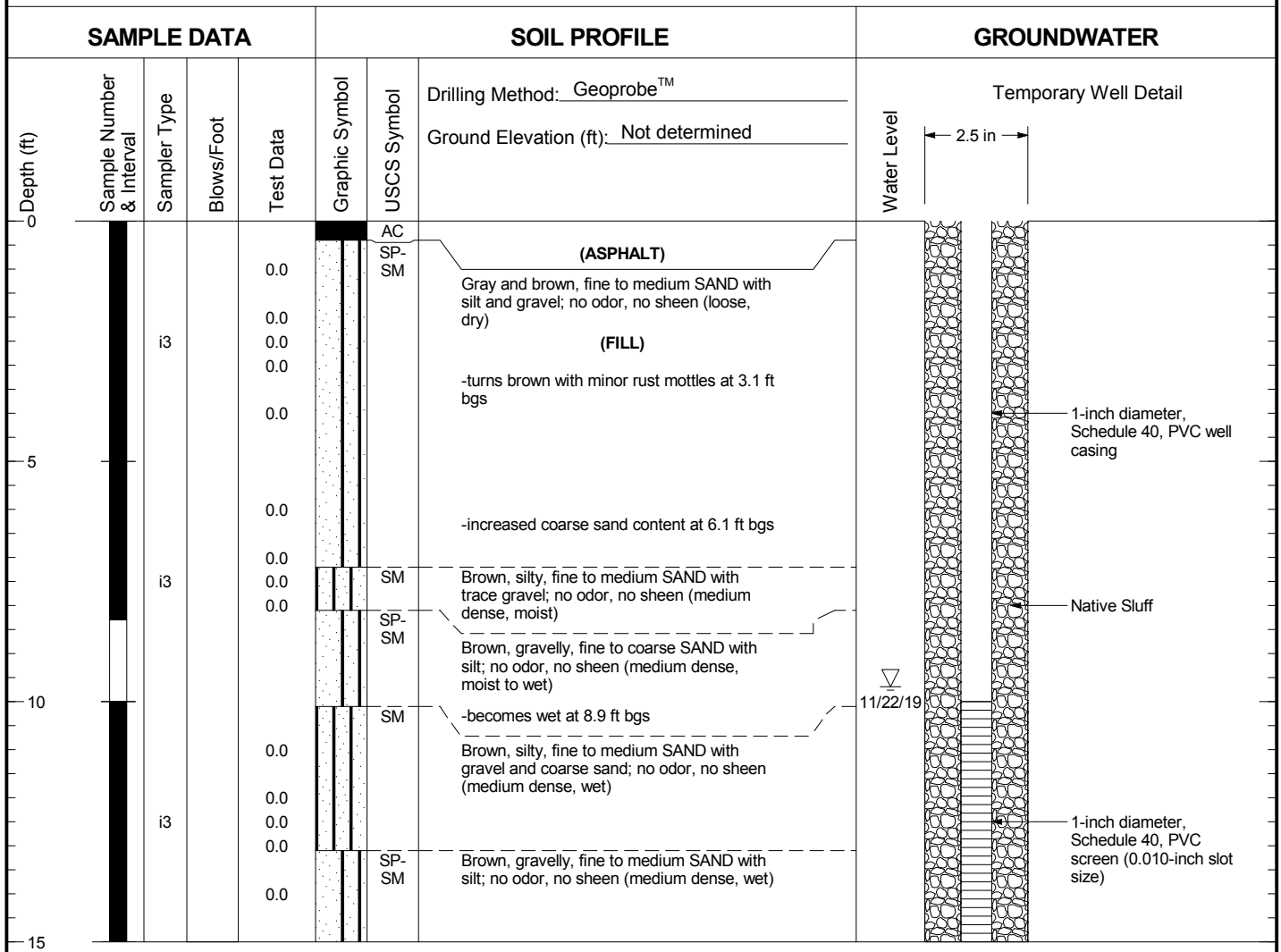
LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Temporary Well PSE-GW-N

Figure
A-9

PSE-GW-E



Boring Completed 11/22/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

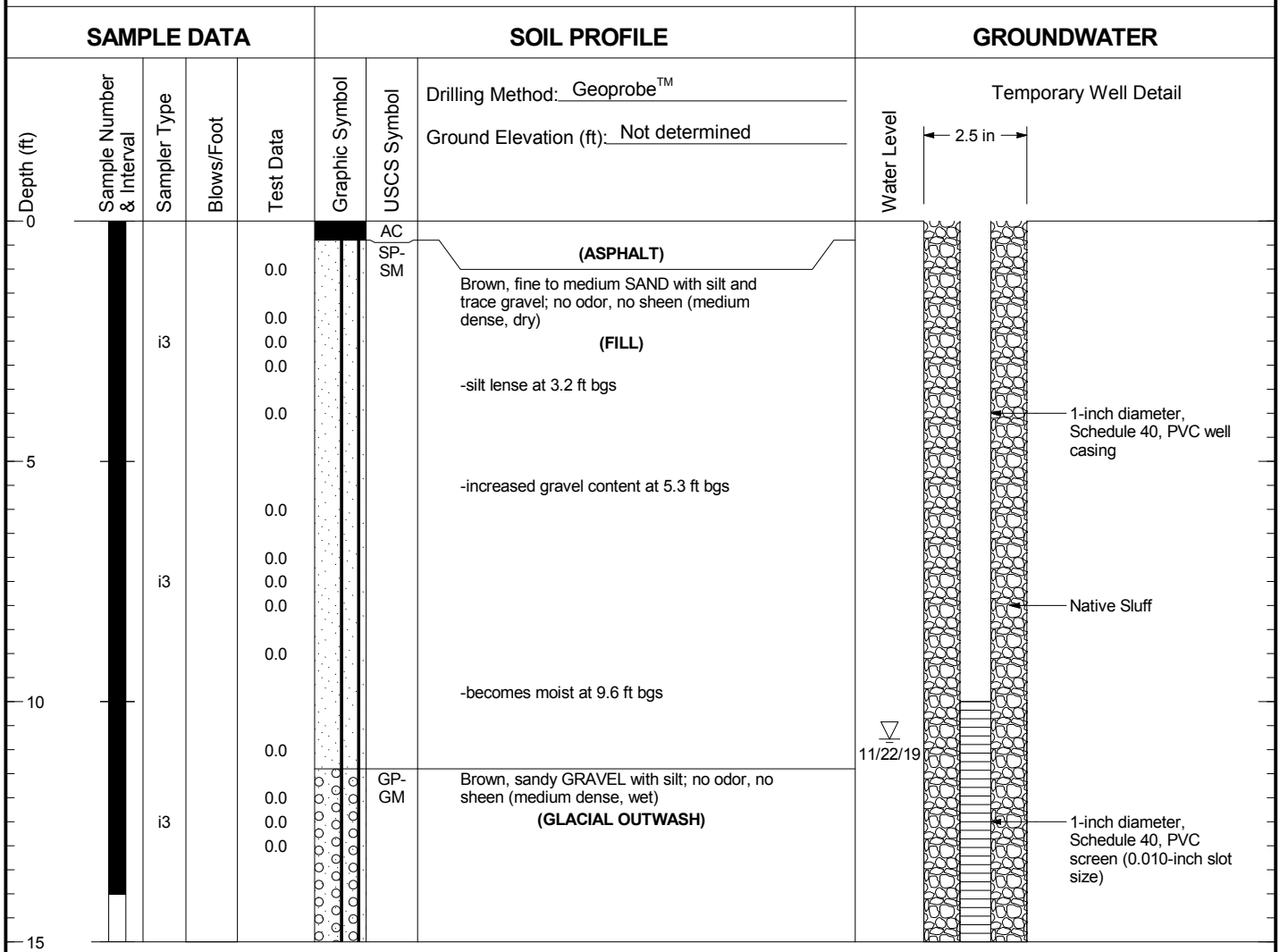
LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Temporary Well PSE-GW-E

Figure
A-10

PSE-GW-S



Boring Completed 11/22/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

PSE Factoria Service Center Bellevue, Washington	Log of Temporary Well PSE-GW-S	Figure A-11

PSE-GW-W

SAMPLE DATA | **SOIL PROFILE** | **GROUNDWATER**

Drilling Method: Geoprobe™

Ground Elevation (ft): Not determined

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Water Level
0						AC	**(ASPHALT)**	
				0.0		SP-SM	Dark brown, fine to coarse SAND with silt and gravel; no odor, no sheen (medium dense, dry)	
				0.0				
		i3		0.0			**(FILL)**	
							-decrease in coarse sand and gravel content at 1.5 ft bgs	
5				0.0				
				0.0				
		i3		0.0				
				0.0		SM	Brown, silty, fine to medium SAND with trace gravel; no odor, no sheen (medium dense, moist)	
						GP-GM	Brown, sandy GRAVEL with silt; no odor no sheen (medium dense, moist to wet)	
10							**(GLACIAL OUTWASH)**	
							-becomes wet at 10.5 ft bgs	11/22/19
				0.0		SP-SM	Brown, fine to medium SAND with silt and gravel; no odor, no sheen (medium dense, wet)	
		i3		0.0				
15								
20								
25								

Temporary Well Detail

2.5 in

1-inch diameter, Schedule 40, PVC well casing

Native Sluff

1-inch diameter, Schedule 40, PVC screen (0.010-inch slot size)

Boring Completed 11/22/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

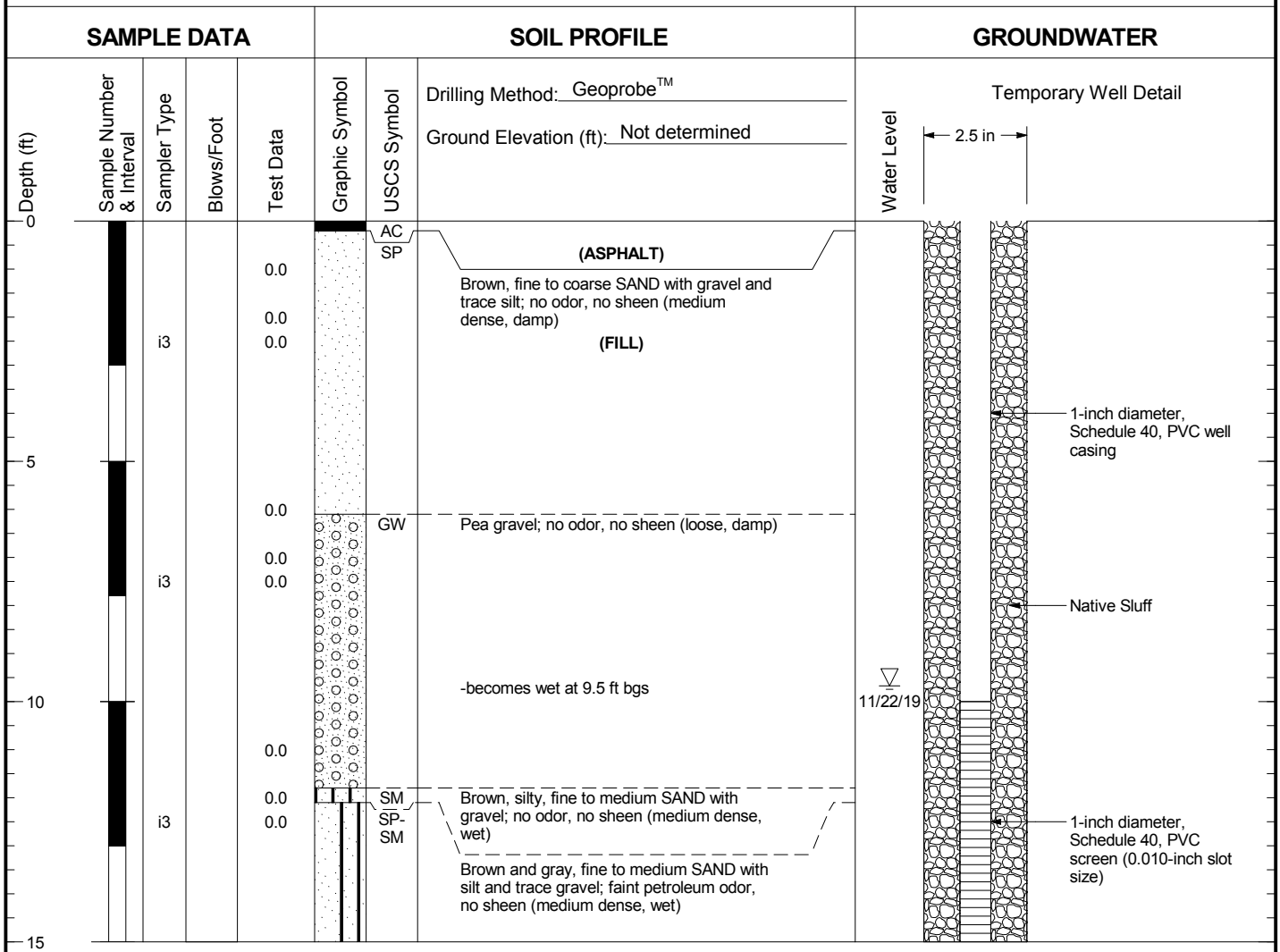
LANDAU ASSOCIATES

PSE Factoria Service Center
Bellevue, Washington

Log of Temporary Well PSE-GW-W

Figure
A-12

PSE-GW-Pit



Boring Completed 11/22/19
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

130027.010.011 1/6/20 N:\PROJECTS\130027.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

PSE Factoria Service Center Bellevue, Washington	Log of Temporary Well PSE-GW-Pit	Figure A-13

APPENDIX B

Laboratory Analytical Reports

November 14, 2019

Ms. Sierra Mott
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Mott,

On November 8th, 8 samples were received by our laboratory and assigned our laboratory project number EV19110065. The project was identified as your PSE Factoria - UST Decommissioning - 130027-010. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-01
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019 8:41:00 AM
CLIENT SAMPLE ID	SW-N-(10-11')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/10/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**63.2**	11/13/2019	KLS
C25	NWTPH-DX	**116**	11/10/2019	EBS
Toluene-d8	EPA-8260	**97.7**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-02
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019 1:20:00 PM
CLIENT SAMPLE ID	SP-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/10/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**79.2**	11/13/2019	KLS
C25	NWTPH-DX	**105**	11/10/2019	EBS
Toluene-d8	EPA-8260	**96.5**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-03
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019 1:30:00 PM
CLIENT SAMPLE ID	SP-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	**28**	25	1	MG/KG	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/10/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**81.2**	11/13/2019	KLS
C25	NWTPH-DX	**104**	11/10/2019	EBS
Toluene-d8	EPA-8260	**96.5**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-04
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019 1:36:00 PM
CLIENT SAMPLE ID	SW-E-(10-11')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/10/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**65.7**	11/13/2019	KLS
C25	NWTPH-DX	**98.0**	11/10/2019	EBS
Toluene-d8	EPA-8260	**98.5**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-05
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019 1:40:00 PM
CLIENT SAMPLE ID	SP-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/10/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**79.1**	11/13/2019	KLS
C25	NWTPH-DX	**101**	11/10/2019	EBS
Toluene-d8	EPA-8260	**98.4**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-06
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019 1:50:00 PM
CLIENT SAMPLE ID	SP-4	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	**37**	25	1	MG/KG	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/10/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**77.7**	11/13/2019	KLS
C25	NWTPH-DX	**98.2**	11/10/2019	EBS
Toluene-d8	EPA-8260	**97.3**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-07
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019 2:00:00 PM
CLIENT SAMPLE ID	SW-W-(10-11')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/10/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**65.1**	11/13/2019	KLS
C25	NWTPH-DX	**97.9**	11/10/2019	EBS
Toluene-d8	EPA-8260	**99.5**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/14/2019 EV19110065 EV19110065-08
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/08/2019
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010	COLLECTION DATE:	11/8/2019
CLIENT SAMPLE ID	Tripblanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/11/2019	KLS
Benzene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
Toluene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/13/2019	CCN
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**80.4**	11/11/2019	KLS
Toluene-d8	EPA-8260	**102**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	11/14/2019 EV19110065 C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010		

LABORATORY BLANK RESULTS

MBG-111319S - Batch 147518 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	MG/KG	3.0	11/13/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBG-111119W - Batch 147435 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	UG/L	50	11/11/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-110919S2 - Batch 147561 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	MG/KG	25	11/10/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	MG/KG	50	11/10/2019	EBS

SURROGATE	METHOD	%REC	CONTROL LIMITS MIN	CONTROL LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX	**973 S**	**58**	**134**	11/10/2019	EBS

S - Outside of control limits.

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111219S - Batch 147510 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
Benzene	EPA-8260	U	UG/KG	5.0	11/12/2019	CCN
Toluene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
Ethylbenzene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
m,p-Xylene	EPA-8260	U	UG/KG	20	11/12/2019	CCN
o-Xylene	EPA-8260	U	UG/KG	10	11/12/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111319S - Batch 147557 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/KG	10	11/13/2019	CCN
Benzene	EPA-8260	U	UG/KG	5.0	11/13/2019	CCN
Toluene	EPA-8260	U	UG/KG	10	11/13/2019	CCN

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CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/14/2019
		ALS SDG#:	EV19110065
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST Decommissioning - 130027-010		

LABORATORY BLANK RESULTS

MB-111319S - Batch 147557 - Soil by EPA-8260

Ethylbenzene	EPA-8260	U	UG/KG	10	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	UG/KG	20	11/13/2019	CCN
o-Xylene	EPA-8260	U	UG/KG	10	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111319W - Batch 147559 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
Benzene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
Toluene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	UG/L	4.0	11/13/2019	CCN
o-Xylene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

CLIENT CONTACT: Sierra Mott

CLIENT PROJECT: PSE Factoria - UST Decommissioning - 130027-010

DATE: 11/14/2019
ALS SDG#: EV19110065
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 147518 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	**86.1**			66.5	122.7	11/13/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	**87.8**	**2**		66.5	122.7	11/13/2019	KLS

ALS Test Batch ID: 147435 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	**76.5**			66.5	122.7	11/11/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	**79.1**	**3**		66.5	122.7	11/11/2019	KLS

ALS Test Batch ID: 147561 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	**84.3**			75.5	122.1	11/10/2019	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	**84.7**	**0**		75.5	122.1	11/10/2019	EBS

ALS Test Batch ID: 147510 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	**95.8**			70	130	11/12/2019	CCN
1,1-Dichloroethene - BSD	EPA-8260	**96.4**	**1**		70	130	11/12/2019	CCN
Benzene - BS	EPA-8260	**92.5**			75	138	11/12/2019	CCN
Benzene - BSD	EPA-8260	**93.5**	**1**		75	138	11/12/2019	CCN
Toluene - BS	EPA-8260	**94.9**			71.6	122.1	11/12/2019	CCN
Toluene - BSD	EPA-8260	**95.9**	**1**		71.6	122.1	11/12/2019	CCN
Ethylbenzene - BS	EPA-8260	**92.5**			50	150	11/12/2019	CCN
Ethylbenzene - BSD	EPA-8260	**98.1**	**6**		50	150	11/12/2019	CCN
m,p-Xylene - BS	EPA-8260	**88.9**			50	150	11/12/2019	CCN
m,p-Xylene - BSD	EPA-8260	**92.7**	**4**		50	150	11/12/2019	CCN
o-Xylene - BS	EPA-8260	**94.9**			50	150	11/12/2019	CCN
o-Xylene - BSD	EPA-8260	**102**	**7**		50	150	11/12/2019	CCN

ALS Test Batch ID: 147557 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	**101**			70	130	11/13/2019	CCN
1,1-Dichloroethene - BSD	EPA-8260	**106**	**5**		70	130	11/13/2019	CCN
Benzene - BS	EPA-8260	**94.5**			75	138	11/13/2019	CCN
Benzene - BSD	EPA-8260	**99.4**	**5**		75	138	11/13/2019	CCN

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CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

DATE: 11/14/2019
ALS SDG#: EV19110065
WDOE ACCREDITATION: C601

CLIENT CONTACT: Sierra Mott
CLIENT PROJECT: PSE Factoria - UST Decommissioning - 130027-010

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Toluene - BS	EPA-8260	**96.0**			71.6	122.1	11/13/2019	CCN
Toluene - BSD	EPA-8260	**102**	**6**		71.6	122.1	11/13/2019	CCN
Ethylbenzene - BS	EPA-8260	**94.9**			50	150	11/13/2019	CCN
Ethylbenzene - BSD	EPA-8260	**98.2**	**3**		50	150	11/13/2019	CCN
m,p-Xylene - BS	EPA-8260	**91.7**			50	150	11/13/2019	CCN
m,p-Xylene - BSD	EPA-8260	**94.3**	**3**		50	150	11/13/2019	CCN
o-Xylene - BS	EPA-8260	**97.4**			50	150	11/13/2019	CCN
o-Xylene - BSD	EPA-8260	**102**	**5**		50	150	11/13/2019	CCN

ALS Test Batch ID: 147559 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	**93.5**			72.5	136	11/13/2019	CCN
1,1-Dichloroethene - BSD	EPA-8260	**98.1**	**5**		72.5	136	11/13/2019	CCN
Benzene - BS	EPA-8260	**103**			74.7	143	11/13/2019	CCN
Benzene - BSD	EPA-8260	**109**	**5**		74.7	143	11/13/2019	CCN
Toluene - BS	EPA-8260	**98.3**			71.7	139	11/13/2019	CCN
Toluene - BSD	EPA-8260	**103**	**5**		71.7	139	11/13/2019	CCN
Ethylbenzene - BS	EPA-8260	**96.2**			50	150	11/13/2019	CCN
Ethylbenzene - BSD	EPA-8260	**101**	**5**		50	150	11/13/2019	CCN
m,p-Xylene - BS	EPA-8260	**95.3**			50	150	11/13/2019	CCN
m,p-Xylene - BSD	EPA-8260	**101**	**6**		50	150	11/13/2019	CCN
o-Xylene - BS	EPA-8260	**94.9**			50	150	11/13/2019	CCN
o-Xylene - BSD	EPA-8260	**99.9**	**5**		50	150	11/13/2019	CCN

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

EV19110065

Chain-of-Custody Record

LANDAU ASSOCIATES

☒ Seattle/Edmonds (425) 778-0907 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ _____

Date 11/8/19
Page 1 of 1

Turnaround Time:
Standard 3B
Accelerated

Project Name PSE Factoria - UST Decommissing Project No. 130827-010
Project Location/Event Factoria, WA / UST Decommissing
Sampler's Name Jeovani Hueta
Project Contact Sierra Mett
Send Results To SMett & JDorgan

Special Handling Requirements:
Shipment Method: Drop off
Stored on ice: (Yes) No

	Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx	NWTPH-Dx	BTEX (8260)
1	SW-N-(10-11')	11/8/19	841	Soil	4	X	X	X
2	SP-1	11/8/19	1320	Soil	4	X	X	X
3	SP-2	11/8/19	1330	Soil	4	X	X	X
4	SW-E-(10-11')	11/8/19	1336	Soil	4	X	X	X
5	SP-3	11/8/19	1340	Soil	4	X	X	X
6	SP-4	11/8/19	1350	Soil	4	X	X	X
7	SW-W-(10-11')	11/8/19	1400	Soil	14	X	X	X
8	Triplanks	—	—	Ice	2	X		X

Observations/Comments

- Allow water samples to settle, collect aliquot from clear portion ☐
- NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- Dissolved metal samples were field filtered

Other

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name Jeovani Hueta	Printed Name Rick Bagan	Printed Name	Printed Name
Company Landau Associates	Company ALS	Company	Company
Date 11/8/19 Time 1540	Date 11/8/19 Time 15:40	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: EV1911 0065

Project: PSE Factoria - UST Decommissioning

Received Date: 11/8/19 Received Time: 15:40 By: RB

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Mail ___ Courier ___ Hand Delivered X
FedEx Express ___

	Yes	No	N/A
Were custody seals on outside of shipping container?	___	X	___
If yes, how many? ___ Where? ___			
Custody seal date: ___ Seal name: ___			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	___	___
Did all bottles have labels?	X	___	___
Did all bottle labels and tags agree with Chain of Custody?	X	___	___
Were samples received within hold time?	X	___	___
Did all bottles arrive in good condition (unbroken, etc.)?	X	___	___
Was sufficient amount of sample sent for the tests indicated?	X	___	___
Was correct preservation added to samples?	Y	___	___

If no, Sample Control added preservative to the following: Per 5035 low = 7

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles? X ___ ___

Bubbles present in sample #: none

Temperature of cooler upon receipt: 8.6°C on ice (Cold) Cool Ambient N/A

Explain any discrepancies: ___

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

November 18, 2019

Ms. Sierra Mott
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Mott,

On November 12th, 8 samples were received by our laboratory and assigned our laboratory project number EV19110072. The project was identified as your PSE Factoria - UST - 130027-010. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-01
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 11:40:00 AM
CLIENT SAMPLE ID	SW-SE-(10-11')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**60.3**	11/13/2019	KLS
C25	NWTPH-DX	**84.3**	11/12/2019	EBS
Toluene-d8	EPA-8260	**95.9**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-02
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 11:50:00 AM
CLIENT SAMPLE ID	SW-SW-(10-11')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**63.5**	11/13/2019	KLS
C25	NWTPH-DX	**89.5**	11/12/2019	EBS
Toluene-d8	EPA-8260	**100**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-03
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 12:00:00 PM
CLIENT SAMPLE ID	B-E-(13-14')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**66.7**	11/13/2019	KLS
C25	NWTPH-DX	**86.0**	11/12/2019	EBS
Toluene-d8	EPA-8260	**96.1**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-04
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 2:00:00 PM
CLIENT SAMPLE ID	B-W-(15-16')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	**5.6**	3.0	1	MG/KG	11/12/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	**8.9**	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	**730**	15	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	**360**	29	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**60.0**	11/12/2019	KLS
C25	NWTPH-DX	**105**	11/12/2019	EBS
Toluene-d8	EPA-8260	**70.9**	11/13/2019	CCN
Toluene-d8	EPA-8260	**91.8**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-05
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 2:20:00 PM
CLIENT SAMPLE ID	SP-5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/12/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**72.4**	11/12/2019	KLS
C25	NWTPH-DX	**91.5**	11/12/2019	EBS
Toluene-d8	EPA-8260	**94.3**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-06
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 2:30:00 PM
CLIENT SAMPLE ID	SP-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**76.2**	11/13/2019	KLS
C25	NWTPH-DX	**72.3**	11/12/2019	EBS
Toluene-d8	EPA-8260	**96.7**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-07
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 2:40:00 PM
CLIENT SAMPLE ID	SP-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	**160**	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**75.1**	11/13/2019	KLS
C25	NWTPH-DX	**67.3**	11/12/2019	EBS
Toluene-d8	EPA-8260	**95.6**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/18/2019 EV19110072 EV19110072-08
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019
CLIENT SAMPLE ID	Tripblanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/15/2019	KLS
Benzene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
Toluene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/13/2019	CCN
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**81.3**	11/15/2019	KLS
Toluene-d8	EPA-8260	**103**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/18/2019
		ALS SDG#:	EV19110072
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST - 130027-010		

LABORATORY BLANK RESULTS

MBG-111219S - Batch 147453 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	MG/KG	3.0	11/12/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBG-111319S - Batch 147518 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	MG/KG	3.0	11/13/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBG-111519W - Batch 147681 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	UG/L	50	11/15/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111219S - Batch 147454 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	MG/KG	25	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	MG/KG	50	11/12/2019	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111219S - Batch 147510 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
Benzene	EPA-8260	U	UG/KG	5.0	11/12/2019	CCN
Toluene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
Ethylbenzene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
m,p-Xylene	EPA-8260	U	UG/KG	20	11/12/2019	CCN
o-Xylene	EPA-8260	U	UG/KG	10	11/12/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111319W - Batch 147559 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
Benzene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/18/2019
		ALS SDG#:	EV19110072
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST - 130027-010		

LABORATORY BLANK RESULTS

MB-111319W - Batch 147559 - Water by EPA-8260

Toluene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	UG/L	4.0	11/13/2019	CCN
o-Xylene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020
CLIENT CONTACT: Sierra Mott
CLIENT PROJECT: PSE Factoria - UST - 130027-010

DATE: 11/18/2019
ALS SDG#: EV19110072
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 147453 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	81.8			66.5	122.7	11/12/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	83.2	2		66.5	122.7	11/12/2019	KLS

ALS Test Batch ID: 147518 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	86.1			66.5	122.7	11/13/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	87.8	2		66.5	122.7	11/13/2019	KLS

ALS Test Batch ID: 147681 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	90.2			66.5	122.7	11/15/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	89.6	1		66.5	122.7	11/15/2019	KLS

ALS Test Batch ID: 147454 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	91.8			75.5	122.1	11/12/2019	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	89.9	2		75.5	122.1	11/12/2019	EBS

ALS Test Batch ID: 147510 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	95.8			70	130	11/12/2019	CCN
1,1-Dichloroethene - BSD	EPA-8260	96.4	1		70	130	11/12/2019	CCN
Benzene - BS	EPA-8260	92.5			75	138	11/12/2019	CCN
Benzene - BSD	EPA-8260	93.5	1		75	138	11/12/2019	CCN
Toluene - BS	EPA-8260	94.9			71.6	122.1	11/12/2019	CCN
Toluene - BSD	EPA-8260	95.9	1		71.6	122.1	11/12/2019	CCN
Ethylbenzene - BS	EPA-8260	92.5			50	150	11/12/2019	CCN
Ethylbenzene - BSD	EPA-8260	98.1	6		50	150	11/12/2019	CCN
m,p-Xylene - BS	EPA-8260	88.9			50	150	11/12/2019	CCN
m,p-Xylene - BSD	EPA-8260	92.7	4		50	150	11/12/2019	CCN
o-Xylene - BS	EPA-8260	94.9			50	150	11/12/2019	CCN
o-Xylene - BSD	EPA-8260	102	7		50	150	11/12/2019	CCN

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

CLIENT CONTACT: Sierra Mott

CLIENT PROJECT: PSE Factoria - UST - 130027-010

DATE: 11/18/2019
ALS SDG#: EV19110072
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 147559 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	**93.5**			72.5	136	11/13/2019	CCN
1,1-Dichloroethene - BSD	EPA-8260	**98.1**	**5**		72.5	136	11/13/2019	CCN
Benzene - BS	EPA-8260	**103**			74.7	143	11/13/2019	CCN
Benzene - BSD	EPA-8260	**109**	**5**		74.7	143	11/13/2019	CCN
Toluene - BS	EPA-8260	**98.3**			71.7	139	11/13/2019	CCN
Toluene - BSD	EPA-8260	**103**	**5**		71.7	139	11/13/2019	CCN
Ethylbenzene - BS	EPA-8260	**96.2**			50	150	11/13/2019	CCN
Ethylbenzene - BSD	EPA-8260	**101**	**5**		50	150	11/13/2019	CCN
m,p-Xylene - BS	EPA-8260	**95.3**			50	150	11/13/2019	CCN
m,p-Xylene - BSD	EPA-8260	**101**	**6**		50	150	11/13/2019	CCN
o-Xylene - BS	EPA-8260	**94.9**			50	150	11/13/2019	CCN
o-Xylene - BSD	EPA-8260	**99.9**	**5**		50	150	11/13/2019	CCN

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau ALS Job #: EV1911007Z

Project: PSE Factoria UST - 130027.010

Received Date: 11-12-19 Received Time: 1106 By: [signature]

Type of shipping container: Cooler X Box ____ Other ____

Shipped via: FedEx Ground ____ UPS ____ Mail ____ Courier X ALS Hand Delivered ____
FedEx Express ____

	Yes	No	N/A
Were custody seals on outside of shipping container? If yes, how many? 1 Where? top, lid Custody seal date: 11-11-19 Seal name: Security Seal	X		
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X		
Did all bottles have labels?	X		
Did all bottle labels and tags agree with Chain of Custody?	X		
Were samples received within hold time?	X		
Did all bottles arrive in good condition (unbroken, etc.)?	X		
Was sufficient amount of sample sent for the tests indicated?	X		
Was correct preservation added to samples?	X		

If no, Sample Control added preservative to the following: 7 low kits

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles? Bubbles present in sample #: None	X		

Temperature of cooler upon receipt: 1.9°C on ice (Cold) Cool Ambient N/A

Explain any discrepancies: ____

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____

Outcome of call: ____

EV191100 72

LANDAU ASSOCIATES — Chain-of-Custody Record

☒ Seattle/Edmonds (425) 778-0907 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ _____

Date 11/11/19
Page 1 of 1

Turnaround Time:
Standard X
Accelerated X see notes

Project Name PSE Factoria - UST Project No. 130027-010
Project Location/Event Bellevue, WA / UST decommissioning
Sampler's Name Jovani Huerta
Project Contact Sierra Mott
Send Results To Smott & DJorgensen

Special Handling Requirements: _____
Shipment Method: Lab Pkup
Stored on ice: (Yes) / No

	Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Gx	BTEX (8260)	Rush TAT (24-hr)	
1	SW-SE-(10-11')	11/11/19	1140	Soil	4	X	X	X		
2	SW-SW-(10-11')	11/11/19	1150	Soil	4	X	X	X		
3	B-E-(13-14')	11/11/19	1200	Soil	4	X	X	X		
4	B-W-(15-16')	11/11/19	1400	Soil	4	X	X	X	X	
5	SP-5	11/11/19	1420	Soil	4	X	X	X		
6	SP-6	11/11/19	1430	Soil	4	X	X	X		
7	SP-7	11/11/19	1440	Soil	4	X	X	X		
8	Tripblanks	-	-	AQ	2	X		X		

Observations/Comments

☐ Allow water samples to settle, collect aliquot from clear portion
☐ NWTPH-Dx - Acid wash cleanup
☐ - Silica gel cleanup
☐ Dissolved metal samples were field filtered

Other
Please run Sample "B-W-(15-16')" on a 24-hr TAT

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Jeo Huerta	Printed Name Roger Burchel	Printed Name	Printed Name
Company Landau Associates	Company ALS	Company	Company
Date 11/11/19 Time 1700	Date 11-12-19 Time 1106	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

November 20, 2019

Ms. Sierra Mott
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Mott,

On November 12th, 3 samples were received by our laboratory and assigned our laboratory project number EV19110073. The project was identified as your PSE Factoria - UST - 130027-010. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/20/2019 EV19110073 EV19110073-01
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 11:00:00 AM
CLIENT SAMPLE ID	B-N-(12-13')	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	3.0	1	MG/KG	11/13/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	25	1	MG/KG	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	50	1	MG/KG	11/12/2019	EBS
Benzene	EPA-8260	U	5.0	1	UG/KG	11/13/2019	CCN
Toluene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/13/2019	CCN
o-Xylene	EPA-8260	U	10	1	UG/KG	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**66.3**	11/13/2019	KLS
C25	NWTPH-DX	**102**	11/12/2019	EBS
Toluene-d8	EPA-8260	**91.4**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/20/2019 EV19110073 EV19110073-02
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019 1:00:00 PM
CLIENT SAMPLE ID	Tankpit - H2O	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	**55000**	20000	400	UG/L	11/15/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	**12000**	260	2	UG/L	11/14/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	**870**	500	2	UG/L	11/14/2019	EBS
Benzene	EPA-8260	U	400	200	UG/L	11/19/2019	CCN
Toluene	EPA-8260	U	400	200	UG/L	11/19/2019	CCN
Ethylbenzene	EPA-8260	**1100**	400	200	UG/L	11/19/2019	CCN
m,p-Xylene	EPA-8260	**4700**	800	200	UG/L	11/19/2019	CCN
o-Xylene	EPA-8260	**1400**	400	200	UG/L	11/19/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 400X Dilution	NWTPH-GX	**81.7**	11/15/2019	KLS
C25 2X Dilution	NWTPH-DX	**77.7**	11/14/2019	EBS
Toluene-d8 200X Dilution	EPA-8260	**78.9 SUR12**	11/19/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.
SUR12 -Surrogate recoveries were outside of the control limits due to matrix interference.
Chromatogram indicates that it is likely that sample contains weathered gasoline, an unidentified diesel range product and an unidentified oil range product.
Diesel range product results biased high due to gasoline range product overlap.

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CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	11/20/2019 EV19110073 EV19110073-03
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/12/2019
CLIENT PROJECT:	PSE Factoria - UST - 130027-010	COLLECTION DATE:	11/11/2019
CLIENT SAMPLE ID	Tripblanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/15/2019	KLS
Benzene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
Toluene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/13/2019	CCN
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/13/2019	CCN

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**80.8**	11/15/2019	KLS
Toluene-d8	EPA-8260	**101**	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020
CLIENT CONTACT: Sierra Mott
CLIENT PROJECT: PSE Factoria - UST - 130027-010

DATE: 11/20/2019
ALS SDG#: EV19110073
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBG-111319S - Batch 147518 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	MG/KG	3.0	11/13/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MBG-111519W - Batch 147681 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	UG/L	50	11/15/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111219S - Batch 147454 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	MG/KG	25	11/12/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	MG/KG	50	11/12/2019	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111219W - Batch 147620 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	11/13/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	11/13/2019	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111219S - Batch 147510 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
Benzene	EPA-8260	U	UG/KG	5.0	11/12/2019	CCN
Toluene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
Ethylbenzene	EPA-8260	U	UG/KG	10	11/12/2019	CCN
m,p-Xylene	EPA-8260	U	UG/KG	20	11/12/2019	CCN
o-Xylene	EPA-8260	U	UG/KG	10	11/12/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111319W - Batch 147559 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/20/2019
		ALS SDG#:	EV19110073
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST - 130027-010		

LABORATORY BLANK RESULTS

MB-111319W - Batch 147559 - Water by EPA-8260

Benzene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
Toluene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
Ethylbenzene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN
m,p-Xylene	EPA-8260	U	UG/L	4.0	11/13/2019	CCN
o-Xylene	EPA-8260	U	UG/L	2.0	11/13/2019	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020
CLIENT CONTACT: Sierra Mott
CLIENT PROJECT: PSE Factoria - UST - 130027-010

DATE: 11/20/2019
ALS SDG#: EV19110073
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 147518 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	**86.1**			66.5	122.7	11/13/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	**87.8**	**2**		66.5	122.7	11/13/2019	KLS

ALS Test Batch ID: 147681 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	**90.2**			66.5	122.7	11/15/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	**89.6**	**1**		66.5	122.7	11/15/2019	KLS

ALS Test Batch ID: 147454 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	**91.8**			75.5	122.1	11/12/2019	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	**89.9**	**2**		75.5	122.1	11/12/2019	EBS

ALS Test Batch ID: 147620 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	**85.6**			67	125.2	11/13/2019	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	**92.0**	**7**		67	125.2	11/13/2019	EBS

ALS Test Batch ID: 147510 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	**95.8**			70	130	11/12/2019	CCN
1,1-Dichloroethene - BSD	EPA-8260	**96.4**	**1**		70	130	11/12/2019	CCN
Benzene - BS	EPA-8260	**92.5**			75	138	11/12/2019	CCN
Benzene - BSD	EPA-8260	**93.5**	**1**		75	138	11/12/2019	CCN
Toluene - BS	EPA-8260	**94.9**			71.6	122.1	11/12/2019	CCN
Toluene - BSD	EPA-8260	**95.9**	**1**		71.6	122.1	11/12/2019	CCN
Ethylbenzene - BS	EPA-8260	**92.5**			50	150	11/12/2019	CCN
Ethylbenzene - BSD	EPA-8260	**98.1**	**6**		50	150	11/12/2019	CCN
m,p-Xylene - BS	EPA-8260	**88.9**			50	150	11/12/2019	CCN
m,p-Xylene - BSD	EPA-8260	**92.7**	**4**		50	150	11/12/2019	CCN
o-Xylene - BS	EPA-8260	**94.9**			50	150	11/12/2019	CCN
o-Xylene - BSD	EPA-8260	**102**	**7**		50	150	11/12/2019	CCN

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CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	11/20/2019 EV19110073 C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST - 130027-010		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 147559 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	**93.5**			72.5	136	11/13/2019	CCN
1,1-Dichloroethene - BSD	EPA-8260	**98.1**	**5**		72.5	136	11/13/2019	CCN
Benzene - BS	EPA-8260	**103**			74.7	143	11/13/2019	CCN
Benzene - BSD	EPA-8260	**109**	**5**		74.7	143	11/13/2019	CCN
Toluene - BS	EPA-8260	**98.3**			71.7	139	11/13/2019	CCN
Toluene - BSD	EPA-8260	**103**	**5**		71.7	139	11/13/2019	CCN
Ethylbenzene - BS	EPA-8260	**96.2**			50	150	11/13/2019	CCN
Ethylbenzene - BSD	EPA-8260	**101**	**5**		50	150	11/13/2019	CCN
m,p-Xylene - BS	EPA-8260	**95.3**			50	150	11/13/2019	CCN
m,p-Xylene - BSD	EPA-8260	**101**	**6**		50	150	11/13/2019	CCN
o-Xylene - BS	EPA-8260	**94.9**			50	150	11/13/2019	CCN
o-Xylene - BSD	EPA-8260	**99.9**	**5**		50	150	11/13/2019	CCN

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau ALS Job #: EV1911007Z

Project: PSE Factoria UST - 130027.010

Received Date: 11-12-19 Received Time: 1106 By:

Type of shipping container: Cooler X Box ___ Other ___

Shipped via: FedEx Ground ___ UPS ___ Mail ___ Courier X Hand Delivered ___
FedEx Express ___ ACS

	Yes	No	N/A
Were custody seals on outside of shipping container?	X		
If yes, how many? 1 Where? top, lid			
Custody seal date: 11-11-19 Seal name: security seal			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X		
Did all bottles have labels?	X		
Did all bottle labels and tags agree with Chain of Custody?	X		
Were samples received within hold time?	X		
Did all bottles arrive in good condition (unbroken, etc.)?	X		
Was sufficient amount of sample sent for the tests indicated?	X		
Was correct preservation added to samples?	X		

If no, Sample Control added preservative to the following: soil per SO35 low = 1 kit

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles? X

Bubbles present in sample #: ___

Temperature of cooler upon receipt: 1.9°C on ice (Cold) Cool Ambient N/A

Explain any discrepancies: ___

Was client contacted? ___ Who was called? ___ By whom? ___ Date: ___

Outcome of call: ___

EV1911 0073

Chain-of-Custody Record

LANDAU ASSOCIATES

☐ Seattle/Edmonds (425) 778-0907 ☐ Spokane (509) 327-9737
☐ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080
☐ _____

Date 11/11/19
Page 1 of 1

Turnaround Time:
Standard X
Accelerated _____

Project Name PSE Factoria UST Project No. B0027.010
Project Location/Event Bellevue, WA / UST decommissioning
Sampler's Name Jeovani Huerta
Project Contact Sierra Mott
Send Results To Smott & DJorgensen

Special Handling Requirements: _____
Shipment Method: Lab p/u
Stored on ice: (Yes) / No

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx	NWTPH-Dx	BTEX (8260)	Observations/Comments
B-N-(12-13')	11/11/19	1100	Soil	4	X	X	X	
* Tankpit-H_2O	11/11/19	1300	AQ	6	X	X	X	
Triplanks	—	—	AQ	4	X		X	(x2 for soil, x2 for H_2O)

Allow water samples to settle, collect aliquot from clear portion ☐
NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐
Dissolved metal samples were field filtered

Other
*potentially "hot" sample

Relinquished by	Received by	Relinquished by	Received by
Signature [signature]	Signature [signature]	Signature	Signature
Printed Name Jeo Huerta	Printed Name Roger Barthel	Printed Name	Printed Name
Company Landau Associates	Company ALS	Company	Company
Date 11/11/19 Time 1700	Date 11-12-19 Time 1106	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

December 2, 2019

Ms. Sierra Mott
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Mott,

On November 22nd, 6 samples were received by our laboratory and assigned our laboratory project number EV19110177. The project was identified as your PSE Factoria - UST GW - 130027.010.016. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	12/2/2019 EV19110177 EV19110177-01
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/22/2019
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016	COLLECTION DATE:	11/22/2019 10:46:00 AM
CLIENT SAMPLE ID	PSE-GW-Pit	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	**690**	50	1	UG/L	11/26/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	**460**	130	1	UG/L	11/25/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	250	1	UG/L	11/25/2019	EBS
Benzene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
Toluene	EPA-8260	**5.3**	2.0	1	UG/L	11/26/2019	DLC
Ethylbenzene	EPA-8260	**14**	2.0	1	UG/L	11/26/2019	DLC
m,p-Xylene	EPA-8260	**99**	20	5	UG/L	11/27/2019	DLC
o-Xylene	EPA-8260	**40**	2.0	1	UG/L	11/26/2019	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**76.3**	11/26/2019	KLS
C25	NWTPH-DX	**74.3**	11/25/2019	EBS
Toluene-d8	EPA-8260	**95.5**	11/26/2019	DLC
Toluene-d8 5X Dilution	EPA-8260	**99.0**	11/27/2019	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline and an unidentified diesel range product.

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CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	12/2/2019 EV19110177 EV19110177-02
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/22/2019
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016	COLLECTION DATE:	11/22/2019 11:36:00 AM
CLIENT SAMPLE ID	PSE-GW-N	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/26/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	**150**	130	1	UG/L	11/25/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	**470**	250	1	UG/L	11/25/2019	EBS
Benzene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/26/2019	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**70.0**	11/26/2019	KLS
C25	NWTPH-DX	**61.6**	11/25/2019	EBS
Toluene-d8	EPA-8260	**101**	11/26/2019	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	12/2/2019 EV19110177 EV19110177-03
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/22/2019
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016	COLLECTION DATE:	11/22/2019 12:26:00 PM
CLIENT SAMPLE ID	PSE-GW-W	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/26/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	130	1	UG/L	11/25/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	**250**	250	1	UG/L	11/25/2019	EBS
Benzene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/26/2019	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**72.8**	11/26/2019	KLS
C25	NWTPH-DX	**74.8**	11/25/2019	EBS
Toluene-d8	EPA-8260	**102**	11/26/2019	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lube oil.

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ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	12/2/2019 EV19110177 EV19110177-04
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/22/2019
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016	COLLECTION DATE:	11/22/2019 1:11:00 PM
CLIENT SAMPLE ID	PSE-GW-S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/26/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	130	1	UG/L	11/25/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	250	1	UG/L	11/25/2019	EBS
Benzene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/26/2019	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/26/2019	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**71.5**	11/26/2019	KLS
C25	NWTPH-DX	**74.1**	11/25/2019	EBS
Toluene-d8	EPA-8260	**102**	11/26/2019	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	12/2/2019 EV19110177 EV19110177-05
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/22/2019
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016	COLLECTION DATE:	11/22/2019 1:56:00 PM
CLIENT SAMPLE ID	PSE-GW-E	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/26/2019	KLS
TPH-Diesel Range (C12-C24)	NWTPH-DX	**220**	130	1	UG/L	11/25/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	**980**	250	1	UG/L	11/25/2019	EBS
Benzene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/27/2019	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**70.8**	11/26/2019	KLS
C25	NWTPH-DX	**118**	11/25/2019	EBS
Toluene-d8	EPA-8260	**102**	11/27/2019	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.
Diesel range product results biased high due to oil range product overlap.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS JOB#: ALS SAMPLE#:	12/2/2019 EV19110177 EV19110177-06
CLIENT CONTACT:	Sierra Mott	DATE RECEIVED:	11/22/2019
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016	COLLECTION DATE:	11/22/2019
CLIENT SAMPLE ID	Tripblanks	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	50	1	UG/L	11/26/2019	KLS
Benzene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/27/2019	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/27/2019	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**72.0**	11/26/2019	KLS
Toluene-d8	EPA-8260	**103**	11/27/2019	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: ALS SDG#: WDOE ACCREDITATION:	12/2/2019 EV19110177 C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016		

LABORATORY BLANK RESULTS

MBG-112619W2 - Batch 148085 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12)	NWTPH-GX	U	UG/L	50	11/26/2019	KLS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112519W - Batch 148055 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	11/25/2019	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	11/25/2019	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112619W - Batch 148091 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	11/26/2019	DLC
Benzene	EPA-8260	U	UG/L	2.0	11/26/2019	DLC
Toluene	EPA-8260	U	UG/L	2.0	11/26/2019	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	11/26/2019	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	11/26/2019	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	11/26/2019	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	12/2/2019
		ALS SDG#:	EV19110177
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Sierra Mott		
CLIENT PROJECT:	PSE Factoria - UST GW - 130027.010.016		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 148085 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C5-C12) - BS	NWTPH-GX	**80.1**			66.5	122.7	11/26/2019	KLS
TPH-Volatile Range (C5-C12) - BSD	NWTPH-GX	**88.1**	**10**		66.5	122.7	11/26/2019	KLS

ALS Test Batch ID: 148055 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	**84.2**			67	125.2	11/25/2019	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	**83.4**	**1**		67	125.2	11/26/2019	EBS

ALS Test Batch ID: 148091 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	**116**			72.5	136	11/26/2019	DLC
1,1-Dichloroethene - BSD	EPA-8260	**120**	**3**		72.5	136	11/26/2019	DLC
Benzene - BS	EPA-8260	**111**			74.7	143	11/26/2019	DLC
Benzene - BSD	EPA-8260	**115**	**4**		74.7	143	11/26/2019	DLC
Toluene - BS	EPA-8260	**113**			71.7	139	11/26/2019	DLC
Toluene - BSD	EPA-8260	**117**	**4**		71.7	139	11/26/2019	DLC
Ethylbenzene - BS	EPA-8260	**114**			50	150	11/26/2019	DLC
Ethylbenzene - BSD	EPA-8260	**118**	**4**		50	150	11/26/2019	DLC
m,p-Xylene - BS	EPA-8260	**116**			50	150	11/26/2019	DLC
m,p-Xylene - BSD	EPA-8260	**120**	**3**		50	150	11/26/2019	DLC
o-Xylene - BS	EPA-8260	**114**			50	150	11/26/2019	DLC
o-Xylene - BSD	EPA-8260	**118**	**3**		50	150	11/26/2019	DLC

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: EV1911017

Project: PSE Factoria - UST GW - 130027.010.016

Received Date: 11/22/19 Received Time: 1643 By: SM

Type of shipping container: Cooler X Box ____ Other ____

Shipped via: FedEx Ground ____ UPS ____ Mail ____ Courier ____ Hand Delivered X
FedEx Express ____

	Yes	No	N/A
Were custody seals on outside of shipping container?	____	X	____
If yes, how many? ____ Where? ____			
Custody seal date: ____ Seal name: ____			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	____	____
Did all bottles have labels?	X	____	____
Did all bottle labels and tags agree with Chain of Custody?	X	____	____
Were samples received within hold time?	X	____	____
Did all bottles arrive in good condition (unbroken, etc.)?	X	____	____
Was sufficient amount of sample sent for the tests indicated?	X	____	____
Was correct preservation added to samples?	X	____	____

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

Were VOA vials checked for absence of air bubbles?	X	____	____
Bubbles present in sample #: None			

Temperature of cooler upon receipt: 7.3°C on ice (Cold) Cool Ambient N/A

Explain any discrepancies: ____

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____

Outcome of call: ____

EV1911O177

LANDAU ASSOCIATES — Chain-of-Custody Record

[X] Seattle/Edmonds (425) 778-0907 [ ] Spokane (509) 327-9737
[ ] Tacoma (253) 926-2493 [ ] Portland (503) 542-1080
[ ] _____

Date 11/22/19
Page X of X

Turnaround Time:
Standard X
Accelerated _____

Project Name PSE Factoria-UST gw Project No. 130027-dlc-016
Project Location/Event Bellevue (Factoria) / post cleanup gw mon.
Sampler's Name Jeovani Huerta
Project Contact Sierra Mott
Send Results To Sierra Mott & Danille Jorgensen

Special Handling Requirements: _____
Shipment Method: Drop off
Stored on ice: (Yes) / No

	Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Dx	BTEX (8260D)
1	PSE-GW-PIT	11/22/19	1046	AQ	6	X	X	X
2	PSE-GW-N	11/22/19	1136	AQ	6	X	X	X
3	PSE-GW-W	11/22/19	1226	AQ	6	X	X	X
4	PSE-GW-S	11/22/19	1311	AQ	6	X	X	X
5	PSE-GW-E	11/22/19	1356	AQ	6	X	X	X
6	Tripblanks	—	—	AQ	2	X		X

Testing Parameters

Observations/Comments

- Allow water samples to settle, collect aliquot from clear portion ☐
- NWTPH-Dx - Acid wash cleanup ☐
  - Silica gel cleanup ☐
- Dissolved metal samples were field filtered

Other _____

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature Shawn Robinson	Signature	Signature
Printed Name Jeovani Huerta	Printed Name Shawn Robinson	Printed Name	Printed Name
Company Landau Associates	Company ALS	Company	Company
Date 11/22/19 Time 1643	Date 11/22/19 Time 1643	Date Time	Date Time

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

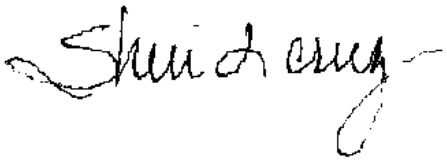
ANALYTICAL REPORT

Job Number: 580-88480-1

Job Description: PSE Factoria UST

For:
Landau & Associates, Inc.
2107 South C Street
Tacoma, WA 98402

Attention: Sierra Mott



Approved for release.
Sheri L Cruz
Project Manager I
9/10/2019 4:54 PM

Sheri L Cruz, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310
sheri.cruz@testamericainc.com
09/10/2019

cc: Danille Jorgensen
Kristi Schultz

TestAmerica Seattle is a part of TestAmerica Laboratories, Inc.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Definitions/Glossary

Client: Landau & Associates, Inc. Job ID: 580-88480-1
Project/Site: PSE Factoria UST

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
580-88480-1

Comments
Samples 6, 9, and 11 reported on wet weight basis since only stir bar vials and MeOH containers received. We are unable to do dry weight correction on these samples.

Receipt
The samples were received on 8/16/2019 12:29 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

GC/MS VOA
Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-309465 and analytical batch 580-309457 recovered outside control limits for the following analytes: 1,2-Dichloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 580-309457 recovered above the upper control limit for 1,2-Dichloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 580-309457/3).

Method(s) 8260C: The laboratory control sample (LCS) for preparation batch 580-309770 and analytical batch 580-309784 recovered outside control limits for the following analytes: Ethylbenzene, m-Xylene & p-Xylene, o-Xylene, Toluene, Methyl tert-butyl ether and Benzene. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

Method(s) 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 580-309770 and analytical batch 580-309784 recovered outside control limits for the following analytes: Methyl tert-butyl ether and Hexane.

Method(s) 8260C: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-310310 was outside criteria for the following analyte: Benzene. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: PSE-GW-DUP (580-88480-2) and PSE-B08-GW (580-88480-8). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Surrogate 4-Bromoflourobenzene and/or 1,2-Dichloroethane-d4 recovery for the following samples were outside the upper control limit: PSE-SOIL-DUP (580-88480-1), PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5), PSE-B08-S(11-12) (580-88480-7), (CCVIS 580-309457/3), (CCVL 580-309457/6), (LCS 580-309465/2-A), (LCSD 580-309465/3-A) and (MB 580-309465/1-A). This samples did not contain any chemically associated target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: The internal standard falls low and outside acceptance criteria for the following samples:PSE-SOIL-DUP (580-88480-1), PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5), PSE-B08-S(11-12) (580-88480-7), (BFB 580-309457/2), (CCVIS 580-309457/3), (CCVL 580-309457/6), (LCS 580-309465/2-A), (LCSD 580-309465/3-A) and (MB 580-309465/1-A). The associated samples were rerun and both results are reported.

Method(s) 8260C: The following samples were analyzed outside of analytical holding time in MeOH to confirm result from direct sparge method. : PSE-SOIL-DUP (580-88480-1) and PSE-B08-S(11-12) (580-88480-7).

Method(s) 8260C: The following samples were analyzed outside of analytical holding time due to system outages. PSE-B01-S(10-11) (580-88480-6), PSE-B02-S(10-11) (580-88480-9), PSE-B08-S(16-17) (580-88480-10), PSE-B03-S(10-11) (580-88480-11) and PSE-B06-S(10-11) (580-88480-12). The instrument that runs this method was down due to a leak in the purge and trap condenser.

Method(s) 8260C: The following samples were re-analyzed outside of analytical holding time due to the instrument's purge and trap being down due to a leak: PSE-B05-S(12-13) (580-88480-3), and PSE-B04-S(10-11) (580-88480-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA
CCVRT associated with batch 580-309481 was outside (high)the control limits for %D for surrogate Trifluorotoluene (Surr) but was within the %recovery limits. Gasoline and 4-Bromofluorobenzene (Surr) met the control limits. All samples had Trifluorotoluene (Surr) and 4-Bromofluorobenzene (Surr) within the recovery limits there for the data has been reported.(CCVRT 580-309481/6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8011: The low level laboratory control sample (LLCS) for preparation batch 580-309742 and analytical batch 580-310344 recovered outside control limits on the confirmation column only for the following analyte : Ethylene Dibromide. This analyte was biased high in the LLCS. The following samples are affected: PSE-GW-DUP (580-88480-2), PSE-B05-GW (580-88480-4), PSE-B08-GW (580-88480-8), PSE-B02-GW (580-88480-14), Tripblanks (580-88480-15), (LLCS 580-309742/6-A) and (580-88694-B-1-A)

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 580-310344 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: PSE-GW-DUP (580-88480-2), PSE-B05-GW (580-88480-4), PSE-B08-GW (580-88480-8), PSE-B02-GW (580-88480-14), Tripblanks (580-88480-15), (CCV 580-309742/1-A), (CCV 580-309742/2-A) and (580-88694-B-1-A).

Method(s) NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to oil overlap. PSE-B04-S(10-11) (580-88480-5).

Method(s) NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to gasoline overlap. PSE-GW-DUP (580-88480-2) and PSE-B08-GW (580-88480-8)

Method(s) NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to biogenic interference. PSE-B02-GW (580-88480-14)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method(s) Moisture: The following sample duplicate (DUP) precision for moisture batch 309118 was outside control limits: IDW-soil-comp (580-88480-13) and (580-88480-A-13 DU). Sample non-homogeneity is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
Method(s) 5035: The following sample had the tare weight rubbed off. The tare weight is illegible. After all analysis is complete thew vial will be emptied and weighed for the tare weight of the vial. PSE-B08-S(11-12) (580-88480-7)

Method(s) 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5) and PSE-B08-S(11-12) (580-88480-7). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 5g. The following samples were above this range: 580-88480-b-3 (6.215g), 580-88480-B-5 (6.219g), and 580-88480-b-7 (6.587g).

Method(s) 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PSE-SOIL-DUP (580-88480-1), PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5), PSE-B01-S(10-11) (580-88480-6), PSE-B08-S(11-12) (580-88480-7), PSE-B03-S(10-11) (580-88480-11) and PSE-B06-S(10-11) (580-88480-12). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 5g. The amount provided was above this range. 580-88480-b-1 (6.602g), 580-88480-b-3 (6.226g), 580-88480-b-5 (6.113g), 580-88480-b-6 (6.174g), 580-88480-b-7 (6.9035g), 580-88480-b-11 (7.356g), 580-88480-b-12 (6.718g).

Method(s) 5035: The following sample was provided to the laboratory with a significantly different initial weight than that required by the reference method: PSE-B06-S(10-11) (580-88480-12). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 5g. The amount provided was above this range. 580-88480-b-12 (7.49g)

Method(s) 5035 for MeOH: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PSE-SOIL-DUP (580-88480-1) and PSE-B08-S(11-12) (580-88480-7). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was above this range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: PSE-SOIL-DUP — Lab Sample ID: 580-88480-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	990	H	44		ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	18		2.1		ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	2900	H	220		ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	41		10		ug/Kg	1	☼	8260C	Total/NA
o-Xylene	320	H	66		ug/Kg	1	☼	8260C	Total/NA
Gasoline Range Organics C6-C12	61		5.5		mg/Kg	1	☼	NWTPH-Gx	Total/NA
Diesel Range Organics [C10-C25]	18		11		mg/Kg	1	☼	NWTPH-Dx	Total/NA

Client Sample ID: PSE-GW-DUP — Lab Sample ID: 580-88480-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
o-Xylene	39		0.50		ug/L	1		8260C	Total/NA
Benzene	0.27		0.20		ug/L	1		8260C	Total/NA
Toluene	1.1		0.20		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene - DL	170		25		ug/L	50		8260C	Total/NA
Ethylbenzene - DL	45		10		ug/L	50		8260C	Total/NA
Gasoline Range Organics C6-C12	2.3		0.25		mg/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics [C10-C25]	0.44		0.24		mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: PSE-B05-S(12-13) — Lab Sample ID: 580-88480-3

No Detections.

Client Sample ID: PSE-B05-GW — Lab Sample ID: 580-88480-4

No Detections.

Client Sample ID: PSE-B04-S(10-11) — Lab Sample ID: 580-88480-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C25]	20		11		mg/Kg	1	☼	NWTPH-Dx	Total/NA
Oil Range Organics (C25-C36)	140		26		mg/Kg	1	☼	NWTPH-Dx	Total/NA

Client Sample ID: PSE-B01-S(10-11) — Lab Sample ID: 580-88480-6

No Detections.

Client Sample ID: PSE-B08-S(11-12) — Lab Sample ID: 580-88480-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	800	H	34		ug/Kg	1	☼	8260C	Total/NA
Ethylbenzene	220	E	1.8		ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	2400	H	170		ug/Kg	1	☼	8260C	Total/NA
m-Xylene & p-Xylene	820	E	8.9		ug/Kg	1	☼	8260C	Total/NA
o-Xylene	320	H	51		ug/Kg	1	☼	8260C	Total/NA
o-Xylene	150	E	4.5		ug/Kg	1	☼	8260C	Total/NA
Gasoline Range Organics C6-C12	85		7.2		mg/Kg	1	☼	NWTPH-Gx	Total/NA
Diesel Range Organics [C10-C25]	11		11		mg/Kg	1	☼	NWTPH-Dx	Total/NA

Client Sample ID: PSE-B08-GW — Lab Sample ID: 580-88480-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
o-Xylene	41		0.50		ug/L	1		8260C	Total/NA
Benzene	0.26		0.20		ug/L	1		8260C	Total/NA
Toluene	1.1		0.20		ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: PSE-B08-GW (Continued) — Lab Sample ID: 580-88480-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene - DL	150		25		ug/L	50		8260C	Total/NA
Ethylbenzene - DL	39		10		ug/L	50		8260C	Total/NA
Gasoline Range Organics C6-C12	2.2		0.25		mg/L	1		NWTPH-Gx	Total/NA
Diesel Range Organics [C10-C25]	0.39		0.24		mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: PSE-B02-S(10-11) — Lab Sample ID: 580-88480-9

No Detections.

Client Sample ID: PSE-B08-S(16-17) — Lab Sample ID: 580-88480-10

No Detections.

Client Sample ID: PSE-B03-S(10-11) — Lab Sample ID: 580-88480-11

No Detections.

Client Sample ID: PSE-B06-S(10-11) — Lab Sample ID: 580-88480-12

No Detections.

Client Sample ID: IDW-soil-comp — Lab Sample ID: 580-88480-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.4		2.4		mg/Kg	1	☼	6010C	Total/NA
Barium	48		0.40		mg/Kg	1	☼	6010C	Total/NA
Chromium	32		1.0		mg/Kg	1	☼	6010C	Total/NA
Lead	2.8		1.2		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: PSE-B02-GW — Lab Sample ID: 580-88480-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.20		0.20		ug/L	1		8260C	Total/NA
Diesel Range Organics [C10-C25]	0.26		0.24		mg/L	1		NWTPH-Dx	Total/NA
Oil Range Organics (C25-C36)	0.55		0.40		mg/L	1		NWTPH-Dx	Total/NA

Client Sample ID: Tripblanks — Lab Sample ID: 580-88480-15

No Detections.

Client Sample ID: Tripblanks — Lab Sample ID: 580-88480-16

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: PSE-SOIL-DUP

Date Collected: 08/15/19 09:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-1

Matrix: Solid
Percent Solids: 85.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		1.0		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
EDC	ND	*	1.0		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Benzene	ND		2.1		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Methyl tert-butyl ether	ND	H	44		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Benzene	ND	H	33		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
EDC	ND	H	22		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Methyl tert-butyl ether	ND		2.1		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Toluene	ND		10		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Toluene	ND	H	160		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
EDB	ND	H	22		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Ethylbenzene	**990**	**H**	44		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Ethylbenzene	**18**		2.1		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
m-Xylene & p-Xylene	**2900**	**H**	220		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
m-Xylene & p-Xylene	**41**		10		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
o-Xylene	**320**	**H**	66		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
o-Xylene	ND		5.2		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*182*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 121*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
4-Bromofluorobenzene (Surr)	*122*	*X*	*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
Toluene-d8 (Surr)	*86*		*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
Trifluorotoluene (Surr)	*109*		*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	**61**		5.5		mg/Kg	☼	08/26/19 12:31	08/27/19 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*50 - 150*	*08/26/19 12:31*	*08/27/19 03:26*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**18**		11		mg/Kg	☼	08/28/19 08:14	08/28/19 17:06	1
Oil Range Organics (C25-C36)	ND		28		mg/Kg	☼	08/28/19 08:14	08/28/19 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:06*	*1*
n-Triacontane-d62	*100*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:06*	*1*

Client Sample ID: PSE-GW-DUP

Date Collected: 08/15/19 10:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-2

Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**39**		0.50		ug/L			08/20/19 21:45	1
Benzene	**0.27**		0.20		ug/L			08/20/19 21:45	1
Toluene	**1.1**		0.20		ug/L			08/20/19 21:45	1
EDC	ND		0.20		ug/L			08/20/19 21:45	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 21:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/20/19 21:45*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/20/19 21:45*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*08/20/19 21:45*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*08/20/19 21:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*08/20/19 21:45*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	**170**		25		ug/L			08/23/19 23:47	50
Ethylbenzene	**45**		10		ug/L			08/23/19 23:47	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/23/19 23:47*	*50*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/23/19 23:47*	*50*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*08/23/19 23:47*	*50*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*08/23/19 23:47*	*50*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*		*08/23/19 23:47*	*50*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	**2.3**		0.25		mg/L			08/27/19 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*50 - 150*		*08/27/19 17:13*	*1*
Trifluorotoluene (Surr)	*139*		*50 - 150*		*08/27/19 17:13*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*77*		*60 - 140*	*08/29/19 13:46*	*09/05/19 18:25*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**0.44**		0.24		mg/L		08/28/19 14:13	08/29/19 01:39	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/29/19 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:39*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:39*	*1*

Client Sample ID: PSE-B05-S(12-13)

Date Collected: 08/15/19 10:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-3

Matrix: Solid
Percent Solids: 84.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.9		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
Benzene	ND	H *	1.9		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
Toluene	ND		9.5		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
Toluene	ND	H *	9.5		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
Ethylbenzene	ND		1.9		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
Ethylbenzene	ND	H *	1.9		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
m-Xylene & p-Xylene	ND		9.5		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
m-Xylene & p-Xylene	ND	H *	9.5		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
o-Xylene	ND		4.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
o-Xylene	ND	H *	4.7		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*149*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 121*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
4-Bromofluorobenzene (Surr)	*120*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		11		mg/Kg	☼	08/28/19 08:14	08/28/19 17:28	1
Oil Range Organics (C25-C36)	ND		29		mg/Kg	☼	08/28/19 08:14	08/28/19 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:28*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:28*	*1*

Client Sample ID: PSE-B05-GW

Date Collected: 08/15/19 11:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-4

Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 22:11	1
o-Xylene	ND		0.50		ug/L			08/20/19 22:11	1
Benzene	ND		0.20		ug/L			08/20/19 22:11	1
Toluene	ND		0.20		ug/L			08/20/19 22:11	1
EDC	ND		0.20		ug/L			08/20/19 22:11	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 22:11	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/20/19 22:11*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/20/19 22:11*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*08/20/19 22:11*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/20/19 22:11*	*1*

Client Sample ID: PSE-B05-GW — Lab Sample ID: 580-88480-4

Date Collected: 08/15/19 11:00 — **Matrix: Water**
Date Received: 08/16/19 12:29

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*08/20/19 22:11*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/27/19 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*08/27/19 17:43*	*1*
Trifluorotoluene (Surr)	*111*		*50 - 150*		*08/27/19 17:43*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.0099		ug/L		08/29/19 13:46	09/05/19 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*92*		*60 - 140*	*08/29/19 13:46*	*09/05/19 18:41*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		0.24		mg/L		08/28/19 14:13	08/29/19 01:58	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/29/19 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:58*	*1*
n-Triacontane-d62	*76*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:58*	*1*

Client Sample ID: PSE-B04-S(10-11) — Lab Sample ID: 580-88480-5

Date Collected: 08/15/19 11:10 — **Matrix: Solid**
Date Received: 08/16/19 12:29 — **Percent Solids: 92.4**

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
Benzene	ND	H *	1.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
Toluene	ND		8.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
Toluene	ND	H *	8.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
Ethylbenzene	ND		1.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
Ethylbenzene	ND	H *	1.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
m-Xylene & p-Xylene	ND		8.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
m-Xylene & p-Xylene	ND	H *	8.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
o-Xylene	ND		4.3		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
o-Xylene	ND	H *	4.4		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*149*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 121*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
4-Bromofluorobenzene (Surr)	*114*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*

Client Sample ID: PSE-B04-S(10-11) Lab Sample ID: 580-88480-5

Date Collected: 08/15/19 11:10 **Matrix: Solid**
Date Received: 08/16/19 12:29 **Percent Solids: 92.4**

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
Trifluorotoluene (Surr)	*106*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**20**		11		mg/Kg	☼	08/28/19 08:14	08/28/19 17:47	1
Oil Range Organics (C25-C36)	**140**		26		mg/Kg	☼	08/28/19 08:14	08/28/19 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:47*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:47*	*1*

Client Sample ID: PSE-B01-S(10-11) Lab Sample ID: 580-88480-6

Date Collected: 08/15/19 12:10 **Matrix: Solid**
Date Received: 08/16/19 12:29

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	0.81		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
EDC	ND	H	0.81		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Benzene	ND	H *	1.6		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Methyl tert-butyl ether	ND	H *	1.6		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Toluene	ND	H *	8.1		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Ethylbenzene	ND	H *	1.6		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
m-Xylene & p-Xylene	ND	H *	8.1		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
o-Xylene	ND	H *	4.0		ug/Kg		08/16/19 13:00	08/30/19 02:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 121*	*08/16/19 13:00*	*08/30/19 02:54*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		3.9		mg/Kg		08/26/19 12:31	08/27/19 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*08/26/19 12:31*	*08/27/19 03:50*	*1*

Client Sample ID: PSE-B08-S(11-12) Lab Sample ID: 580-88480-7

Date Collected: 08/15/19 13:20 **Matrix: Solid**
Date Received: 08/16/19 12:29 **Percent Solids: 85.3**

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.89		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
EDC	ND	*	0.89		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
Benzene	ND		1.8		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1

Client Sample ID: PSE-B08-S(11-12)
Lab Sample ID: 580-88480-7

Date Collected: 08/15/19 13:20
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 85.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND	H	34		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Benzene	ND	H	26		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
EDC	ND	H	17		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Methyl tert-butyl ether	ND		1.8		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
Toluene	ND		8.9		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
Toluene	ND	H	130		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
EDB	ND	H	17		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Ethylbenzene	**800**	**H**	34		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Ethylbenzene	**220**	**E**	1.8		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
m-Xylene & p-Xylene	**2400**	**H**	170		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
m-Xylene & p-Xylene	**820**	**E**	8.9		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
o-Xylene	**320**	**H**	51		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
o-Xylene	**150**	**E**	4.5		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*148*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 121*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
4-Bromofluorobenzene (Surr)	*124*	*X*	*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
Trifluorotoluene (Surr)	*113*		*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	**85**		7.2		mg/Kg	☼	08/26/19 12:31	08/27/19 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*	*08/26/19 12:31*	*08/27/19 04:13*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**11**		11		mg/Kg	☼	08/28/19 08:14	08/28/19 18:07	1
Oil Range Organics (C25-C36)	ND		29		mg/Kg	☼	08/28/19 08:14	08/28/19 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:07*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:07*	*1*

Client Sample ID: PSE-B08-GW
Lab Sample ID: 580-88480-8

Date Collected: 08/15/19 13:47
Matrix: Water
Date Received: 08/16/19 12:29

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**41**		0.50		ug/L			08/20/19 22:37	1
Benzene	**0.26**		0.20		ug/L			08/20/19 22:37	1
Toluene	**1.1**		0.20		ug/L			08/20/19 22:37	1

Client Sample ID: PSE-B08-GW

Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8

Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDC	ND		0.20		ug/L			08/20/19 22:37	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*08/20/19 22:37*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/20/19 22:37*	*1*
Trifluorotoluene (Surr)	*94*		*80 - 120*		*08/20/19 22:37*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*08/20/19 22:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*08/20/19 22:37*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	**150**		25		ug/L			08/24/19 00:13	50
Ethylbenzene	**39**		10		ug/L			08/24/19 00:13	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*08/24/19 00:13*	*50*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/24/19 00:13*	*50*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*08/24/19 00:13*	*50*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/24/19 00:13*	*50*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*		*08/24/19 00:13*	*50*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	**2.2**		0.25		mg/L			08/27/19 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*50 - 150*		*08/27/19 18:13*	*1*
Trifluorotoluene (Surr)	*109*		*50 - 150*		*08/27/19 18:13*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*111*		*60 - 140*	*08/29/19 13:46*	*09/05/19 18:56*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**0.39**		0.24		mg/L		08/28/19 14:13	08/29/19 02:18	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/29/19 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:18*	*1*
n-Triacontane-d62	*78*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:18*	*1*

Client Sample ID: PSE-B02-S(10-11)

Date Collected: 08/15/19 14:40
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-9
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	0.91		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
EDC	ND	H	0.91		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Benzene	ND	H *	1.8		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Methyl tert-butyl ether	ND	H *	1.8		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Toluene	ND	H *	9.1		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Ethylbenzene	ND	H *	1.8		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
m-Xylene & p-Xylene	ND	H *	9.1		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
o-Xylene	ND	H *	4.5		ug/Kg		08/16/19 13:00	08/30/19 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 121*	*08/16/19 13:00*	*08/30/19 03:50*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*	*08/16/19 13:00*	*08/30/19 03:50*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*08/16/19 13:00*	*08/30/19 03:50*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*	*08/16/19 13:00*	*08/30/19 03:50*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*	*08/16/19 13:00*	*08/30/19 03:50*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		4.7		mg/Kg		08/26/19 12:31	08/27/19 04:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*50 - 150*	*08/26/19 12:31*	*08/27/19 04:39*	*1*

Client Sample ID: PSE-B08-S(16-17)

Date Collected: 08/15/19 15:50
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-10
Matrix: Solid
Percent Solids: 86.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	1.2		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
EDC	ND	H	1.2		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Benzene	ND	H *	2.4		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Methyl tert-butyl ether	ND	H *	2.4		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Toluene	ND	H *	12		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Ethylbenzene	ND	H *	2.4		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
m-Xylene & p-Xylene	ND	H *	12		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
o-Xylene	ND	H *	5.9		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 121*	*08/16/19 13:00*	*08/30/19 04:18*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:18*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:18*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:18*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:18*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		6.2		mg/Kg	☼	08/26/19 12:31	08/27/19 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*	*08/26/19 12:31*	*08/27/19 05:03*	*1*

Client Sample ID: PSE-B08-S(16-17) Lab Sample ID: 580-88480-10

Date Collected: 08/15/19 15:50 **Matrix: Solid**
Date Received: 08/16/19 12:29 **Percent Solids: 86.6**

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		11		mg/Kg	☼	08/28/19 08:14	08/28/19 18:27	1
Oil Range Organics (C25-C36)	ND		28		mg/Kg	☼	08/28/19 08:14	08/28/19 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:27*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:27*	*1*

Client Sample ID: PSE-B03-S(10-11) Lab Sample ID: 580-88480-11

Date Collected: 08/15/19 16:10 **Matrix: Solid**
Date Received: 08/16/19 12:29

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	0.68		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
EDC	ND	H	0.68		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Benzene	ND	H *	1.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Methyl tert-butyl ether	ND	H *	1.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Toluene	ND	H *	6.8		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Ethylbenzene	ND	H *	1.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
m-Xylene & p-Xylene	ND	H *	6.8		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
o-Xylene	ND	H *	3.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 121*	*08/16/19 13:00*	*08/30/19 04:46*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:46*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:46*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:46*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 04:46*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		3.5		mg/Kg		08/26/19 12:31	08/27/19 05:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*	*08/26/19 12:31*	*08/27/19 05:26*	*1*

Client Sample ID: PSE-B06-S(10-11) Lab Sample ID: 580-88480-12

Date Collected: 08/15/19 16:40 **Matrix: Solid**
Date Received: 08/16/19 12:29 **Percent Solids: 88.5**

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H *	1.7		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1
Toluene	ND	H *	8.4		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1
Ethylbenzene	ND	H *	1.7		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1
m-Xylene & p-Xylene	ND	H *	8.4		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1
o-Xylene	ND	H *	4.2		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 121*	*08/16/19 13:00*	*08/30/19 05:14*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*

Client Sample ID: PSE-B06-S(10-11)

Lab Sample ID: 580-88480-12

Date Collected: 08/15/19 16:40
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 88.5

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		11		mg/Kg	☼	08/28/19 08:14	08/28/19 18:46	1
Oil Range Organics (C25-C36)	ND		28		mg/Kg	☼	08/28/19 08:14	08/28/19 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:46*	*1*
n-Triacontane-d62	*89*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:46*	*1*

Client Sample ID: IDW-soil-comp

Lab Sample ID: 580-88480-13

Date Collected: 08/15/19 16:50
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 91.0

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.4**		2.4		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Barium	**48**		0.40		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Cadmium	ND		0.81		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Chromium	**32**		1.0		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Lead	**2.8**		1.2		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Selenium	ND		4.0		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Silver	ND		2.0		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.026		mg/Kg	☼	08/29/19 13:51	08/29/19 19:29	1

Client Sample ID: PSE-B02-GW

Lab Sample ID: 580-88480-14

Date Collected: 08/15/19 17:31
Matrix: Water
Date Received: 08/16/19 12:29

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 23:04	1
o-Xylene	ND		0.50		ug/L			08/20/19 23:04	1
Benzene	**0.20**		0.20		ug/L			08/20/19 23:04	1
Toluene	ND		0.20		ug/L			08/20/19 23:04	1
EDC	ND		0.20		ug/L			08/20/19 23:04	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 23:04	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/20/19 23:04*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/20/19 23:04*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*08/20/19 23:04*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/20/19 23:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*08/20/19 23:04*	*1*

Client Sample ID: PSE-B02-GW

Lab Sample ID: 580-88480-14

Date Collected: 08/15/19 17:31
Matrix: Water
Date Received: 08/16/19 12:29

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/28/19 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*50 - 150*		*08/28/19 13:22*	*1*
Trifluorotoluene (Surr)	*71*		*50 - 150*		*08/28/19 13:22*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*94*		*60 - 140*	*08/29/19 13:46*	*09/05/19 19:13*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**0.26**		0.24		mg/L		08/28/19 14:13	08/29/19 02:38	1
Oil Range Organics (C25-C36)	**0.55**		0.40		mg/L		08/28/19 14:13	08/29/19 02:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:38*	*1*
n-Triacontane-d62	*82*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:38*	*1*

Client Sample ID: Tripblanks

Lab Sample ID: 580-88480-15

Date Collected: 08/15/19 00:01
Matrix: Water
Date Received: 08/16/19 12:29

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 23:31	1
o-Xylene	ND		0.50		ug/L			08/20/19 23:31	1
Benzene	ND		0.20		ug/L			08/20/19 23:31	1
Toluene	ND		0.20		ug/L			08/20/19 23:31	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/20/19 23:31*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/20/19 23:31*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*08/20/19 23:31*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/20/19 23:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*08/20/19 23:31*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/27/19 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*08/27/19 16:43*	*1*
Trifluorotoluene (Surr)	*109*		*50 - 150*		*08/27/19 16:43*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 19:29	1

Client Sample ID: Tripblanks
Date Collected: 08/15/19 00:01
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-15
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	*96*		*60 - 140*	*08/29/19 13:46*	*09/05/19 19:29*	*1*

Client Sample ID: Tripblanks
Date Collected: 08/15/19 00:01
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-16
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDC	ND		1.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Benzene	ND	*	2.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Methyl tert-butyl ether	ND	*	2.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Toluene	ND	*	10		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Ethylbenzene	ND	*	2.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
m-Xylene & p-Xylene	ND	*	10		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
o-Xylene	ND	*	5.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 121*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
Trifluorotoluene (Surr)	*104*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		5.0		mg/Kg		08/26/19 12:31	08/26/19 22:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*50 - 150*	*08/26/19 12:31*	*08/26/19 22:59*	*1*

Default Detection Limits

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units
Benzene	0.20	0.030	ug/L
EDC	0.20	0.043	ug/L
Ethylbenzene	0.20	0.030	ug/L
Methyl tert-butyl ether	0.30	0.070	ug/L
m-Xylene & p-Xylene	0.50	0.12	ug/L
o-Xylene	0.50	0.15	ug/L
Toluene	0.20	0.050	ug/L

Method: 8260C - Volatile Organic Compounds by GC/MS

Prep: 5035

Analyte	RL	MDL	Units
Benzene	2.0	0.39	ug/Kg
Benzene	30	3.8	ug/Kg
EDB	1.0	0.20	ug/Kg
EDB	20	3.8	ug/Kg
EDC	1.0	0.20	ug/Kg
EDC	20	5.5	ug/Kg
Ethylbenzene	2.0	0.41	ug/Kg
Ethylbenzene	40	9.1	ug/Kg
Methyl tert-butyl ether	2.0	0.30	ug/Kg
Methyl tert-butyl ether	40	6.0	ug/Kg
m-Xylene & p-Xylene	10	1.7	ug/Kg
m-Xylene & p-Xylene	200	15	ug/Kg
o-Xylene	5.0	0.92	ug/Kg
o-Xylene	60	13	ug/Kg
Toluene	10	1.3	ug/Kg
Toluene	150	14	ug/Kg

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	RL	MDL	Units
Gasoline Range Organics C6-C12	0.25	0.10	mg/L

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Prep: 5035

Analyte	RL	MDL	Units
Gasoline Range Organics C6-C12	5.0	2.3	mg/Kg

Method: 8011 - EDB and DBCP in Water by Microextraction

Prep: 8011

Analyte	RL	MDL	Units
Ethylene Dibromide	0.010	0.0020	ug/L

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Prep: 3510C

Analyte	RL	MDL	Units
Diesel Range Organics [C10-C25]	0.24	0.11	mg/L
Oil Range Organics (C25-C36)	0.40	0.12	mg/L

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Prep: 3550C

Default Detection Limits

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Prep: 3550C

Analyte	RL	MDL	Units
Diesel Range Organics [C10-C25]	10	4.2	mg/Kg
Oil Range Organics (C25-C36)	25	5.0	mg/Kg

Method: 6010C - Metals (ICP)

Prep: 3050B

Analyte	RL	MDL	Units
Arsenic	3.0	0.25	mg/Kg
Barium	0.50	0.079	mg/Kg
Cadmium	1.0	0.049	mg/Kg
Chromium	1.3	0.22	mg/Kg
Lead	1.5	0.22	mg/Kg
Selenium	5.0	0.40	mg/Kg
Silver	2.5	0.56	mg/Kg

Method: 7471A - Mercury (CVAA)

Prep: 7471A

Analyte	RL	MDL	Units
Mercury	0.030	0.0090	mg/Kg

Surrogate Summary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		BFB	TOL	TFT	DBFM	DCA
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)	(80-120)
580-88480-2	PSE-GW-DUP	94	99	97	94	97
580-88480-2 - DL	PSE-GW-DUP	96	99	105	93	94
580-88480-4	PSE-B05-GW	90	98	105	101	106
580-88480-8	PSE-B08-GW	98	101	94	93	93
580-88480-8 - DL	PSE-B08-GW	97	99	99	96	94
580-88480-14	PSE-B02-GW	90	101	107	101	100
580-88480-15	Tripblanks	90	99	107	99	105
LCS 580-308876/4	Lab Control Sample	96	100	100	94	93
LCS 580-309232/4	Lab Control Sample	96	99	97	96	93
LCSD 580-308876/5	Lab Control Sample Dup	94	99	99	93	94
LCSD 580-309232/5	Lab Control Sample Dup	95	100	101	95	88
MB 580-308876/6	Method Blank	87	100	113	104	104
MB 580-309232/7	Method Blank	93	98	107	101	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
TFT = Trifluorotoluene (Surr)
DBFM = Dibromofluoromethane (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		DCA	BFB	DBFM	TOL	TFT
Lab Sample ID	Client Sample ID	(80-121)	(80-120)	(80-120)	(80-120)	(80-120)
580-88480-1	PSE-SOIL-DUP	182 X	122 X	111	86	109
580-88480-1	PSE-SOIL-DUP	95	99	99	105	97
580-88480-3	PSE-B05-S(12-13)	149 X	120	112	98	107
580-88480-3	PSE-B05-S(12-13)	101	101	103	98	98
580-88480-5	PSE-B04-S(10-11)	149 X	114	102	100	106
580-88480-5	PSE-B04-S(10-11)	101	101	103	100	99
580-88480-6	PSE-B01-S(10-11)	99	100	101	100	99
580-88480-7	PSE-B08-S(11-12)	148 X	124 X	114	100	113
580-88480-7	PSE-B08-S(11-12)	93	98	97	103	97
580-88480-9	PSE-B02-S(10-11)	103	102	105	96	97
580-88480-10	PSE-B08-S(16-17)	102	103	106	98	103
580-88480-11	PSE-B03-S(10-11)	103	101	102	99	101
580-88480-12	PSE-B06-S(10-11)	106	100	107	98	101
580-88480-16	Tripblanks	110	103	107	96	104
LCS 580-309465/2-A	Lab Control Sample	144 X	115	104	98	114
LCS 580-309770/2-A	Lab Control Sample	121	95	112	92	104
LCS 580-310306/2-A	Lab Control Sample	95	95	97	103	100
LCSD 580-309465/3-A	Lab Control Sample Dup	146 X	112	117	98	118
LCSD 580-309770/3-A	Lab Control Sample Dup	115	99	95	109	94
LCSD 580-310306/3-A	Lab Control Sample Dup	93	98	99	104	96
LLCS 580-309784/4	Lab Control Sample	98	99	102	102	101
MB 580-309465/1-A	Method Blank	154 X	116	110	101	108
MB 580-309770/1-A	Method Blank	104	101	104	100	98

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		DCA	BFB	DBFM	TOL	TFT
Lab Sample ID	Client Sample ID	(80-121)	(80-120)	(80-120)	(80-120)	(80-120)
MB 580-310306/1-A	Method Blank	95	99	96	105	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
TFT = Trifluorotoluene (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB2
Lab Sample ID	Client Sample ID	(50-150)
580-88480-1	PSE-SOIL-DUP	99
580-88480-6	PSE-B01-S(10-11)	96
580-88480-7	PSE-B08-S(11-12)	98
580-88480-9	PSE-B02-S(10-11)	93
580-88480-10	PSE-B08-S(16-17)	98
580-88480-11	PSE-B03-S(10-11)	97
580-88480-16	Tripblanks	92
LCS 580-309347/2-A	Lab Control Sample	97
LCSD 580-309347/3-A	Lab Control Sample Dup	95
MB 580-309347/1-A	Method Blank	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB2	TFT2
Lab Sample ID	Client Sample ID	(50-150)	(50-150)
580-88480-14	PSE-B02-GW	93	71
LCS 580-309560/7	Lab Control Sample	94	100
LCSD 580-309560/8	Lab Control Sample Dup	99	99
MB 580-309560/6	Method Blank	97	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
TFT = Trifluorotoluene (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	TFT1
Lab Sample ID	Client Sample ID	(50-150)	(50-150)
580-88480-2	PSE-GW-DUP	114	139
580-88480-4	PSE-B05-GW	97	111
580-88480-8	PSE-B08-GW	115	109

Surrogate Summary

Client: Landau & Associates, Inc. Job ID: 580-88480-1
Project/Site: PSE Factoria UST

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (50-150)	TFT1 (50-150)
580-88480-15	Tripblanks	96	109
LCS 580-309481/8	Lab Control Sample	98	108
LCSD 580-309481/9	Lab Control Sample Dup	101	103
MB 580-309481/7	Method Blank	90	110

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
TFT = Trifluorotoluene (Surr)

Method: 8011 - EDB and DBCP in Water by Microextraction

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	12DBP1 (60-140)
580-88480-2	PSE-GW-DUP	77
580-88480-4	PSE-B05-GW	92
580-88480-8	PSE-B08-GW	111
580-88480-14	PSE-B02-GW	94
580-88480-15	Tripblanks	96
LCS 580-309742/4-A	Lab Control Sample	94
LCSD 580-309742/5-A	Lab Control Sample Dup	81
LLCS 580-309742/6-A	Lab Control Sample	71
MB 580-309742/3-A	Method Blank	99

Surrogate Legend

12DBP = 1,2-Dibromopropane

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH (50-150)	NTC (50-150)
580-88480-1	PSE-SOIL-DUP	99	100
580-88480-3	PSE-B05-S(12-13)	89	88
580-88480-5	PSE-B04-S(10-11)	97	102
580-88480-7	PSE-B08-S(11-12)	91	90
580-88480-10	PSE-B08-S(16-17)	96	92
580-88480-12	PSE-B06-S(10-11)	90	89
LCS 590-23794/2-A	Lab Control Sample	101	98
MB 590-23794/1-A	Method Blank	84	79

Surrogate Legend

OTPH = o-Terphenyl
NTC = n-Triacontane-d62

Surrogate Summary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH (50-150)	NTC (50-150)
580-88480-2	PSE-GW-DUP	93	88
580-88480-4	PSE-B05-GW	83	76
580-88480-8	PSE-B08-GW	86	78
580-88480-14	PSE-B02-GW	88	82
LCS 590-23810/2-A	Lab Control Sample	95	95
LCSD 590-23810/3-A	Lab Control Sample Dup	98	93
MB 590-23810/1-A	Method Blank	89	76

Surrogate Legend

OTPH = o-Terphenyl
NTC = n-Triacontane-d62

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-308876/6
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 15:27	1
o-Xylene	ND		0.50		ug/L			08/20/19 15:27	1
Benzene	ND		0.20		ug/L			08/20/19 15:27	1
Toluene	ND		0.20		ug/L			08/20/19 15:27	1
EDC	ND		0.20		ug/L			08/20/19 15:27	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 15:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 15:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*80 - 120*		*08/20/19 15:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/20/19 15:27*	*1*
Trifluorotoluene (Surr)	*113*		*80 - 120*		*08/20/19 15:27*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/20/19 15:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*08/20/19 15:27*	*1*

Lab Sample ID: LCS 580-308876/4
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	5.00	5.03		ug/L		101	78 - 130
o-Xylene	5.00	4.87		ug/L		97	80 - 139
Benzene	5.00	5.28		ug/L		106	73 - 133
Toluene	5.00	5.31		ug/L		106	80 - 126
EDC	5.00	4.71		ug/L		94	74 - 130
Ethylbenzene	5.00	4.84		ug/L		97	80 - 130
Methyl tert-butyl ether	5.00	3.89		ug/L		78	60 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*

Lab Sample ID: LCSD 580-308876/5
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene	5.00	4.90		ug/L		98	78 - 130	3	20
o-Xylene	5.00	4.86		ug/L		97	80 - 139	0	20
Benzene	5.00	5.20		ug/L		104	73 - 133	1	20
Toluene	5.00	5.31		ug/L		106	80 - 126	0	20
EDC	5.00	4.87		ug/L		97	74 - 130	3	15
Ethylbenzene	5.00	4.77		ug/L		95	80 - 130	2	20
Methyl tert-butyl ether	5.00	4.04		ug/L		81	60 - 150	4	25

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-308876/5
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*

Lab Sample ID: MB 580-309232/7
Matrix: Water
Analysis Batch: 309232

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/23/19 19:48	1
o-Xylene	ND		0.50		ug/L			08/23/19 19:48	1
Benzene	ND		0.20		ug/L			08/23/19 19:48	1
Toluene	ND		0.20		ug/L			08/23/19 19:48	1
EDC	ND		0.20		ug/L			08/23/19 19:48	1
Ethylbenzene	ND		0.20		ug/L			08/23/19 19:48	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/23/19 19:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*08/23/19 19:48*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/23/19 19:48*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*08/23/19 19:48*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/23/19 19:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*		*08/23/19 19:48*	*1*

Lab Sample ID: LCS 580-309232/4
Matrix: Water
Analysis Batch: 309232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	5.00	5.24		ug/L		105	78 - 130
o-Xylene	5.00	5.31		ug/L		106	80 - 139
Benzene	5.00	5.46		ug/L		109	73 - 133
Toluene	5.00	5.47		ug/L		109	80 - 126
EDC	5.00	4.80		ug/L		96	74 - 130
Ethylbenzene	5.00	4.97		ug/L		99	80 - 130
Methyl tert-butyl ether	5.00	4.60		ug/L		92	60 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-309232/5
Matrix: Water
Analysis Batch: 309232

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene			5.00	5.61		ug/L		112	78 - 130	7	20
o-Xylene			5.00	5.71		ug/L		114	80 - 139	7	20
Benzene			5.00	5.66		ug/L		113	73 - 133	4	20
Toluene			5.00	5.94		ug/L		119	80 - 126	8	20
EDC			5.00	4.99		ug/L		100	74 - 130	4	15
Ethylbenzene			5.00	5.36		ug/L		107	80 - 130	8	20
Methyl tert-butyl ether			5.00	4.46		ug/L		89	60 - 150	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*88*		*80 - 120*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-309465/1-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309465

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
EDC	ND		1.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
Methyl tert-butyl ether	ND		2.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
Toluene	ND		10		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
EDB	ND		1.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
Ethylbenzene	ND		2.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
m-Xylene & p-Xylene	ND		10		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
o-Xylene	ND		5.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*154*	*X*	*80 - 121*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
4-Bromofluorobenzene (Surr)	*116*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
Trifluorotoluene (Surr)	*108*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*

Lab Sample ID: LCS 580-309465/2-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309465

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			20.0	18.1		ug/Kg		90	72 - 135		
EDC			20.0	28.4	*	ug/Kg		142	68 - 132		
Methyl tert-butyl ether			20.0	22.2		ug/Kg		111	68 - 132		
Toluene			20.0	18.2		ug/Kg		91	75 - 137		
EDB			20.0	19.3		ug/Kg		97	77 - 123		

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-309465/2-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309465

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	20.0	18.9		ug/Kg		94	80 - 135
m-Xylene & p-Xylene	20.0	19.4		ug/Kg		97	80 - 132
o-Xylene	20.0	19.8		ug/Kg		99	80 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*144*	*X*	*80 - 121*
4-Bromofluorobenzene (Surr)	*115*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
Trifluorotoluene (Surr)	*114*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*

Lab Sample ID: LCSD 580-309465/3-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309465

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	18.7		ug/Kg		94	72 - 135	4	15
EDC	20.0	27.5	*	ug/Kg		138	68 - 132	3	17
Methyl tert-butyl ether	20.0	25.7		ug/Kg		129	68 - 132	15	25
Toluene	20.0	17.8		ug/Kg		89	75 - 137	2	20
EDB	20.0	18.0		ug/Kg		90	77 - 123	7	20
Ethylbenzene	20.0	19.1		ug/Kg		96	80 - 135	1	16
m-Xylene & p-Xylene	20.0	20.0		ug/Kg		100	80 - 132	3	20
o-Xylene	20.0	21.2		ug/Kg		106	80 - 125	7	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*146*	*X*	*80 - 121*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
Trifluorotoluene (Surr)	*118*		*80 - 120*
Dibromofluoromethane (Surr)	*117*		*80 - 120*

Lab Sample ID: MB 580-309770/1-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
EDC	ND		1.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
Methyl tert-butyl ether	ND		2.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
Toluene	ND		10		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
EDB	ND		1.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
Ethylbenzene	ND		2.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
m-Xylene & p-Xylene	ND		10		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
o-Xylene	ND		5.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 121*	*08/29/19 16:50*	*08/29/19 20:51*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-309770/1-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309770

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120	08/29/19 16:50	08/29/19 20:51	1
Toluene-d8 (Surr)	100		80 - 120	08/29/19 16:50	08/29/19 20:51	1
Trifluorotoluene (Surr)	98		80 - 120	08/29/19 16:50	08/29/19 20:51	1
Dibromofluoromethane (Surr)	104		80 - 120	08/29/19 16:50	08/29/19 20:51	1

Lab Sample ID: LCS 580-309770/2-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	15.6		ug/Kg		78	72 - 135
EDC	20.0	18.7		ug/Kg		94	68 - 132
Methyl tert-butyl ether	20.0	16.5		ug/Kg		82	68 - 132
Toluene	20.0	13.6	*	ug/Kg		68	75 - 137
EDB	20.0	18.4		ug/Kg		92	77 - 123
Ethylbenzene	20.0	13.1	*	ug/Kg		66	80 - 135
m-Xylene & p-Xylene	20.0	12.8	*	ug/Kg		64	80 - 132
o-Xylene	20.0	13.5	*	ug/Kg		67	80 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	121		80 - 121
4-Bromofluorobenzene (Surr)	95		80 - 120
Toluene-d8 (Surr)	92		80 - 120
Trifluorotoluene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	112		80 - 120

Lab Sample ID: LCSD 580-309770/3-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309770

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	13.6	*	ug/Kg		68	72 - 135	13	15
EDC	20.0	20.1		ug/Kg		101	68 - 132	7	17
Methyl tert-butyl ether	20.0	7.60	*	ug/Kg		38	68 - 132	74	25
Toluene	20.0	15.8		ug/Kg		79	75 - 137	15	20
EDB	20.0	21.5		ug/Kg		107	77 - 123	15	20
Ethylbenzene	20.0	15.0	*	ug/Kg		75	80 - 135	13	16
m-Xylene & p-Xylene	20.0	15.5	*	ug/Kg		77	80 - 132	19	20
o-Xylene	20.0	15.3	*	ug/Kg		77	80 - 125	13	14

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	109		80 - 120
Trifluorotoluene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LLCS 580-309784/4
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	1.00	1.09	J	ug/Kg		109	72 - 135
EDC	1.00	1.05		ug/Kg		105	68 - 132
Methyl tert-butyl ether	1.00	1.05	J	ug/Kg		105	68 - 132
Toluene	1.00	ND		ug/Kg		117	75 - 137
EDB	1.00	1.19		ug/Kg		119	77 - 123
Ethylbenzene	1.00	1.17	J	ug/Kg		117	80 - 135
m-Xylene & p-Xylene	1.00	ND		ug/Kg		120	80 - 132
o-Xylene	1.00	1.17	J	ug/Kg		117	80 - 125

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 121*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*

Lab Sample ID: MB 580-310306/1-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 310306

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		30		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
EDC	ND		20		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
Methyl tert-butyl ether	ND		40		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
Toluene	ND		150		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
EDB	ND		20		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
Ethylbenzene	ND		40		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
m-Xylene & p-Xylene	ND		200		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
o-Xylene	ND		60		ug/Kg		09/05/19 08:00	09/05/19 13:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 121*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*

Lab Sample ID: LCS 580-310306/2-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 310306

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	800	802		ug/Kg		100	72 - 135
EDC	800	726		ug/Kg		91	68 - 132
Methyl tert-butyl ether	800	749		ug/Kg		94	68 - 132
Toluene	800	852		ug/Kg		106	75 - 137
EDB	800	827		ug/Kg		103	77 - 123
Ethylbenzene	800	868		ug/Kg		109	80 - 135

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-310306/2-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 310306

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	800	844		ug/Kg		105	80 - 132
o-Xylene	800	819		ug/Kg		102	80 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 121*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Trifluorotoluene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*

Lab Sample ID: LCSD 580-310306/3-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 310306

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	800	812		ug/Kg		101	72 - 135	1	15
EDC	800	724		ug/Kg		90	68 - 132	0	17
Methyl tert-butyl ether	800	745		ug/Kg		93	68 - 132	0	25
Toluene	800	873		ug/Kg		109	75 - 137	3	20
EDB	800	848		ug/Kg		106	77 - 123	3	20
Ethylbenzene	800	872		ug/Kg		109	80 - 135	0	16
m-Xylene & p-Xylene	800	868		ug/Kg		109	80 - 132	3	20
o-Xylene	800	832		ug/Kg		104	80 - 125	2	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 121*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-309347/1-A
Matrix: Solid
Analysis Batch: 309383

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309347

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		5.0		mg/Kg		08/26/19 12:31	08/26/19 21:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*	*08/26/19 12:31*	*08/26/19 21:46*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-309347/2-A
Matrix: Solid
Analysis Batch: 309383

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309347

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics C6-C12			40.0	36.6		mg/Kg		91	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*

Lab Sample ID: LCSD 580-309347/3-A
Matrix: Solid
Analysis Batch: 309383

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309347

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics C6-C12			40.0	37.6		mg/Kg		94	80 - 120	3	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*50 - 150*

Lab Sample ID: MB 580-309481/7
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/27/19 13:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*50 - 150*		*08/27/19 13:42*	*1*
Trifluorotoluene (Surr)	*110*		*50 - 150*		*08/27/19 13:42*	*1*

Lab Sample ID: LCS 580-309481/8
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics C6-C12			1.00	0.908		mg/L		91	79 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*
Trifluorotoluene (Surr)	*108*		*50 - 150*

Lab Sample ID: LCSD 580-309481/9
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics C6-C12			1.00	0.895		mg/L		90	79 - 120	1	10

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-309481/9
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		50 - 150
Trifluorotoluene (Surr)	103		50 - 150

Lab Sample ID: MB 580-309560/6
Matrix: Water
Analysis Batch: 309560

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/28/19 11:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		50 - 150		08/28/19 11:20	1
Trifluorotoluene (Surr)	98		50 - 150		08/28/19 11:20	1

Lab Sample ID: LCS 580-309560/7
Matrix: Water
Analysis Batch: 309560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics C6-C12			1.00	0.891		mg/L		89	79 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		50 - 150
Trifluorotoluene (Surr)	100		50 - 150

Lab Sample ID: LCSD 580-309560/8
Matrix: Water
Analysis Batch: 309560

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics C6-C12			1.00	0.906		mg/L		91	79 - 120	2	10

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		50 - 150
Trifluorotoluene (Surr)	99		50 - 150

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 580-309742/3-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309742

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.010		ug/L		08/29/19 13:45	09/05/19 17:19	1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: MB 580-309742/3-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309742

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	99		60 - 140	08/29/19 13:45	09/05/19 17:19	1

Lab Sample ID: LCS 580-309742/4-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309742

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethylene Dibromide			0.0571	0.0535		ug/L		94	60 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dibromopropane	94		60 - 140

Lab Sample ID: LCSD 580-309742/5-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309742

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide			0.0571	0.0655		ug/L		115	60 - 140	20	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dibromopropane	81		60 - 140

Lab Sample ID: LLCS 580-309742/6-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309742

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethylene Dibromide			0.0114	0.0173	*	ug/L		152	60 - 140		

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
1,2-Dibromopropane	71		60 - 140

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-23794/1-A
Matrix: Solid
Analysis Batch: 23804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23794

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		10		mg/Kg		08/28/19 08:14	08/28/19 12:31	1
Oil Range Organics (C25-C36)	ND		25		mg/Kg		08/28/19 08:14	08/28/19 12:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	08/28/19 08:14	08/28/19 12:31	1
n-Triacontane-d62	79		50 - 150	08/28/19 08:14	08/28/19 12:31	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-23794/2-A
Matrix: Solid
Analysis Batch: 23804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C25]			66.7	67.8		mg/Kg		102	50 - 150		
Oil Range Organics (C25-C36)			66.7	73.1		mg/Kg		110	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*101*		*50 - 150*
n-Triacontane-d62	*98*		*50 - 150*

Lab Sample ID: MB 590-23810/1-A
Matrix: Water
Analysis Batch: 23804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		0.24		mg/L		08/28/19 14:13	08/28/19 23:41	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/28/19 23:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/28/19 14:13*	*08/28/19 23:41*	*1*
n-Triacontane-d62	*76*		*50 - 150*	*08/28/19 14:13*	*08/28/19 23:41*	*1*

Lab Sample ID: LCS 590-23810/2-A
Matrix: Water
Analysis Batch: 23804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23810

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C25]			1.60	1.53		mg/L		95	50 - 150		
Oil Range Organics (C25-C36)			1.60	1.74		mg/L		109	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*95*		*50 - 150*
n-Triacontane-d62	*95*		*50 - 150*

Lab Sample ID: LCSD 590-23810/3-A
Matrix: Water
Analysis Batch: 23804

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23810

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C25]			1.60	1.53		mg/L		96	50 - 150	0	25
Oil Range Organics (C25-C36)			1.60	1.73		mg/L		108	50 - 150	0	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*
n-Triacontane-d62	*93*		*50 - 150*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 580-309252/22-A
Matrix: Solid
Analysis Batch: 309449

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309252

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Barium	ND		0.50		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Cadmium	ND		1.0		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Chromium	ND		1.3		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Lead	ND		1.5		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Selenium	ND		5.0		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Silver	ND		2.5		mg/Kg		08/24/19 08:31	08/26/19 14:32	1

Lab Sample ID: LCS 580-309252/23-A
Matrix: Solid
Analysis Batch: 309449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309252

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	51.5		mg/Kg		103	80 - 120
Barium	50.0	53.6		mg/Kg		107	80 - 120
Cadmium	50.0	51.8		mg/Kg		104	80 - 120
Chromium	50.0	56.5		mg/Kg		113	80 - 120
Lead	50.0	53.8		mg/Kg		108	80 - 120
Selenium	50.0	52.0		mg/Kg		104	80 - 120
Silver	50.0	51.4		mg/Kg		103	80 - 120

Lab Sample ID: LCSD 580-309252/24-A
Matrix: Solid
Analysis Batch: 309449

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309252

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	49.2		mg/Kg		98	80 - 120	5	20
Barium	50.0	51.1		mg/Kg		102	80 - 120	5	20
Cadmium	50.0	49.9		mg/Kg		100	80 - 120	4	20
Chromium	50.0	54.4		mg/Kg		109	80 - 120	4	20
Lead	50.0	51.8		mg/Kg		104	80 - 120	4	20
Selenium	50.0	49.6		mg/Kg		99	80 - 120	5	20
Silver	50.0	54.1		mg/Kg		108	80 - 120	5	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-309743/14-A
Matrix: Solid
Analysis Batch: 309797

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309743

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.030		mg/Kg		08/29/19 13:51	08/29/19 18:42	1

Lab Sample ID: LCS 580-309743/15-A
Matrix: Solid
Analysis Batch: 309797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309743

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.181		mg/Kg		109	80 - 120

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-309743/16-A
Matrix: Solid
Analysis Batch: 309797

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309743

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.167	0.172		mg/Kg		103	80 - 120	5	20

GC/MS VOA

Analysis Batch: 308876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-2	PSE-GW-DUP	Total/NA	Water	8260C	
580-88480-4	PSE-B05-GW	Total/NA	Water	8260C	
580-88480-8	PSE-B08-GW	Total/NA	Water	8260C	
580-88480-14	PSE-B02-GW	Total/NA	Water	8260C	
580-88480-15	Tripblanks	Total/NA	Water	8260C	
MB 580-308876/6	Method Blank	Total/NA	Water	8260C	
LCS 580-308876/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-308876/5	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 309232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-2 - DL	PSE-GW-DUP	Total/NA	Water	8260C	
580-88480-8 - DL	PSE-B08-GW	Total/NA	Water	8260C	
MB 580-309232/7	Method Blank	Total/NA	Water	8260C	
LCS 580-309232/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-309232/5	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 309457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	8260C	309465
580-88480-3	PSE-B05-S(12-13)	Total/NA	Solid	8260C	309465
580-88480-5	PSE-B04-S(10-11)	Total/NA	Solid	8260C	309465
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	8260C	309465
MB 580-309465/1-A	Method Blank	Total/NA	Solid	8260C	309465
LCS 580-309465/2-A	Lab Control Sample	Total/NA	Solid	8260C	309465
LCSD 580-309465/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	309465

Prep Batch: 309465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	5035	
580-88480-3	PSE-B05-S(12-13)	Total/NA	Solid	5035	
580-88480-5	PSE-B04-S(10-11)	Total/NA	Solid	5035	
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	5035	
MB 580-309465/1-A	Method Blank	Total/NA	Solid	5035	
LCS 580-309465/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 580-309465/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 309770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-3	PSE-B05-S(12-13)	Total/NA	Solid	5035	
580-88480-5	PSE-B04-S(10-11)	Total/NA	Solid	5035	
580-88480-6	PSE-B01-S(10-11)	Total/NA	Solid	5035	
580-88480-9	PSE-B02-S(10-11)	Total/NA	Solid	5035	
580-88480-10	PSE-B08-S(16-17)	Total/NA	Solid	5035	
580-88480-11	PSE-B03-S(10-11)	Total/NA	Solid	5035	
580-88480-12	PSE-B06-S(10-11)	Total/NA	Solid	5035	
580-88480-16	Tripblanks	Total/NA	Solid	5035	
MB 580-309770/1-A	Method Blank	Total/NA	Solid	5035	
LCS 580-309770/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 580-309770/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC/MS VOA

Analysis Batch: 309784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-3	PSE-B05-S(12-13)	Total/NA	Solid	8260C	309770
580-88480-5	PSE-B04-S(10-11)	Total/NA	Solid	8260C	309770
580-88480-6	PSE-B01-S(10-11)	Total/NA	Solid	8260C	309770
580-88480-9	PSE-B02-S(10-11)	Total/NA	Solid	8260C	309770
580-88480-10	PSE-B08-S(16-17)	Total/NA	Solid	8260C	309770
580-88480-11	PSE-B03-S(10-11)	Total/NA	Solid	8260C	309770
580-88480-12	PSE-B06-S(10-11)	Total/NA	Solid	8260C	309770
580-88480-16	Tripblanks	Total/NA	Solid	8260C	309770
MB 580-309770/1-A	Method Blank	Total/NA	Solid	8260C	309770
LCS 580-309770/2-A	Lab Control Sample	Total/NA	Solid	8260C	309770
LCSD 580-309770/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	309770
LLCS 580-309784/4	Lab Control Sample	Total/NA	Solid	8260C	

Prep Batch: 310306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	5035	
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	5035	
MB 580-310306/1-A	Method Blank	Total/NA	Solid	5035	
LCS 580-310306/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 580-310306/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 310310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	8260C	310306
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	8260C	310306
MB 580-310306/1-A	Method Blank	Total/NA	Solid	8260C	310306
LCS 580-310306/2-A	Lab Control Sample	Total/NA	Solid	8260C	310306
LCSD 580-310306/3-A	Lab Control Sample Dup	Total/NA	Solid	8260C	310306

GC VOA

Prep Batch: 309347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	5035	
580-88480-6	PSE-B01-S(10-11)	Total/NA	Solid	5035	
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	5035	
580-88480-9	PSE-B02-S(10-11)	Total/NA	Solid	5035	
580-88480-10	PSE-B08-S(16-17)	Total/NA	Solid	5035	
580-88480-11	PSE-B03-S(10-11)	Total/NA	Solid	5035	
580-88480-16	Tripblanks	Total/NA	Solid	5035	
MB 580-309347/1-A	Method Blank	Total/NA	Solid	5035	
LCS 580-309347/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 580-309347/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 309383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	NWTPH-Gx	309347
580-88480-6	PSE-B01-S(10-11)	Total/NA	Solid	NWTPH-Gx	309347
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	NWTPH-Gx	309347
580-88480-9	PSE-B02-S(10-11)	Total/NA	Solid	NWTPH-Gx	309347
580-88480-10	PSE-B08-S(16-17)	Total/NA	Solid	NWTPH-Gx	309347

GC VOA (Continued)

Analysis Batch: 309383 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-11	PSE-B03-S(10-11)	Total/NA	Solid	NWTPH-Gx	309347
580-88480-16	Tripblanks	Total/NA	Solid	NWTPH-Gx	309347
MB 580-309347/1-A	Method Blank	Total/NA	Solid	NWTPH-Gx	309347
LCS 580-309347/2-A	Lab Control Sample	Total/NA	Solid	NWTPH-Gx	309347
LCSD 580-309347/3-A	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Gx	309347

Analysis Batch: 309481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-2	PSE-GW-DUP	Total/NA	Water	NWTPH-Gx	
580-88480-4	PSE-B05-GW	Total/NA	Water	NWTPH-Gx	
580-88480-8	PSE-B08-GW	Total/NA	Water	NWTPH-Gx	
580-88480-15	Tripblanks	Total/NA	Water	NWTPH-Gx	
MB 580-309481/7	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-309481/8	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-309481/9	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 309560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-14	PSE-B02-GW	Total/NA	Water	NWTPH-Gx	
MB 580-309560/6	Method Blank	Total/NA	Water	NWTPH-Gx	
LCS 580-309560/7	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
LCSD 580-309560/8	Lab Control Sample Dup	Total/NA	Water	NWTPH-Gx	

GC Semi VOA

Prep Batch: 23794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	3550C	
580-88480-3	PSE-B05-S(12-13)	Total/NA	Solid	3550C	
580-88480-5	PSE-B04-S(10-11)	Total/NA	Solid	3550C	
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	3550C	
580-88480-10	PSE-B08-S(16-17)	Total/NA	Solid	3550C	
580-88480-12	PSE-B06-S(10-11)	Total/NA	Solid	3550C	
MB 590-23794/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 590-23794/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 23804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	NWTPH-Dx	23794
580-88480-2	PSE-GW-DUP	Total/NA	Water	NWTPH-Dx	23810
580-88480-3	PSE-B05-S(12-13)	Total/NA	Solid	NWTPH-Dx	23794
580-88480-4	PSE-B05-GW	Total/NA	Water	NWTPH-Dx	23810
580-88480-5	PSE-B04-S(10-11)	Total/NA	Solid	NWTPH-Dx	23794
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	NWTPH-Dx	23794
580-88480-8	PSE-B08-GW	Total/NA	Water	NWTPH-Dx	23810
580-88480-10	PSE-B08-S(16-17)	Total/NA	Solid	NWTPH-Dx	23794
580-88480-12	PSE-B06-S(10-11)	Total/NA	Solid	NWTPH-Dx	23794
580-88480-14	PSE-B02-GW	Total/NA	Water	NWTPH-Dx	23810
MB 590-23794/1-A	Method Blank	Total/NA	Solid	NWTPH-Dx	23794
MB 590-23810/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	23810
LCS 590-23794/2-A	Lab Control Sample	Total/NA	Solid	NWTPH-Dx	23794

GC Semi VOA (Continued)

Analysis Batch: 23804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 590-23810/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	23810
LCSD 590-23810/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	23810

Prep Batch: 23810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-2	PSE-GW-DUP	Total/NA	Water	3510C	
580-88480-4	PSE-B05-GW	Total/NA	Water	3510C	
580-88480-8	PSE-B08-GW	Total/NA	Water	3510C	
580-88480-14	PSE-B02-GW	Total/NA	Water	3510C	
MB 590-23810/1-A	Method Blank	Total/NA	Water	3510C	
LCS 590-23810/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 590-23810/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 309742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-2	PSE-GW-DUP	Total/NA	Water	8011	
580-88480-4	PSE-B05-GW	Total/NA	Water	8011	
580-88480-8	PSE-B08-GW	Total/NA	Water	8011	
580-88480-14	PSE-B02-GW	Total/NA	Water	8011	
580-88480-15	Tripblanks	Total/NA	Water	8011	
MB 580-309742/3-A	Method Blank	Total/NA	Water	8011	
LCS 580-309742/4-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 580-309742/5-A	Lab Control Sample Dup	Total/NA	Water	8011	
LLCS 580-309742/6-A	Lab Control Sample	Total/NA	Water	8011	

Analysis Batch: 310344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-2	PSE-GW-DUP	Total/NA	Water	8011	309742
580-88480-4	PSE-B05-GW	Total/NA	Water	8011	309742
580-88480-8	PSE-B08-GW	Total/NA	Water	8011	309742
580-88480-14	PSE-B02-GW	Total/NA	Water	8011	309742
580-88480-15	Tripblanks	Total/NA	Water	8011	309742
MB 580-309742/3-A	Method Blank	Total/NA	Water	8011	309742
LCS 580-309742/4-A	Lab Control Sample	Total/NA	Water	8011	309742
LCSD 580-309742/5-A	Lab Control Sample Dup	Total/NA	Water	8011	309742
LLCS 580-309742/6-A	Lab Control Sample	Total/NA	Water	8011	309742

Metals

Prep Batch: 309252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-13	IDW-soil-comp	Total/NA	Solid	3050B	
MB 580-309252/22-A	Method Blank	Total/NA	Solid	3050B	
LCS 580-309252/23-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 580-309252/24-A	Lab Control Sample Dup	Total/NA	Solid	3050B	

Analysis Batch: 309449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-13	IDW-soil-comp	Total/NA	Solid	6010C	309252
MB 580-309252/22-A	Method Blank	Total/NA	Solid	6010C	309252
LCS 580-309252/23-A	Lab Control Sample	Total/NA	Solid	6010C	309252

Metals (Continued)

Analysis Batch: 309449 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 580-309252/24-A	Lab Control Sample Dup	Total/NA	Solid	6010C	309252

Prep Batch: 309743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-13	IDW-soil-comp	Total/NA	Solid	7471A	
MB 580-309743/14-A	Method Blank	Total/NA	Solid	7471A	
LCS 580-309743/15-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 580-309743/16-A	Lab Control Sample Dup	Total/NA	Solid	7471A	

Analysis Batch: 309797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-13	IDW-soil-comp	Total/NA	Solid	7471A	309743
MB 580-309743/14-A	Method Blank	Total/NA	Solid	7471A	309743
LCS 580-309743/15-A	Lab Control Sample	Total/NA	Solid	7471A	309743
LCSD 580-309743/16-A	Lab Control Sample Dup	Total/NA	Solid	7471A	309743

General Chemistry

Analysis Batch: 23779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-1	PSE-SOIL-DUP	Total/NA	Solid	Moisture	
580-88480-3	PSE-B05-S(12-13)	Total/NA	Solid	Moisture	
580-88480-5	PSE-B04-S(10-11)	Total/NA	Solid	Moisture	
580-88480-7	PSE-B08-S(11-12)	Total/NA	Solid	Moisture	
580-88480-10	PSE-B08-S(16-17)	Total/NA	Solid	Moisture	
580-88480-12	PSE-B06-S(10-11)	Total/NA	Solid	Moisture	

Analysis Batch: 309118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-88480-13	IDW-soil-comp	Total/NA	Solid	D 2216	
580-88480-13 DU	IDW-soil-comp	Total/NA	Solid	D 2216	

Client Sample ID: PSE-SOIL-DUP
Lab Sample ID: 580-88480-1
Date Collected: 08/15/19 09:30
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-SOIL-DUP
Lab Sample ID: 580-88480-1
Date Collected: 08/15/19 09:30
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310306	09/05/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	310310	09/05/19 14:57	ASJ	TAL SEA
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 15:49	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 03:26	DCV	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 17:06	NMI	TAL SPK

Client Sample ID: PSE-GW-DUP
Lab Sample ID: 580-88480-2
Date Collected: 08/15/19 10:00
Matrix: Water
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 21:45	DSO	TAL SEA
Total/NA	Analysis	8260C	DL	50	309232	08/23/19 23:47	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 17:13	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 18:25	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 01:39	NMI	TAL SPK

Client Sample ID: PSE-B05-S(12-13)
Lab Sample ID: 580-88480-3
Date Collected: 08/15/19 10:30
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B05-S(12-13)
Lab Sample ID: 580-88480-3
Date Collected: 08/15/19 10:30
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 16:13	APR	TAL SEA
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 01:58	APR	TAL SEA

Client Sample ID: PSE-B05-S(12-13)

Lab Sample ID: 580-88480-3
Date Collected: 08/15/19 10:30
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 17:28	NMI	TAL SPK

Client Sample ID: PSE-B05-GW

Lab Sample ID: 580-88480-4
Date Collected: 08/15/19 11:00
Matrix: Water
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 22:11	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 17:43	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 18:41	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 01:58	NMI	TAL SPK

Client Sample ID: PSE-B04-S(10-11)

Lab Sample ID: 580-88480-5
Date Collected: 08/15/19 11:10
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B04-S(10-11)

Lab Sample ID: 580-88480-5
Date Collected: 08/15/19 11:10
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 16:38	APR	TAL SEA
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 02:26	APR	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 17:47	NMI	TAL SPK

Client Sample ID: PSE-B01-S(10-11)

Lab Sample ID: 580-88480-6
Date Collected: 08/15/19 12:10
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 02:54	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 03:50	DCV	TAL SEA

Client Sample ID: PSE-B08-S(11-12)
Date Collected: 08/15/19 13:20
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B08-S(11-12)
Date Collected: 08/15/19 13:20
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-7
Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310306	09/05/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	310310	09/05/19 15:23	ASJ	TAL SEA
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 17:27	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 04:13	DCV	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 18:07	NMI	TAL SPK

Client Sample ID: PSE-B08-GW
Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 22:37	DSO	TAL SEA
Total/NA	Analysis	8260C	DL	50	309232	08/24/19 00:13	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 18:13	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 18:56	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 02:18	NMI	TAL SPK

Client Sample ID: PSE-B02-S(10-11)
Date Collected: 08/15/19 14:40
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 03:50	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 04:39	DCV	TAL SEA

Client Sample ID: PSE-B08-S(16-17)
Date Collected: 08/15/19 15:50
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: PSE-B08-S(16-17)

Lab Sample ID: 580-88480-10
Date Collected: 08/15/19 15:50
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 04:18	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 05:03	DCV	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 18:27	NMI	TAL SPK

Client Sample ID: PSE-B03-S(10-11)

Lab Sample ID: 580-88480-11
Date Collected: 08/15/19 16:10
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 04:46	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 05:26	DCV	TAL SEA

Client Sample ID: PSE-B06-S(10-11)

Lab Sample ID: 580-88480-12
Date Collected: 08/15/19 16:40
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B06-S(10-11)

Lab Sample ID: 580-88480-12
Date Collected: 08/15/19 16:40
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 88.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 05:14	APR	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 18:46	NMI	TAL SPK

Client Sample ID: IDW-soil-comp

Lab Sample ID: 580-88480-13
Date Collected: 08/15/19 16:50
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	309118	08/22/19 14:13	ERZ	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: IDW-soil-comp
Lab Sample ID: 580-88480-13
Date Collected: 08/15/19 16:50
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			309252	08/24/19 08:31	JCP	TAL SEA
Total/NA	Analysis	6010C		1	309449	08/26/19 15:52	T1H	TAL SEA
Total/NA	Prep	7471A			309743	08/29/19 13:51	ART	TAL SEA
Total/NA	Analysis	7471A		1	309797	08/29/19 19:29	T1H	TAL SEA

Client Sample ID: PSE-B02-GW
Lab Sample ID: 580-88480-14
Date Collected: 08/15/19 17:31
Matrix: Water
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 23:04	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309560	08/28/19 13:22	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 19:13	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 02:38	NMI	TAL SPK

Client Sample ID: Tripblanks
Lab Sample ID: 580-88480-15
Date Collected: 08/15/19 00:01
Matrix: Water
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 23:31	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 16:43	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 19:29	CJ	TAL SEA

Client Sample ID: Tripblanks
Lab Sample ID: 580-88480-16
Date Collected: 08/15/19 00:01
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/29/19 21:47	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/26/19 22:59	DCV	TAL SEA

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Landau & Associates, Inc. Job ID: 580-88480-1
Project/Site: PSE Factoria UST

Laboratory: Eurofins TestAmerica, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State Program	C553	02-17-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6010C	3050B	Solid	Arsenic
6010C	3050B	Solid	Barium
6010C	3050B	Solid	Cadmium
6010C	3050B	Solid	Chromium
6010C	3050B	Solid	Lead
6010C	3050B	Solid	Selenium
6010C	3050B	Solid	Silver
D 2216		Solid	Percent Moisture

Laboratory: Eurofins TestAmerica, Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-025	12-07-19
Alaska (UST)	State Program	17-025	12-07-19
Oregon	NELAP	4137	12-07-19
Oregon	NELAP	4137	12-07-19
Washington	State	C569	01-06-20
Washington	State Program	C569	01-06-20

Method Summary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SEA
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SEA
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC)	NWTPH	TAL SEA
8011	EDB and DBCP in Water by Microextraction	EPA	TAL SEA
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
6010C	Metals (ICP)	SW846	TAL SEA
7471A	Mercury (CVAA)	SW846	TAL SEA
D 2216	Percent Moisture	ASTM	TAL SEA
Moisture	Percent Moisture	EPA	TAL SPK
3050B	Preparation, Metals	SW846	TAL SEA
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK
5030B	Purge and Trap	SW846	TAL SEA
5035	Closed System Purge and Trap	SW846	TAL SEA
7471A	Preparation, Mercury	SW846	TAL SEA
8011	Microextraction	SW846	TAL SEA

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Sample Summary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-88480-1	PSE-SOIL-DUP	Solid	08/15/19 09:30	08/16/19 12:29	
580-88480-2	PSE-GW-DUP	Water	08/15/19 10:00	08/16/19 12:29	
580-88480-3	PSE-B05-S(12-13)	Solid	08/15/19 10:30	08/16/19 12:29	
580-88480-4	PSE-B05-GW	Water	08/15/19 11:00	08/16/19 12:29	
580-88480-5	PSE-B04-S(10-11)	Solid	08/15/19 11:10	08/16/19 12:29	
580-88480-6	PSE-B01-S(10-11)	Solid	08/15/19 12:10	08/16/19 12:29	
580-88480-7	PSE-B08-S(11-12)	Solid	08/15/19 13:20	08/16/19 12:29	
580-88480-8	PSE-B08-GW	Water	08/15/19 13:47	08/16/19 12:29	
580-88480-9	PSE-B02-S(10-11)	Solid	08/15/19 14:40	08/16/19 12:29	
580-88480-10	PSE-B08-S(16-17)	Solid	08/15/19 15:50	08/16/19 12:29	
580-88480-11	PSE-B03-S(10-11)	Solid	08/15/19 16:10	08/16/19 12:29	
580-88480-12	PSE-B06-S(10-11)	Solid	08/15/19 16:40	08/16/19 12:29	
580-88480-13	IDW-soil-comp	Solid	08/15/19 16:50	08/16/19 12:29	
580-88480-14	PSE-B02-GW	Water	08/15/19 17:31	08/16/19 12:29	
580-88480-15	Tripblanks	Water	08/15/19 00:01	08/16/19 12:29	
580-88480-16	Tripblanks	Solid	08/15/19 00:01	08/16/19 12:29	

Chain-of-Custody Record

LANDAU ASSOCIATES

☐ Seattle/Edmonds (425) 778-0907 ☐ Spokane (509) 327-9737
☒ Tacoma (253) 926-2493 ☐ Portland (503) 542-1080

Date 8/15/19 Page 1 of 1

Turnaround Time: Standard X Accelerated ☐

Project Name PSE Factoria UST Project No. 130027.010
Project Location/Event Bellevue, WA / Pre-dig investigation
Sampler's Name Levan Alerta & Cara Jernigan
Project Contact Siesta Nutt
Send Results To Snutt & DJorgensen

Special Handling Requirements:

Shipment Method: Lab Pick Up
Stored on ice: (Yes) No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Dx	BTEX (8260)	EDB/EDC/MTBE (8260)	RCRA 8 metals (6020/7471)	EDC/MTBE (8260)	EDB (8011)
PSE-Soil-Dup	8/15/19	930	Soil	4	X	X	X	X			
PSE-Gw-Dup	8/15/19	1000	AQ	9	X	X	X			X	X
PSE-B05-S (12-13)	8/15/19	1030	Soil	3		X	X				
PSE-B05-Gw	8/15/19	1100	AQ	9	X	X	X			X	X
PSE-B04-S(10-11)	8/15/19	1110	Soil	3		X	X				
PSE-B01-S(10-11)	8/15/19	1210	Soil	3	X		X	X			
PSE-B08-S(11-12)	8/15/19	1320	Soil	4	X	X	X	X			
PSE-B08-Gw	8/15/19	1347	AQ	9	X	X	X			X	X
PSE-B02-S(10-11)	8/15/19	1440	Soil	3	X		X	X			
PSE-B08-S(16-17)	8/15/19	1550	Soil	4	X	X	X	X			
PSE-B03-S(10-11)	8/15/19	1610	Soil	3	X		X	X			
PSE-B06-S(10-11)	8/15/19	1640	Soil	3		X	X				
IDW-Soil-Comp	8/15/19	1650	Soil	1					X		
PSE-B02-Gw	8/15/19	1731	AQ	9	X	X	X			X	X
Tripblanks	—	—	AQ	8	X		X		X		X
Tripblanks	—	—	AQ/Dry	9	X		X	X			

Observations/Comments

Allow water samples to settle, collect aliquot from clear portion ☐

NWTPH-Dx - Acid wash cleanup ☐
- Silica gel cleanup ☐

Dissolved metal samples were field filtered

Other

580-88480 Chain of Custody

Therm. ID: A2 Cor: 0.0 ° Unc: 0.3 °
Cooler Dsc: Lrg Blue
Packing: Bubble
Cust. Seal: Yes ___ No +
Blue Ice, (Wet) Dry, None
FedEx: ___
UPS: ___
Lab Cour: +
Other: ___

Relinquished by	Received by	Relinquished by	Received by
Signature Cara	Signature B. Gail	Signature	Signature
Printed Name Cara Jernigan	Printed Name B. Gail	Printed Name	Printed Name
Company Landau Associates	Company STL TA	Company	Company
Date 8/15/19 CNT Time 19:39 CNT	Date 8/16/19 Time 1229	Date Time	Date Time

8/16/19 12:29

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

10/2018

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-69175.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 580-88480-1
Address: 11922 East 1st Ave.	Due Date Requested: 8/22/2019			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99206				
Phone: 509-924-9200(Tel) 509-924-9290(Fax)	PO #:			
Email:	WO #:			
Project Name: PSE Factoria UST	Project #: 58014196			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Dx/3550C DRO and RRO	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
PSE-SOIL-DUP (580-88480-1)	8/15/19	09:30 Pacific		Solid			X	X	1	
PSE-B05-S(12-13) (580-88480-3)	8/15/19	10:30 Pacific		Solid			X	X	1	
PSE-B04-S(10-11) (580-88480-5)	8/15/19	11:10 Pacific		Solid			X	X	1	
PSE-B08-S(11-12) (580-88480-7)	8/15/19	13:20 Pacific		Solid			X	X	1	
PSE-B08-S(16-17) (580-88480-10)	8/15/19	15:50 Pacific		Solid			X	X	1	
PSE-B06-S(10-11) (580-88480-12)	8/15/19	16:40 Pacific		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Tom Blankenship	8/22/19	TA-Sea	Myka Goode	8/23/19 1452	TAPC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.4

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-88480-1

Login Number: 88480
List Number: 1
Creator: Vallelunga, Diana L

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-88480-1

Login Number: 88480
List Number: 2
Creator: O'Toole, Maria C

List Source: Eurofins TestAmerica, Spokane
List Creation: 08/23/19 03:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1048130
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	3.4
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Not present
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-88480-1
Client Project/Site: PSE Factoria UST

For:
Landau & Associates, Inc.
2107 South C Street
Tacoma, Washington 98402

Attn: Sierra Mott

Authorized for release by:
9/10/2019 4:26:43 PM

Sheri Cruz, Project Manager I
(253)922-2310
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Job ID: 580-88480-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-88480-1

Comments
Samples 6, 9, and 11 reported on wet weight basis since only stir bar vials and MeOH containers received. We are unable to do dry weight correction on these samples.

Receipt
The samples were received on 8/16/2019 12:29 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

GC/MS VOA
Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-309465 and analytical batch 580-309457 recovered outside control limits for the following analytes: 1,2-Dichloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 580-309457 recovered above the upper control limit for 1,2-Dichloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 580-309457/3).

Method(s) 8260C: The laboratory control sample (LCS) for preparation batch 580-309770 and analytical batch 580-309784 recovered outside control limits for the following analytes: Ethylbenzene, m-Xylene & p-Xylene, o-Xylene, Toluene, Methyl tert-butyl ether and Benzene. A low-level LCS (LLCS), spiked at the reporting limit (RL), was prepared with this batch. The affected target analytes recovered within acceptance limits; therefore, the LLCS demonstrates the analytical system had sufficient sensitivity to detect the compounds had they been present. Since the affected target compounds were not detected in the samples, the data have been reported and qualified.

Method(s) 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 580-309770 and analytical batch 580-309784 recovered outside control limits for the following analytes: Methyl tert-butyl ether and Hexane.

Method(s) 8260C: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-310310 was outside criteria for the following analyte: Benzene. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: PSE-GW-DUP (580-88480-2) and PSE-B08-GW (580-88480-8). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: Surrogate 4-Bromoflourobenzene and/or 1,2-Dichloroethane-d4 recovery for the following samples were outside the upper control limit: PSE-SOIL-DUP (580-88480-1), PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5), PSE-B08-S(11-12) (580-88480-7), (CCVIS 580-309457/3), (CCVL 580-309457/6), (LCS 580-309465/2-A), (LCSD 580-309465/3-A) and (MB 580-309465/1-A). This samples did not contain any chemically associated target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: The internal standard falls low and outside acceptance criteria for the following samples:PSE-SOIL-DUP (580-88480-1), PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5), PSE-B08-S(11-12) (580-88480-7), (BFB 580-309457/2), (CCVIS 580-309457/3), (CCVL 580-309457/6), (LCS 580-309465/2-A), (LCSD 580-309465/3-A) and (MB 580-309465/1-A). The associated samples were rerun and both results are reported. See attached reports with IS recoveries.

Method(s) 8260C: The following samples were analyzed outside of analytical holding time in MeOH to confirm result from direct sparge method. : PSE-SOIL-DUP (580-88480-1) and PSE-B08-S(11-12) (580-88480-7).

Method(s) 8260C: The following samples were analyzed outside of analytical holding time due to system outages. PSE-B01-S(10-11) (580-88480-6), PSE-B02-S(10-11) (580-88480-9), PSE-B08-S(16-17) (580-88480-10), PSE-B03-S(10-11) (580-88480-11) and PSE-B06-S(10-11) (580-88480-12). The instrument that runs this method was down due to a leak in the purge and trap condenser.

Job ID: 580-88480-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

Method(s) 8260C: The following samples were re-analyzed outside of analytical holding time due to the instrument's purge and trap being down due to a leak: PSE-B05-S(12-13) (580-88480-3), and PSE-B04-S(10-11) (580-88480-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA

CCVRT associated with batch 580-309481 was outside (high)the control limits for %D for surrogate Trifluorotoluene (Surr) but was within the %recovery limits. Gasoline and 4-Bromofluorobenzene (Surr) met the control limits. All samples had Trifluorotoluene (Surr) and 4-Bromofluorobenzene (Surr) within the recovery limits there for the data has been reported.(CCVRT 580-309481/6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8011: The low level laboratory control sample (LLCS) for preparation batch 580-309742 and analytical batch 580-310344 recovered outside control limits on the confirmation column only for the following analyte : Ethylene Dibromide. This analyte was biased high in the LLCS. The following samples are affected: PSE-GW-DUP (580-88480-2), PSE-B05-GW (580-88480-4), PSE-B08-GW (580-88480-8), PSE-B02-GW (580-88480-14), Tripblanks (580-88480-15), (LLCS 580-309742/6-A) and (580-88694-B-1-A)

Method(s) 8011: The continuing calibration verification (CCV) associated with batch 580-310344 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: PSE-GW-DUP (580-88480-2), PSE-B05-GW (580-88480-4), PSE-B08-GW (580-88480-8), PSE-B02-GW (580-88480-14), Tripblanks (580-88480-15), (CCV 580-309742/1-A), (CCV 580-309742/2-A) and (580-88694-B-1-A).

Method(s) NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to oil overlap. PSE-B04-S(10-11) (580-88480-5).

Method(s) NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to gasoline overlap. PSE-GW-DUP (580-88480-2) and PSE-B08-GW (580-88480-8)

Method(s) NWTPH-Dx: Detected hydrocarbons in the diesel range appear to be due to biogenic interference. PSE-B02-GW (580-88480-14)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) Moisture: The following sample duplicate (DUP) precision for moisture batch 309118 was outside control limits: IDW-soil-comp (580-88480-13) and (580-88480-A-13 DU). Sample non-homogeneity is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

Method(s) 5035: The following sample had the tare weight rubbed off. The tare weight is illegible. After all analysis is complete thew vial will be emptied and weighed for the tare weight of the vial. PSE-B08-S(11-12) (580-88480-7)

Method(s) 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5) and PSE-B08-S(11-12) (580-88480-7). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 5g. The following samples were above this range: 580-88480-b-3 (6.215g), 580-88480-B-5 (6.219g), and 580-88480-b-7 (6.587g).

Method(s) 5035: The following samples were provided to the laboratory with a significantly different initial weight than that required by the

Job ID: 580-88480-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

reference method: PSE-SOIL-DUP (580-88480-1), PSE-B05-S(12-13) (580-88480-3), PSE-B04-S(10-11) (580-88480-5), PSE-B01-S(10-11) (580-88480-6), PSE-B08-S(11-12) (580-88480-7), PSE-B03-S(10-11) (580-88480-11) and PSE-B06-S(10-11) (580-88480-12). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 5g. The amount provided was above this range. 580-88480-b-1 (6.602g), 580-88480-b-3 (6.226g), 580-88480-b-5 (6.113g), 580-88480-b-6 (6.174g), 580-88480-b-7 (6.9035g), 580-88480-b-11 (7.356g), 580-88480-b-12 (6.718g).

Method(s) 5035: The following sample was provided to the laboratory with a significantly different initial weight than that required by the reference method: PSE-B06-S(10-11) (580-88480-12). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 5g. The amount provided was above this range. 580-88480-b-12 (7.49g)

Method(s) 5035 for MeOH: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PSE-SOIL-DUP (580-88480-1) and PSE-B08-S(11-12) (580-88480-7). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was above this range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-88480-1	PSE-SOIL-DUP	Solid	08/15/19 09:30	08/16/19 12:29	
580-88480-2	PSE-GW-DUP	Water	08/15/19 10:00	08/16/19 12:29	
580-88480-3	PSE-B05-S(12-13)	Solid	08/15/19 10:30	08/16/19 12:29	
580-88480-4	PSE-B05-GW	Water	08/15/19 11:00	08/16/19 12:29	
580-88480-5	PSE-B04-S(10-11)	Solid	08/15/19 11:10	08/16/19 12:29	
580-88480-6	PSE-B01-S(10-11)	Solid	08/15/19 12:10	08/16/19 12:29	
580-88480-7	PSE-B08-S(11-12)	Solid	08/15/19 13:20	08/16/19 12:29	
580-88480-8	PSE-B08-GW	Water	08/15/19 13:47	08/16/19 12:29	
580-88480-9	PSE-B02-S(10-11)	Solid	08/15/19 14:40	08/16/19 12:29	
580-88480-10	PSE-B08-S(16-17)	Solid	08/15/19 15:50	08/16/19 12:29	
580-88480-11	PSE-B03-S(10-11)	Solid	08/15/19 16:10	08/16/19 12:29	
580-88480-12	PSE-B06-S(10-11)	Solid	08/15/19 16:40	08/16/19 12:29	
580-88480-13	IDW-soil-comp	Solid	08/15/19 16:50	08/16/19 12:29	
580-88480-14	PSE-B02-GW	Water	08/15/19 17:31	08/16/19 12:29	
580-88480-15	Tripblanks	Water	08/15/19 00:01	08/16/19 12:29	
580-88480-16	Tripblanks	Solid	08/15/19 00:01	08/16/19 12:29	

Chain-of-Custody Record

LANDAU ASSOCIATES

Seattle/Edmonds (425) 778-0907 | Tacoma (253) 926-2493 | Spokane (509) 327-9737 | Portland (503) 542-1080

Date 8/15/19 Page 1 of 1

Turnaround Time: Standard X Accelerated

Project Name PSE Factoria UST Project No. 130027.010

Project Location/Event Bellevue, WA / Pre-dig investigation

Sampler's Name Servan Alerta & Cara Jernigan

Project Contact Sierra Nutt

Send Results To Snutt & DJorgensen

Special Handling Requirements:

Shipment Method: Lab Pu

Stored on ice: (Yes) No

Testing Parameters

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NW TPH-D (silica)	BTEX (8260)	EDB/EDC/MTBE (8260)	RCRA 8 metals (6020)	EDC/MTBE (8260)	EDB (8011)	Observations/Comments
PSE-Soil-Dup	8/15/19	930	Soil	4	X	X	X	X				
PSE-Gw-Dup	8/15/19	1000	AQ	9	X	X	X			X	X	
PSE-B05-S(12-13)	8/15/19	1030	Soil	2		X	X					
PSE-B05-Gw	8/15/19	1100	AQ	9	X	X	X			X	X	
PSE-B04-S(10-11)	8/15/19	1110	Soil	3		X	X					
PSE-B01-S(10-11)	8/15/19	1210	Soil	3	X		X	X				
PSE-B08-S(11-12)	8/15/19	1320	Soil	4	X	X	X	X				
PSE-B08-Gw	8/15/19	1347	AQ	9	X	X	X			X	X	
PSE-B02-S(10-11)	8/15/19	1440	Soil	3	X		X	X				
PSE-B06-S(16-17)	8/15/19	1550	Soil	4	X	X	X	X				
PSE-B03-S(10-11)	8/15/19	1610	Soil	3	X		X	X				
PSE-B06-S(10-11)	8/15/19	1640	Soil	3		X	X					
IDW-Soil-Comp	8/15/19	1650	Soil	1					X			
PSE-B02-Gw	8/15/19	1731	AQ	9	X	X	X			X	X	
Tripblanks	—	—	AQ	8	X		X		X		X	
Tripblanks	—	—	AQ/Dry	9	X		X	X				

Allow water samples to settle, collect aliquot from clear portion ☐

NWTPH-Dx - Acid wash cleanup ☐

- Silica gel cleanup ☐

Dissolved metal samples were field filtered

Other

580-88480 Chain of Custody

Therm. ID: R2 Cor: 0.0 ° Unc: 0.3 °

Cooler Dsc: Lrg Blue

Packing: Bubble

Cust. Seal: Yes ___ No +

Blue Ice, (Wet) Dry, None

FedEx: ___

UPS: ___

Lab Cour: +

Other: ___

Relinquished by	Received by	Relinquished by	Received by
Signature Cara	Signature B. Gail	Signature	Signature
Printed Name Cara Jernigan	Printed Name B. Gail	Printed Name	Printed Name
Company Landau Associates	Company STL	Company	Company
Date 8/15/19 CNT Time 19:39 CNT	Date 8-16-19 Time 1229	Date Time	Date Time
8/16/19 12:29			

WHITE COPY - Laboratory YELLOW COPY - Project File PINK COPY - Client Representative

9/10/2019

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-69175.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 580-88480-1
Address: 11922 East 1st Ave, ,	Due Date Requested: 8/22/2019			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99206				
Phone: 509-924-9200(Tel) 509-924-9290(Fax)	PO #:			
Email:	WO #:			
Project Name: PSE Factoria UST	Project #: 58014196			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH_Dx/3550C DRO and RRO	Moisture	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
PSE-SOIL-DUP (580-88480-1)	8/15/19	09:30 Pacific		Solid			X	X	1	
PSE-B05-S(12-13) (580-88480-3)	8/15/19	10:30 Pacific		Solid			X	X	1	
PSE-B04-S(10-11) (580-88480-5)	8/15/19	11:10 Pacific		Solid			X	X	1	
PSE-B08-S(11-12) (580-88480-7)	8/15/19	13:20 Pacific		Solid			X	X	1	
PSE-B08-S(16-17) (580-88480-10)	8/15/19	15:50 Pacific		Solid			X	X	1	
PSE-B06-S(10-11) (580-88480-12)	8/15/19	16:40 Pacific		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tom Blankenship	8/22/19	TA-Sea	Myra Goode	8/23/19 1452	TAPC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.4

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-88480-1

Login Number: 88480
List Number: 1
Creator: Vallelunga, Diana L

List Source: Eurofins TestAmerica, Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not requested on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 580-88480-1

Login Number: 88480
List Number: 2
Creator: O'Toole, Maria C

List Source: Eurofins TestAmerica, Spokane
List Creation: 08/23/19 03:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1048130
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	3.4
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Not present
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: PSE-GW-DUP
Date Collected: 08/15/19 10:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**39**		0.50		ug/L			08/20/19 21:45	1
Benzene	**0.27**		0.20		ug/L			08/20/19 21:45	1
Toluene	**1.1**		0.20		ug/L			08/20/19 21:45	1
EDC	ND		0.20		ug/L			08/20/19 21:45	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 21:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*08/20/19 21:45*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/20/19 21:45*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*08/20/19 21:45*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 120*		*08/20/19 21:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*		*08/20/19 21:45*	*1*

Client Sample ID: PSE-B05-GW
Date Collected: 08/15/19 11:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 22:11	1
o-Xylene	ND		0.50		ug/L			08/20/19 22:11	1
Benzene	ND		0.20		ug/L			08/20/19 22:11	1
Toluene	ND		0.20		ug/L			08/20/19 22:11	1
EDC	ND		0.20		ug/L			08/20/19 22:11	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 22:11	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/20/19 22:11*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/20/19 22:11*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*08/20/19 22:11*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/20/19 22:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*08/20/19 22:11*	*1*

Client Sample ID: PSE-B08-GW
Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**41**		0.50		ug/L			08/20/19 22:37	1
Benzene	**0.26**		0.20		ug/L			08/20/19 22:37	1
Toluene	**1.1**		0.20		ug/L			08/20/19 22:37	1
EDC	ND		0.20		ug/L			08/20/19 22:37	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*08/20/19 22:37*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/20/19 22:37*	*1*
Trifluorotoluene (Surr)	*94*		*80 - 120*		*08/20/19 22:37*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*08/20/19 22:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*		*08/20/19 22:37*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: PSE-B02-GW
Date Collected: 08/15/19 17:31
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 23:04	1
o-Xylene	ND		0.50		ug/L			08/20/19 23:04	1
Benzene	**0.20**		0.20		ug/L			08/20/19 23:04	1
Toluene	ND		0.20		ug/L			08/20/19 23:04	1
EDC	ND		0.20		ug/L			08/20/19 23:04	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 23:04	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/20/19 23:04*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*08/20/19 23:04*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*08/20/19 23:04*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/20/19 23:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*08/20/19 23:04*	*1*

Client Sample ID: Tripblanks
Date Collected: 08/15/19 00:01
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 23:31	1
o-Xylene	ND		0.50		ug/L			08/20/19 23:31	1
Benzene	ND		0.20		ug/L			08/20/19 23:31	1
Toluene	ND		0.20		ug/L			08/20/19 23:31	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*08/20/19 23:31*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/20/19 23:31*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*08/20/19 23:31*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*08/20/19 23:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*08/20/19 23:31*	*1*

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

Client Sample ID: PSE-GW-DUP
Date Collected: 08/15/19 10:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	170		25		ug/L			08/23/19 23:47	50
Ethylbenzene	45		10		ug/L			08/23/19 23:47	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*08/23/19 23:47*	*50*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/23/19 23:47*	*50*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*08/23/19 23:47*	*50*
Dibromofluoromethane (Surr)	*93*		*80 - 120*		*08/23/19 23:47*	*50*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*		*08/23/19 23:47*	*50*

Client Sample ID: PSE-B08-GW
Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	150		25		ug/L			08/24/19 00:13	50
Ethylbenzene	39		10		ug/L			08/24/19 00:13	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*08/24/19 00:13*	*50*
Toluene-d8 (Surr)	*99*		*80 - 120*		*08/24/19 00:13*	*50*
Trifluorotoluene (Surr)	*99*		*80 - 120*		*08/24/19 00:13*	*50*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*08/24/19 00:13*	*50*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*		*08/24/19 00:13*	*50*

Method: 8260C - Volatile Organic Compounds by GC/MS

Client Sample ID: PSE-SOIL-DUP
Date Collected: 08/15/19 09:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-1
Matrix: Solid
Percent Solids: 85.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		1.0		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
EDC	ND	*	1.0		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Benzene	ND		2.1		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Methyl tert-butyl ether	ND	H	44		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Benzene	ND	H	33		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
EDC	ND	H	22		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Methyl tert-butyl ether	ND		2.1		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Toluene	ND		10		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
Toluene	ND	H	160		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
EDB	ND	H	22		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Ethylbenzene	**990**	**H**	44		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
Ethylbenzene	**18**		2.1		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
m-Xylene & p-Xylene	**2900**	**H**	220		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
m-Xylene & p-Xylene	**41**		10		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1
o-Xylene	**320**	**H**	66		ug/Kg	☼	09/05/19 08:00	09/05/19 14:57	1
o-Xylene	ND		5.2		ug/Kg	☼	08/16/19 13:00	08/27/19 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*182*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 121*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
4-Bromofluorobenzene (Surr)	*122*	*X*	*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
Toluene-d8 (Surr)	*86*		*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
Trifluorotoluene (Surr)	*109*		*80 - 120*	*08/16/19 13:00*	*08/27/19 15:49*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*	*09/05/19 08:00*	*09/05/19 14:57*	*1*

Client Sample ID: PSE-B05-S(12-13)
Date Collected: 08/15/19 10:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-3
Matrix: Solid
Percent Solids: 84.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.9		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
Benzene	ND	H *	1.9		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
Toluene	ND		9.5		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
Toluene	ND	H *	9.5		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
Ethylbenzene	ND		1.9		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
Ethylbenzene	ND	H *	1.9		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
m-Xylene & p-Xylene	ND		9.5		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
m-Xylene & p-Xylene	ND	H *	9.5		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1
o-Xylene	ND		4.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:13	1
o-Xylene	ND	H *	4.7		ug/Kg	☼	08/16/19 13:00	08/30/19 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*149*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 121*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
4-Bromofluorobenzene (Surr)	*120*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Client Sample ID: PSE-B05-S(12-13)
Date Collected: 08/15/19 10:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-3
Matrix: Solid
Percent Solids: 84.8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:13*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/30/19 01:58*	*1*

Client Sample ID: PSE-B04-S(10-11)
Date Collected: 08/15/19 11:10
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-5
Matrix: Solid
Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
Benzene	ND	H *	1.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
Toluene	ND		8.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
Toluene	ND	H *	8.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
Ethylbenzene	ND		1.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
Ethylbenzene	ND	H *	1.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
m-Xylene & p-Xylene	ND		8.7		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
m-Xylene & p-Xylene	ND	H *	8.8		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1
o-Xylene	ND		4.3		ug/Kg	☼	08/16/19 13:00	08/27/19 16:38	1
o-Xylene	ND	H *	4.4		ug/Kg	☼	08/16/19 13:00	08/30/19 02:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*149*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 121*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
4-Bromofluorobenzene (Surr)	*114*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*
Trifluorotoluene (Surr)	*106*		*80 - 120*	*08/16/19 13:00*	*08/27/19 16:38*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:26*	*1*

Client Sample ID: PSE-B01-S(10-11)
Date Collected: 08/15/19 12:10
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	0.81		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
EDC	ND	H	0.81		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Benzene	ND	H *	1.6		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Methyl tert-butyl ether	ND	H *	1.6		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Toluene	ND	H *	8.1		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
Ethylbenzene	ND	H *	1.6		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
m-Xylene & p-Xylene	ND	H *	8.1		ug/Kg		08/16/19 13:00	08/30/19 02:54	1
o-Xylene	ND	H *	4.0		ug/Kg		08/16/19 13:00	08/30/19 02:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 121*	*08/16/19 13:00*	*08/30/19 02:54*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Client Sample ID: PSE-B01-S(10-11)
Date Collected: 08/15/19 12:10
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-6
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*
Trifluorotoluene (Surr)	*99*		*80 - 120*	*08/16/19 13:00*	*08/30/19 02:54*	*1*

Client Sample ID: PSE-B08-S(11-12)
Date Collected: 08/15/19 13:20
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-7
Matrix: Solid
Percent Solids: 85.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.89		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
EDC	ND	*	0.89		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
Benzene	ND		1.8		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
Methyl tert-butyl ether	ND	H	34		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Benzene	ND	H	26		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
EDC	ND	H	17		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Methyl tert-butyl ether	ND		1.8		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
Toluene	ND		8.9		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
Toluene	ND	H	130		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
EDB	ND	H	17		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Ethylbenzene	**800**	**H**	34		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
Ethylbenzene	**220**	**E**	1.8		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
m-Xylene & p-Xylene	**2400**	**H**	170		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
m-Xylene & p-Xylene	**820**	**E**	8.9		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1
o-Xylene	**320**	**H**	51		ug/Kg	☼	09/05/19 08:00	09/05/19 15:23	1
o-Xylene	**150**	**E**	4.5		ug/Kg	☼	08/16/19 13:00	08/27/19 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Trifluorotoluene (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*148*	*X*	*80 - 121*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 121*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
4-Bromofluorobenzene (Surr)	*124*	*X*	*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
Trifluorotoluene (Surr)	*113*		*80 - 120*	*08/16/19 13:00*	*08/27/19 17:27*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 15:23*	*1*

Client Sample ID: PSE-B02-S(10-11)
Date Collected: 08/15/19 14:40
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	0.91		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
EDC	ND	H	0.91		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Benzene	ND	H *	1.8		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Methyl tert-butyl ether	ND	H *	1.8		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Toluene	ND	H *	9.1		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
Ethylbenzene	ND	H *	1.8		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
m-Xylene & p-Xylene	ND	H *	9.1		ug/Kg		08/16/19 13:00	08/30/19 03:50	1
o-Xylene	ND	H *	4.5		ug/Kg		08/16/19 13:00	08/30/19 03:50	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121	08/16/19 13:00	08/30/19 03:50	1
4-Bromofluorobenzene (Surr)	102		80 - 120	08/16/19 13:00	08/30/19 03:50	1
Dibromofluoromethane (Surr)	105		80 - 120	08/16/19 13:00	08/30/19 03:50	1
Toluene-d8 (Surr)	96		80 - 120	08/16/19 13:00	08/30/19 03:50	1
Trifluorotoluene (Surr)	97		80 - 120	08/16/19 13:00	08/30/19 03:50	1

Client Sample ID: PSE-B08-S(16-17) — **Lab Sample ID: 580-88480-10**
Date Collected: 08/15/19 15:50 — **Matrix: Solid**
Date Received: 08/16/19 12:29 — **Percent Solids: 86.6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	1.2		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
EDC	ND	H	1.2		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Benzene	ND	H *	2.4		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Methyl tert-butyl ether	ND	H *	2.4		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Toluene	ND	H *	12		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
Ethylbenzene	ND	H *	2.4		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
m-Xylene & p-Xylene	ND	H *	12		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1
o-Xylene	ND	H *	5.9		ug/Kg	☼	08/16/19 13:00	08/30/19 04:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121	08/16/19 13:00	08/30/19 04:18	1
4-Bromofluorobenzene (Surr)	103		80 - 120	08/16/19 13:00	08/30/19 04:18	1
Dibromofluoromethane (Surr)	106		80 - 120	08/16/19 13:00	08/30/19 04:18	1
Toluene-d8 (Surr)	98		80 - 120	08/16/19 13:00	08/30/19 04:18	1
Trifluorotoluene (Surr)	103		80 - 120	08/16/19 13:00	08/30/19 04:18	1

Client Sample ID: PSE-B03-S(10-11) — **Lab Sample ID: 580-88480-11**
Date Collected: 08/15/19 16:10 — **Matrix: Solid**
Date Received: 08/16/19 12:29

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND	H	0.68		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
EDC	ND	H	0.68		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Benzene	ND	H *	1.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Methyl tert-butyl ether	ND	H *	1.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Toluene	ND	H *	6.8		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
Ethylbenzene	ND	H *	1.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
m-Xylene & p-Xylene	ND	H *	6.8		ug/Kg		08/16/19 13:00	08/30/19 04:46	1
o-Xylene	ND	H *	3.4		ug/Kg		08/16/19 13:00	08/30/19 04:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121	08/16/19 13:00	08/30/19 04:46	1
4-Bromofluorobenzene (Surr)	101		80 - 120	08/16/19 13:00	08/30/19 04:46	1
Dibromofluoromethane (Surr)	102		80 - 120	08/16/19 13:00	08/30/19 04:46	1
Toluene-d8 (Surr)	99		80 - 120	08/16/19 13:00	08/30/19 04:46	1
Trifluorotoluene (Surr)	101		80 - 120	08/16/19 13:00	08/30/19 04:46	1

Client Sample ID: PSE-B06-S(10-11) — **Lab Sample ID: 580-88480-12**
Date Collected: 08/15/19 16:40 — **Matrix: Solid**
Date Received: 08/16/19 12:29 — **Percent Solids: 88.5**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H *	1.7		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1
Toluene	ND	H *	8.4		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1
Ethylbenzene	ND	H *	1.7		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Client Sample ID: PSE-B06-S(10-11)
Date Collected: 08/15/19 16:40
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-12
Matrix: Solid
Percent Solids: 88.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND	H *	8.4		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1
o-Xylene	ND	H *	4.2		ug/Kg	☼	08/16/19 13:00	08/30/19 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 121*	*08/16/19 13:00*	*08/30/19 05:14*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*	*08/16/19 13:00*	*08/30/19 05:14*	*1*

Client Sample ID: Tripblanks
Date Collected: 08/15/19 00:01
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDC	ND		1.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Benzene	ND	*	2.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Methyl tert-butyl ether	ND	*	2.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Toluene	ND	*	10		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
Ethylbenzene	ND	*	2.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
m-Xylene & p-Xylene	ND	*	10		ug/Kg		08/16/19 13:00	08/29/19 21:47	1
o-Xylene	ND	*	5.0		ug/Kg		08/16/19 13:00	08/29/19 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 121*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*
Trifluorotoluene (Surr)	*104*		*80 - 120*	*08/16/19 13:00*	*08/29/19 21:47*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Client Sample ID: PSE-SOIL-DUP
Date Collected: 08/15/19 09:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-1
Matrix: Solid
Percent Solids: 85.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	61		5.5		mg/Kg	☼	08/26/19 12:31	08/27/19 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*50 - 150*	*08/26/19 12:31*	*08/27/19 03:26*	*1*

Client Sample ID: PSE-GW-DUP
Date Collected: 08/15/19 10:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	2.3		0.25		mg/L			08/27/19 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*50 - 150*		*08/27/19 17:13*	*1*
Trifluorotoluene (Surr)	*139*		*50 - 150*		*08/27/19 17:13*	*1*

Client Sample ID: PSE-B05-GW
Date Collected: 08/15/19 11:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/27/19 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*		*08/27/19 17:43*	*1*
Trifluorotoluene (Surr)	*111*		*50 - 150*		*08/27/19 17:43*	*1*

Client Sample ID: PSE-B01-S(10-11)
Date Collected: 08/15/19 12:10
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		3.9		mg/Kg		08/26/19 12:31	08/27/19 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*	*08/26/19 12:31*	*08/27/19 03:50*	*1*

Client Sample ID: PSE-B08-S(11-12)
Date Collected: 08/15/19 13:20
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-7
Matrix: Solid
Percent Solids: 85.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	85		7.2		mg/Kg	☼	08/26/19 12:31	08/27/19 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*	*08/26/19 12:31*	*08/27/19 04:13*	*1*

Client Sample ID: PSE-B08-GW
Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	2.2		0.25		mg/L			08/27/19 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*50 - 150*		*08/27/19 18:13*	*1*
Trifluorotoluene (Surr)	*109*		*50 - 150*		*08/27/19 18:13*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Client Sample ID: PSE-B02-S(10-11)
Date Collected: 08/15/19 14:40
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		4.7		mg/Kg		08/26/19 12:31	08/27/19 04:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*50 - 150*	*08/26/19 12:31*	*08/27/19 04:39*	*1*

Client Sample ID: PSE-B08-S(16-17)
Date Collected: 08/15/19 15:50
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-10
Matrix: Solid
Percent Solids: 86.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		6.2		mg/Kg	☼	08/26/19 12:31	08/27/19 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*	*08/26/19 12:31*	*08/27/19 05:03*	*1*

Client Sample ID: PSE-B03-S(10-11)
Date Collected: 08/15/19 16:10
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		3.5		mg/Kg		08/26/19 12:31	08/27/19 05:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*	*08/26/19 12:31*	*08/27/19 05:26*	*1*

Client Sample ID: PSE-B02-GW
Date Collected: 08/15/19 17:31
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/28/19 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*50 - 150*		*08/28/19 13:22*	*1*
Trifluorotoluene (Surr)	*71*		*50 - 150*		*08/28/19 13:22*	*1*

Client Sample ID: Tripblanks
Date Collected: 08/15/19 00:01
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/27/19 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*50 - 150*		*08/27/19 16:43*	*1*
Trifluorotoluene (Surr)	*109*		*50 - 150*		*08/27/19 16:43*	*1*

Client Sample ID: Tripblanks
Date Collected: 08/15/19 00:01
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		5.0		mg/Kg		08/26/19 12:31	08/26/19 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*50 - 150*	*08/26/19 12:31*	*08/26/19 22:59*	*1*

Method: 8011 - EDB and DBCP in Water by Microextraction

Client Sample ID: PSE-GW-DUP
Date Collected: 08/15/19 10:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*77*		*60 - 140*	*08/29/19 13:46*	*09/05/19 18:25*	*1*

Client Sample ID: PSE-B05-GW
Date Collected: 08/15/19 11:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.0099		ug/L		08/29/19 13:46	09/05/19 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*92*		*60 - 140*	*08/29/19 13:46*	*09/05/19 18:41*	*1*

Client Sample ID: PSE-B08-GW
Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*111*		*60 - 140*	*08/29/19 13:46*	*09/05/19 18:56*	*1*

Client Sample ID: PSE-B02-GW
Date Collected: 08/15/19 17:31
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*94*		*60 - 140*	*08/29/19 13:46*	*09/05/19 19:13*	*1*

Client Sample ID: Tripblanks
Date Collected: 08/15/19 00:01
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND	*	0.010		ug/L		08/29/19 13:46	09/05/19 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*96*		*60 - 140*	*08/29/19 13:46*	*09/05/19 19:29*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Client Sample ID: PSE-SOIL-DUP
Date Collected: 08/15/19 09:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-1
Matrix: Solid
Percent Solids: 85.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**18**		11		mg/Kg	☼	08/28/19 08:14	08/28/19 17:06	1
Oil Range Organics (C25-C36)	ND		28		mg/Kg	☼	08/28/19 08:14	08/28/19 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:06*	*1*
n-Triacontane-d62	*100*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:06*	*1*

Client Sample ID: PSE-GW-DUP
Date Collected: 08/15/19 10:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**0.44**		0.24		mg/L		08/28/19 14:13	08/29/19 01:39	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/29/19 01:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:39*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:39*	*1*

Client Sample ID: PSE-B05-S(12-13)
Date Collected: 08/15/19 10:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-3
Matrix: Solid
Percent Solids: 84.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		11		mg/Kg	☼	08/28/19 08:14	08/28/19 17:28	1
Oil Range Organics (C25-C36)	ND		29		mg/Kg	☼	08/28/19 08:14	08/28/19 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:28*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:28*	*1*

Client Sample ID: PSE-B05-GW
Date Collected: 08/15/19 11:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		0.24		mg/L		08/28/19 14:13	08/29/19 01:58	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/29/19 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*83*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:58*	*1*
n-Triacontane-d62	*76*		*50 - 150*	*08/28/19 14:13*	*08/29/19 01:58*	*1*

Client Sample ID: PSE-B04-S(10-11)
Date Collected: 08/15/19 11:10
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-5
Matrix: Solid
Percent Solids: 92.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**20**		11		mg/Kg	☼	08/28/19 08:14	08/28/19 17:47	1
Oil Range Organics (C25-C36)	**140**		26		mg/Kg	☼	08/28/19 08:14	08/28/19 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:47*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*08/28/19 08:14*	*08/28/19 17:47*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Client Sample ID: PSE-B08-S(11-12)
Date Collected: 08/15/19 13:20
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-7
Matrix: Solid
Percent Solids: 85.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**11**		11		mg/Kg	☼	08/28/19 08:14	08/28/19 18:07	1
Oil Range Organics (C25-C36)	ND		29		mg/Kg	☼	08/28/19 08:14	08/28/19 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*91*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:07*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:07*	*1*

Client Sample ID: PSE-B08-GW
Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**0.39**		0.24		mg/L		08/28/19 14:13	08/29/19 02:18	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/29/19 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:18*	*1*
n-Triacontane-d62	*78*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:18*	*1*

Client Sample ID: PSE-B08-S(16-17)
Date Collected: 08/15/19 15:50
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-10
Matrix: Solid
Percent Solids: 86.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		11		mg/Kg	☼	08/28/19 08:14	08/28/19 18:27	1
Oil Range Organics (C25-C36)	ND		28		mg/Kg	☼	08/28/19 08:14	08/28/19 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:27*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:27*	*1*

Client Sample ID: PSE-B06-S(10-11)
Date Collected: 08/15/19 16:40
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-12
Matrix: Solid
Percent Solids: 88.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		11		mg/Kg	☼	08/28/19 08:14	08/28/19 18:46	1
Oil Range Organics (C25-C36)	ND		28		mg/Kg	☼	08/28/19 08:14	08/28/19 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:46*	*1*
n-Triacontane-d62	*89*		*50 - 150*	*08/28/19 08:14*	*08/28/19 18:46*	*1*

Client Sample ID: PSE-B02-GW
Date Collected: 08/15/19 17:31
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	**0.26**		0.24		mg/L		08/28/19 14:13	08/29/19 02:38	1
Oil Range Organics (C25-C36)	**0.55**		0.40		mg/L		08/28/19 14:13	08/29/19 02:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:38*	*1*
n-Triacontane-d62	*82*		*50 - 150*	*08/28/19 14:13*	*08/29/19 02:38*	*1*

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method: 6010C - Metals (ICP)

Client Sample ID: IDW-soil-comp
Date Collected: 08/15/19 16:50
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-13
Matrix: Solid
Percent Solids: 91.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.4**		2.4		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Barium	**48**		0.40		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Cadmium	ND		0.81		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Chromium	**32**		1.0		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Lead	**2.8**		1.2		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Selenium	ND		4.0		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1
Silver	ND		2.0		mg/Kg	☼	08/24/19 08:31	08/26/19 15:52	1

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Method: 7471A - Mercury (CVAA)

Client Sample ID: IDW-soil-comp
Date Collected: 08/15/19 16:50
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-13
Matrix: Solid
Percent Solids: 91.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.026		mg/Kg	☼	08/29/19 13:51	08/29/19 19:29	1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-308876/6
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/20/19 15:27	1
o-Xylene	ND		0.50		ug/L			08/20/19 15:27	1
Benzene	ND		0.20		ug/L			08/20/19 15:27	1
Toluene	ND		0.20		ug/L			08/20/19 15:27	1
EDC	ND		0.20		ug/L			08/20/19 15:27	1
Ethylbenzene	ND		0.20		ug/L			08/20/19 15:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/20/19 15:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*80 - 120*		*08/20/19 15:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*08/20/19 15:27*	*1*
Trifluorotoluene (Surr)	*113*		*80 - 120*		*08/20/19 15:27*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*08/20/19 15:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*08/20/19 15:27*	*1*

Lab Sample ID: LCS 580-308876/4
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	5.00	5.03		ug/L		101	78 - 130
o-Xylene	5.00	4.87		ug/L		97	80 - 139
Benzene	5.00	5.28		ug/L		106	73 - 133
Toluene	5.00	5.31		ug/L		106	80 - 126
EDC	5.00	4.71		ug/L		94	74 - 130
Ethylbenzene	5.00	4.84		ug/L		97	80 - 130
Methyl tert-butyl ether	5.00	3.89		ug/L		78	60 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*

Lab Sample ID: LCSD 580-308876/5
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene	5.00	4.90		ug/L		98	78 - 130	3	20
o-Xylene	5.00	4.86		ug/L		97	80 - 139	0	20
Benzene	5.00	5.20		ug/L		104	73 - 133	1	20
Toluene	5.00	5.31		ug/L		106	80 - 126	0	20
EDC	5.00	4.87		ug/L		97	74 - 130	3	15
Ethylbenzene	5.00	4.77		ug/L		95	80 - 130	2	20
Methyl tert-butyl ether	5.00	4.04		ug/L		81	60 - 150	4	25

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-308876/5
Matrix: Water
Analysis Batch: 308876

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*

Lab Sample ID: MB 580-309232/7
Matrix: Water
Analysis Batch: 309232

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.50		ug/L			08/23/19 19:48	1
o-Xylene	ND		0.50		ug/L			08/23/19 19:48	1
Benzene	ND		0.20		ug/L			08/23/19 19:48	1
Toluene	ND		0.20		ug/L			08/23/19 19:48	1
EDC	ND		0.20		ug/L			08/23/19 19:48	1
Ethylbenzene	ND		0.20		ug/L			08/23/19 19:48	1
Methyl tert-butyl ether	ND		0.30		ug/L			08/23/19 19:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*08/23/19 19:48*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*08/23/19 19:48*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*08/23/19 19:48*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*08/23/19 19:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*		*08/23/19 19:48*	*1*

Lab Sample ID: LCS 580-309232/4
Matrix: Water
Analysis Batch: 309232

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	5.00	5.24		ug/L		105	78 - 130
o-Xylene	5.00	5.31		ug/L		106	80 - 139
Benzene	5.00	5.46		ug/L		109	73 - 133
Toluene	5.00	5.47		ug/L		109	80 - 126
EDC	5.00	4.80		ug/L		96	74 - 130
Ethylbenzene	5.00	4.97		ug/L		99	80 - 130
Methyl tert-butyl ether	5.00	4.60		ug/L		92	60 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-309232/5
Matrix: Water
Analysis Batch: 309232

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene			5.00	5.61		ug/L		112	78 - 130	7	20
o-Xylene			5.00	5.71		ug/L		114	80 - 139	7	20
Benzene			5.00	5.66		ug/L		113	73 - 133	4	20
Toluene			5.00	5.94		ug/L		119	80 - 126	8	20
EDC			5.00	4.99		ug/L		100	74 - 130	4	15
Ethylbenzene			5.00	5.36		ug/L		107	80 - 130	8	20
Methyl tert-butyl ether			5.00	4.46		ug/L		89	60 - 150	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*88*		*80 - 120*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-309465/1-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309465

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
EDC	ND		1.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
Methyl tert-butyl ether	ND		2.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
Toluene	ND		10		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
EDB	ND		1.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
Ethylbenzene	ND		2.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
m-Xylene & p-Xylene	ND		10		ug/Kg		08/27/19 09:30	08/27/19 12:32	1
o-Xylene	ND		5.0		ug/Kg		08/27/19 09:30	08/27/19 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*154*	*X*	*80 - 121*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
4-Bromofluorobenzene (Surr)	*116*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
Trifluorotoluene (Surr)	*108*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*	*08/27/19 09:30*	*08/27/19 12:32*	*1*

Lab Sample ID: LCS 580-309465/2-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309465

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			20.0	18.1		ug/Kg		90	72 - 135
EDC			20.0	28.4	*	ug/Kg		142	68 - 132
Methyl tert-butyl ether			20.0	22.2		ug/Kg		111	68 - 132
Toluene			20.0	18.2		ug/Kg		91	75 - 137
EDB			20.0	19.3		ug/Kg		97	77 - 123

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-309465/2-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309465

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethylbenzene			20.0	18.9		ug/Kg		94	80 - 135		
m-Xylene & p-Xylene			20.0	19.4		ug/Kg		97	80 - 132		
o-Xylene			20.0	19.8		ug/Kg		99	80 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*144*	*X*	*80 - 121*
4-Bromofluorobenzene (Surr)	*115*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
Trifluorotoluene (Surr)	*114*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*

Lab Sample ID: LCSD 580-309465/3-A
Matrix: Solid
Analysis Batch: 309457

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309465

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			20.0	18.7		ug/Kg		94	72 - 135	4	15
EDC			20.0	27.5	*	ug/Kg		138	68 - 132	3	17
Methyl tert-butyl ether			20.0	25.7		ug/Kg		129	68 - 132	15	25
Toluene			20.0	17.8		ug/Kg		89	75 - 137	2	20
EDB			20.0	18.0		ug/Kg		90	77 - 123	7	20
Ethylbenzene			20.0	19.1		ug/Kg		96	80 - 135	1	16
m-Xylene & p-Xylene			20.0	20.0		ug/Kg		100	80 - 132	3	20
o-Xylene			20.0	21.2		ug/Kg		106	80 - 125	7	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*146*	*X*	*80 - 121*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
Trifluorotoluene (Surr)	*118*		*80 - 120*
Dibromofluoromethane (Surr)	*117*		*80 - 120*

Lab Sample ID: MB 580-309770/1-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
EDC	ND		1.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
Methyl tert-butyl ether	ND		2.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
Toluene	ND		10		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
EDB	ND		1.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
Ethylbenzene	ND		2.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
m-Xylene & p-Xylene	ND		10		ug/Kg		08/29/19 16:50	08/29/19 20:51	1
o-Xylene	ND		5.0		ug/Kg		08/29/19 16:50	08/29/19 20:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 121*	*08/29/19 16:50*	*08/29/19 20:51*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-309770/1-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309770

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120	08/29/19 16:50	08/29/19 20:51	1
Toluene-d8 (Surr)	100		80 - 120	08/29/19 16:50	08/29/19 20:51	1
Trifluorotoluene (Surr)	98		80 - 120	08/29/19 16:50	08/29/19 20:51	1
Dibromofluoromethane (Surr)	104		80 - 120	08/29/19 16:50	08/29/19 20:51	1

Lab Sample ID: LCS 580-309770/2-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	20.0	15.6		ug/Kg		78	72 - 135
EDC	20.0	18.7		ug/Kg		94	68 - 132
Methyl tert-butyl ether	20.0	16.5		ug/Kg		82	68 - 132
Toluene	20.0	13.6	*	ug/Kg		68	75 - 137
EDB	20.0	18.4		ug/Kg		92	77 - 123
Ethylbenzene	20.0	13.1	*	ug/Kg		66	80 - 135
m-Xylene & p-Xylene	20.0	12.8	*	ug/Kg		64	80 - 132
o-Xylene	20.0	13.5	*	ug/Kg		67	80 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	121		80 - 121
4-Bromofluorobenzene (Surr)	95		80 - 120
Toluene-d8 (Surr)	92		80 - 120
Trifluorotoluene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	112		80 - 120

Lab Sample ID: LCSD 580-309770/3-A
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309770

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.0	13.6	*	ug/Kg		68	72 - 135	13	15
EDC	20.0	20.1		ug/Kg		101	68 - 132	7	17
Methyl tert-butyl ether	20.0	7.60	*	ug/Kg		38	68 - 132	74	25
Toluene	20.0	15.8		ug/Kg		79	75 - 137	15	20
EDB	20.0	21.5		ug/Kg		107	77 - 123	15	20
Ethylbenzene	20.0	15.0	*	ug/Kg		75	80 - 135	13	16
m-Xylene & p-Xylene	20.0	15.5	*	ug/Kg		77	80 - 132	19	20
o-Xylene	20.0	15.3	*	ug/Kg		77	80 - 125	13	14

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	109		80 - 120
Trifluorotoluene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LLCS 580-309784/4
Matrix: Solid
Analysis Batch: 309784

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	1.00	1.09	J	ug/Kg		109	72 - 135
EDC	1.00	1.05		ug/Kg		105	68 - 132
Methyl tert-butyl ether	1.00	1.05	J	ug/Kg		105	68 - 132
Toluene	1.00	ND		ug/Kg		117	75 - 137
EDB	1.00	1.19		ug/Kg		119	77 - 123
Ethylbenzene	1.00	1.17	J	ug/Kg		117	80 - 135
m-Xylene & p-Xylene	1.00	ND		ug/Kg		120	80 - 132
o-Xylene	1.00	1.17	J	ug/Kg		117	80 - 125

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 121*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*80 - 120*

Lab Sample ID: MB 580-310306/1-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 310306

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		30		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
EDC	ND		20		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
Methyl tert-butyl ether	ND		40		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
Toluene	ND		150		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
EDB	ND		20		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
Ethylbenzene	ND		40		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
m-Xylene & p-Xylene	ND		200		ug/Kg		09/05/19 08:00	09/05/19 13:41	1
o-Xylene	ND		60		ug/Kg		09/05/19 08:00	09/05/19 13:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 121*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*	*09/05/19 08:00*	*09/05/19 13:41*	*1*

Lab Sample ID: LCS 580-310306/2-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 310306

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	800	802		ug/Kg		100	72 - 135
EDC	800	726		ug/Kg		91	68 - 132
Methyl tert-butyl ether	800	749		ug/Kg		94	68 - 132
Toluene	800	852		ug/Kg		106	75 - 137
EDB	800	827		ug/Kg		103	77 - 123
Ethylbenzene	800	868		ug/Kg		109	80 - 135

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-310306/2-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 310306

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	800	844		ug/Kg		105	80 - 132
o-Xylene	800	819		ug/Kg		102	80 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 121*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*
Trifluorotoluene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*

Lab Sample ID: LCSD 580-310306/3-A
Matrix: Solid
Analysis Batch: 310310

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 310306

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	800	812		ug/Kg		101	72 - 135	1	15
EDC	800	724		ug/Kg		90	68 - 132	0	17
Methyl tert-butyl ether	800	745		ug/Kg		93	68 - 132	0	25
Toluene	800	873		ug/Kg		109	75 - 137	3	20
EDB	800	848		ug/Kg		106	77 - 123	3	20
Ethylbenzene	800	872		ug/Kg		109	80 - 135	0	16
m-Xylene & p-Xylene	800	868		ug/Kg		109	80 - 132	3	20
o-Xylene	800	832		ug/Kg		104	80 - 125	2	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 121*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*104*		*80 - 120*
Trifluorotoluene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-309347/1-A
Matrix: Solid
Analysis Batch: 309383

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309347

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		5.0		mg/Kg		08/26/19 12:31	08/26/19 21:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*	*08/26/19 12:31*	*08/26/19 21:46*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-309347/2-A
Matrix: Solid
Analysis Batch: 309383

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309347

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics C6-C12			40.0	36.6		mg/Kg		91	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*50 - 150*

Lab Sample ID: LCSD 580-309347/3-A
Matrix: Solid
Analysis Batch: 309383

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309347

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics C6-C12			40.0	37.6		mg/Kg		94	80 - 120	3	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*50 - 150*

Lab Sample ID: MB 580-309481/7
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/27/19 13:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*50 - 150*		*08/27/19 13:42*	*1*
Trifluorotoluene (Surr)	*110*		*50 - 150*		*08/27/19 13:42*	*1*

Lab Sample ID: LCS 580-309481/8
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics C6-C12			1.00	0.908		mg/L		91	79 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*50 - 150*
Trifluorotoluene (Surr)	*108*		*50 - 150*

Lab Sample ID: LCSD 580-309481/9
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics C6-C12			1.00	0.895		mg/L		90	79 - 120	1	10

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-309481/9
Matrix: Water
Analysis Batch: 309481

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		50 - 150
Trifluorotoluene (Surr)	103		50 - 150

Lab Sample ID: MB 580-309560/6
Matrix: Water
Analysis Batch: 309560

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics C6-C12	ND		0.25		mg/L			08/28/19 11:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		50 - 150		08/28/19 11:20	1
Trifluorotoluene (Surr)	98		50 - 150		08/28/19 11:20	1

Lab Sample ID: LCS 580-309560/7
Matrix: Water
Analysis Batch: 309560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics C6-C12			1.00	0.891		mg/L		89	79 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		50 - 150
Trifluorotoluene (Surr)	100		50 - 150

Lab Sample ID: LCSD 580-309560/8
Matrix: Water
Analysis Batch: 309560

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics C6-C12			1.00	0.906		mg/L		91	79 - 120	2	10

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		50 - 150
Trifluorotoluene (Surr)	99		50 - 150

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 580-309742/3-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309742

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylene Dibromide	ND		0.010		ug/L		08/29/19 13:45	09/05/19 17:19	1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: MB 580-309742/3-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309742

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	99		60 - 140	08/29/19 13:45	09/05/19 17:19	1

Lab Sample ID: LCS 580-309742/4-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.0571	0.0535		ug/L		94	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dibromopropane	94		60 - 140

Lab Sample ID: LCSD 580-309742/5-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309742

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide	0.0571	0.0655		ug/L		115	60 - 140	20	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dibromopropane	81		60 - 140

Lab Sample ID: LLCS 580-309742/6-A
Matrix: Water
Analysis Batch: 310344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309742

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylene Dibromide	0.0114	0.0173	*	ug/L		152	60 - 140

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
1,2-Dibromopropane	71		60 - 140

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-23794/1-A
Matrix: Solid
Analysis Batch: 23804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23794

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		10		mg/Kg		08/28/19 08:14	08/28/19 12:31	1
Oil Range Organics (C25-C36)	ND		25		mg/Kg		08/28/19 08:14	08/28/19 12:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	08/28/19 08:14	08/28/19 12:31	1
n-Triacontane-d62	79		50 - 150	08/28/19 08:14	08/28/19 12:31	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 590-23794/2-A
Matrix: Solid
Analysis Batch: 23804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23794

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C25]			66.7	67.8		mg/Kg		102	50 - 150		
Oil Range Organics (C25-C36)			66.7	73.1		mg/Kg		110	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*101*		*50 - 150*
n-Triacontane-d62	*98*		*50 - 150*

Lab Sample ID: MB 590-23810/1-A
Matrix: Water
Analysis Batch: 23804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C25]	ND		0.24		mg/L		08/28/19 14:13	08/28/19 23:41	1
Oil Range Organics (C25-C36)	ND		0.40		mg/L		08/28/19 14:13	08/28/19 23:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*89*		*50 - 150*	*08/28/19 14:13*	*08/28/19 23:41*	*1*
n-Triacontane-d62	*76*		*50 - 150*	*08/28/19 14:13*	*08/28/19 23:41*	*1*

Lab Sample ID: LCS 590-23810/2-A
Matrix: Water
Analysis Batch: 23804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23810

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C25]			1.60	1.53		mg/L		95	50 - 150		
Oil Range Organics (C25-C36)			1.60	1.74		mg/L		109	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*95*		*50 - 150*
n-Triacontane-d62	*95*		*50 - 150*

Lab Sample ID: LCSD 590-23810/3-A
Matrix: Water
Analysis Batch: 23804

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23810

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C25]			1.60	1.53		mg/L		96	50 - 150	0	25
Oil Range Organics (C25-C36)			1.60	1.73		mg/L		108	50 - 150	0	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*
n-Triacontane-d62	*93*		*50 - 150*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 580-309252/22-A
Matrix: Solid
Analysis Batch: 309449

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309252

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.0		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Barium	ND		0.50		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Cadmium	ND		1.0		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Chromium	ND		1.3		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Lead	ND		1.5		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Selenium	ND		5.0		mg/Kg		08/24/19 08:31	08/26/19 14:32	1
Silver	ND		2.5		mg/Kg		08/24/19 08:31	08/26/19 14:32	1

Lab Sample ID: LCS 580-309252/23-A
Matrix: Solid
Analysis Batch: 309449

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309252

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	51.5		mg/Kg		103	80 - 120
Barium	50.0	53.6		mg/Kg		107	80 - 120
Cadmium	50.0	51.8		mg/Kg		104	80 - 120
Chromium	50.0	56.5		mg/Kg		113	80 - 120
Lead	50.0	53.8		mg/Kg		108	80 - 120
Selenium	50.0	52.0		mg/Kg		104	80 - 120
Silver	50.0	51.4		mg/Kg		103	80 - 120

Lab Sample ID: LCSD 580-309252/24-A
Matrix: Solid
Analysis Batch: 309449

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309252

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	49.2		mg/Kg		98	80 - 120	5	20
Barium	50.0	51.1		mg/Kg		102	80 - 120	5	20
Cadmium	50.0	49.9		mg/Kg		100	80 - 120	4	20
Chromium	50.0	54.4		mg/Kg		109	80 - 120	4	20
Lead	50.0	51.8		mg/Kg		104	80 - 120	4	20
Selenium	50.0	49.6		mg/Kg		99	80 - 120	5	20
Silver	50.0	54.1		mg/Kg		108	80 - 120	5	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-309743/14-A
Matrix: Solid
Analysis Batch: 309797

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 309743

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.030		mg/Kg		08/29/19 13:51	08/29/19 18:42	1

Lab Sample ID: LCS 580-309743/15-A
Matrix: Solid
Analysis Batch: 309797

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 309743

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.181		mg/Kg		109	80 - 120

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-309743/16-A
Matrix: Solid
Analysis Batch: 309797

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 309743

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury			0.167	0.172		mg/Kg		103	80 - 120	5	20

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: PSE-SOIL-DUP
Date Collected: 08/15/19 09:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-SOIL-DUP
Date Collected: 08/15/19 09:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-1
Matrix: Solid
Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310306	09/05/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	310310	09/05/19 14:57	ASJ	TAL SEA
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 15:49	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 03:26	DCV	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 17:06	NMI	TAL SPK

Client Sample ID: PSE-GW-DUP
Date Collected: 08/15/19 10:00
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 21:45	DSO	TAL SEA
Total/NA	Analysis	8260C	DL	50	309232	08/23/19 23:47	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 17:13	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 18:25	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 01:39	NMI	TAL SPK

Client Sample ID: PSE-B05-S(12-13)
Date Collected: 08/15/19 10:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B05-S(12-13)
Date Collected: 08/15/19 10:30
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-3
Matrix: Solid
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 16:13	APR	TAL SEA
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 01:58	APR	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: PSE-B05-S(12-13)

Lab Sample ID: 580-88480-3
Date Collected: 08/15/19 10:30
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 17:28	NMI	TAL SPK

Client Sample ID: PSE-B05-GW

Lab Sample ID: 580-88480-4
Date Collected: 08/15/19 11:00
Matrix: Water
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 22:11	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 17:43	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 18:41	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 01:58	NMI	TAL SPK

Client Sample ID: PSE-B04-S(10-11)

Lab Sample ID: 580-88480-5
Date Collected: 08/15/19 11:10
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B04-S(10-11)

Lab Sample ID: 580-88480-5
Date Collected: 08/15/19 11:10
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 16:38	APR	TAL SEA
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 02:26	APR	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 17:47	NMI	TAL SPK

Client Sample ID: PSE-B01-S(10-11)

Lab Sample ID: 580-88480-6
Date Collected: 08/15/19 12:10
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 02:54	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 03:50	DCV	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: PSE-B08-S(11-12)
Date Collected: 08/15/19 13:20
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B08-S(11-12)
Date Collected: 08/15/19 13:20
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-7
Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310306	09/05/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	310310	09/05/19 15:23	ASJ	TAL SEA
Total/NA	Prep	5035			309465	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309457	08/27/19 17:27	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 04:13	DCV	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 18:07	NMI	TAL SPK

Client Sample ID: PSE-B08-GW
Date Collected: 08/15/19 13:47
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 22:37	DSO	TAL SEA
Total/NA	Analysis	8260C	DL	50	309232	08/24/19 00:13	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 18:13	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 18:56	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 02:18	NMI	TAL SPK

Client Sample ID: PSE-B02-S(10-11)
Date Collected: 08/15/19 14:40
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 03:50	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 04:39	DCV	TAL SEA

Client Sample ID: PSE-B08-S(16-17)
Date Collected: 08/15/19 15:50
Date Received: 08/16/19 12:29

Lab Sample ID: 580-88480-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: PSE-B08-S(16-17)

Lab Sample ID: 580-88480-10
Date Collected: 08/15/19 15:50
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 04:18	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 05:03	DCV	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 18:27	NMI	TAL SPK

Client Sample ID: PSE-B03-S(10-11)

Lab Sample ID: 580-88480-11
Date Collected: 08/15/19 16:10
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 04:46	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/27/19 05:26	DCV	TAL SEA

Client Sample ID: PSE-B06-S(10-11)

Lab Sample ID: 580-88480-12
Date Collected: 08/15/19 16:40
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23779	08/27/19 09:35	CWD	TAL SPK

Client Sample ID: PSE-B06-S(10-11)

Lab Sample ID: 580-88480-12
Date Collected: 08/15/19 16:40
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 88.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/30/19 05:14	APR	TAL SEA
Total/NA	Prep	3550C			23794	08/28/19 08:14	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/28/19 18:46	NMI	TAL SPK

Client Sample ID: IDW-soil-comp

Lab Sample ID: 580-88480-13
Date Collected: 08/15/19 16:50
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	309118	08/22/19 14:13	ERZ	TAL SEA

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Client Sample ID: IDW-soil-comp
Lab Sample ID: 580-88480-13
Date Collected: 08/15/19 16:50
Matrix: Solid
Date Received: 08/16/19 12:29
Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			309252	08/24/19 08:31	JCP	TAL SEA
Total/NA	Analysis	6010C		1	309449	08/26/19 15:52	T1H	TAL SEA
Total/NA	Prep	7471A			309743	08/29/19 13:51	ART	TAL SEA
Total/NA	Analysis	7471A		1	309797	08/29/19 19:29	T1H	TAL SEA

Client Sample ID: PSE-B02-GW
Lab Sample ID: 580-88480-14
Date Collected: 08/15/19 17:31
Matrix: Water
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 23:04	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309560	08/28/19 13:22	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 19:13	CJ	TAL SEA
Total/NA	Prep	3510C			23810	08/28/19 14:13	CWD	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1	23804	08/29/19 02:38	NMI	TAL SPK

Client Sample ID: Tripblanks
Lab Sample ID: 580-88480-15
Date Collected: 08/15/19 00:01
Matrix: Water
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	308876	08/20/19 23:31	DSO	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309481	08/27/19 16:43	DCV	TAL SEA
Total/NA	Prep	8011			309742	08/29/19 13:46	MLT	TAL SEA
Total/NA	Analysis	8011		1	310344	09/05/19 19:29	CJ	TAL SEA

Client Sample ID: Tripblanks
Lab Sample ID: 580-88480-16
Date Collected: 08/15/19 00:01
Matrix: Solid
Date Received: 08/16/19 12:29

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309770	08/16/19 13:00	APR	TAL SEA
Total/NA	Analysis	8260C		1	309784	08/29/19 21:47	APR	TAL SEA
Total/NA	Prep	5035			309347	08/26/19 12:31	DCV	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	309383	08/26/19 22:59	DCV	TAL SEA

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Landau & Associates, Inc.
Project/Site: PSE Factoria UST

Job ID: 580-88480-1

Laboratory: Eurofins TestAmerica, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State Program	C553	02-17-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6010C	3050B	Solid	Arsenic
6010C	3050B	Solid	Barium
6010C	3050B	Solid	Cadmium
6010C	3050B	Solid	Chromium
6010C	3050B	Solid	Lead
6010C	3050B	Solid	Selenium
6010C	3050B	Solid	Silver
D 2216		Solid	Percent Moisture

Laboratory: Eurofins TestAmerica, Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-025	12-07-19
Alaska (UST)	State Program	17-025	12-07-19
Oregon	NELAP	4137	12-07-19
Oregon	NELAP	4137	12-07-19
Washington	State	C569	01-06-20
Washington	State Program	C569	01-06-20

APPENDIX C

Washington State Department of Ecology Notifications

DEPARTMENT OF ECOLOGY
State of Washington

30-DAY NOTICE
FOR UNDERGROUND STORAGE TANKS

UST ID #: 8546
County: King

This form provides Ecology 30-days' advanced notice for the following projects, as required by Chapter 173-360 WAC. Instructions are found on the back page.

Please ✓ the appropriate box: ☐ Intent to Install ☒ Intent to Close ☐ Change-in-Service

I. SITE INFORMATION	II. OWNER/OPERATOR INFORMATION
Tag or UBI # (if applicable): 179 010 055 001 0017	Owner/Operator Name: Puget Sound Energy
UST ID # (if applicable): 8546	Business Name: Puget Sound Energy
Site Name: PSE Factoria Service Center	Mailing Address: 10885 NE 4th St., PSE-11N
Site Address: 13230 SE 32nd Street	City: Bellevue State: WA Zip: 98004
City: Bellevue	Phone: 425.462.3198
Phone: 425.499.7513	Email: greg.andrina@pse.com

III. CERTIFIED SERVICE PROVIDER(S)

Check the appropriate boxes. If more than one service provider is required for this project, fill out both sections.

Note: Individuals performing UST services MUST be ICC-certified or have passed another qualifying exam approved by the Department of Ecology.

1) ☐ Installer ☒ Decommissioner ☐ Site Assessor

Company Name: WYSER Construction Co., Inc.	Certification Type: ICC UST Decommissioner
Service Provider Name: Mike Redford	Cert. No.: 873136 Exp. Date: 3/5/2021
Provider Phone: 425.742.0898	Provider Email: darren@wyserdirt.com

2) ☐ Installer ☐ Decommissioner ☒ Site Assessor

Company Name: Landau Associates, Inc.	Certification Type: ICC UST Assessor
Service Provider Name: Jeovani Huerta-Avila	Cert. No.: 8452484 Exp. Date: 4/19/2021
Provider Phone: 425-778-0907	Provider Email: jhuerta@landauinc.com

IV. TANK INFORMATION

TANK ID	SUBSTANCE STORED	TANK CAPACITY	DATE PROJECT IS EXPECTED TO BEGIN	COMMENTS
281	Gasoline	10,000-g	9/19/19	
282	Diesel	10,000-g	9/19/19	

30-DAY NOTICE
FOR UNDERGROUND STORAGE TANKS

GENERAL INSTRUCTIONS

Under WAC 173-360-200 and 173-360-385, owners and operators are required to notify Ecology at least 30 days prior to beginning underground storage tank (UST) installation, decommissioning, or change-in-service projects by mailing this notice to the address below. A separate form must be used for each activity. Once this form is received by Ecology, it is date-stamped and returned to the owner/operator listed on the form. **Installation and decommissioning projects cannot begin within the first 30 days after the date stamped on this form unless the wait-period has been waived by an Ecology UST inspector**. If a project cannot meet the deadlines described below, an additional 30-Day Notice must be submitted.

Department of Ecology
Underground Storage Tank Section
PO Box 47600
Olympia, WA 98504-7600

SITE AND OWNER/OPERATOR INFORMATION

Fill in the site and owner information completely so that any problems can be resolved quickly. **The contact person listed on this form must confirm the exact date an installation and/or decommissioning project will begin at least three business days before proceeding.**

TANK INSTALLATIONS

Installation projects must begin within 90 days of the date stamped on this notice. Complete the Tank Information section by assigning Tank ID numbers that have not previously been used at the facility. Once, processed, this form also allows you to receive a one-time drop of product for UST system testing purposes only. The fuel drop is not required to occur within the 90-day period.

To receive additional deliveries, you must complete the Business License application and UST Addendum to obtain your facility compliance tag from Ecology. The registration information must be submitted to the Department of Revenue within 30 days of bringing the system into use in order to receive a Business License with the appropriate tank endorsement(s). **Once your tank(s) store more than one inch of product, leak detection equipment and monitoring must be in place.**

PERMANENT TANK CLOSURES

Decommissioning projects must be completed within 90 days after the date stamped on this notice. Complete the Tank Information section using Tank ID numbers listed on the Business License. Use the Comments box to include additional information, such as when product was removed so that no more than one inch of residue remains in the system.

Contact your local fire marshal and planning department prior to tank closure to find out if any additional permits are required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC, may be required.

A site assessment is required at the time of closure. Contamination found or suspected at the site must be reported to the appropriate Ecology regional office within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days; if contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

The following are examples of tanks that are exempt from notification requirements.

- Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must be used for farm purposes and cannot be for resale.
- Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- Tanks with a capacity of 110 gallons or less.
- Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.
- Emergency overflow tanks, catch basins, or sumps.

DEPARTMENT OF ECOLOGY
State of Washington

PERMANENT CLOSURE NOTICE
FOR UNDERGROUND STORAGE TANKS

This notice certifies that permanent closure activities were performed and conducted in accordance with Chapter 173-360 WAC. Instructions are found on the back page.

UST ID #: 8546
County: KING

I. UST FACILITY

Facility Compliance Tag #: 179 010 055 001 0017
UST ID #: 8546
Site Name: PSE FACTORIA SERVICE CENTER
Site Address: 13230 SE 32nd STREET
City: BELLEVUE
Phone: 425. 499. 7513

II. OWNER/OPERATOR INFORMATION

Owner/Operator Name: PUGET SOUND ENERGY
Business Name: PUGET SOUND ENERGY
Address: 10885 NE 4TH ST., PSE IIN
City: BELLEVUE State: WA Zip: 98004
Phone: 425. 462. 3198
Email: greg.andrina@pse.com

III. CERTIFIED UST DECOMMISSIONER

Company Name: MYSER CONSTRUCTION CO, INC.
Address: 19015 104TH AVE SE
City: SNOHOMISH State: WA Zip: 98296
Provider Phone: 425. 742. 0898
Service Provider Name: MIKE REDFORD
Certification Type: LIC UST DECOMMISSIONER
Cert. No.: 873136 Exp. Date: 3/5/2021
Provider Email: darrene@myserdirt.com
Provider Signature: [signature] *Date:* 11/12/19

IV. TANK INFORMATION

TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	CLOSURE METHOD			CLOSURE DATE
			removal	closed-in-place	change-in-service	
281	10,000-g	GASOLINE	☑	☐	☐	11/7/19
282	10,000-g	DIESEL	☑	☐	☐	11/7/19
			☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	
			☐	☐	☐	

V. REQUIRED SIGNATURE

Signature acknowledges UST(s) comply with UST regulation WAC 173-360-380 Permanent Closure Requirements.

Date	Signature of Tank Owner/Operator or Authorized Representative	Print or Type Name
Nov. 11, 2019	Greg J Andrina	Greg J Andrina, Supervisor, Environmental Programs - PSE

APPENDIX D

Decommissioning Documentation

SOUND TESTING, INC.
P.O. BOX 16204 SEATTLE, WA 98116
(206) 932-0206 FAX (206) 937-3848
WWW.SOUNDTESTINGINC.COM

MARINE CHEMIST CERTIFICATE

SERIAL Nº 47409

WYSER Survey Requested by	PUGET SOUND ENERGY Vessel Owner or Agent	NOV 6 2019 Date
PLEASE SEE BELOW Vessel	UNDERGROUND TANKS Type of Vessel	13230 SE 32 ND Specific Location of Vessel
GASOLINE, DIESEL, GROUND WATER Last Three (3) Loadings	OXYGEN, COMBUSTIBLE GAS Tests Performed	10 AM Time Survey Completed

ALL 3 TANKS — 10,000 GAL GASOLINE
O_2 = 6%, LEL = 20-30%

MAY BE SAFELY EXCAVATED

10,000 GAL DIESEL
O_2 = 6%, LEL = 20-30%

— MAY BE SAFELY DEMOLISHED MECHANICALLY

WATER RUN-OFF TANK
O_2 = 20%, LEL = 0%

In the event of changes adversely affecting conditions in the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

Qualifications: Manipulation of valves or devices tending to alter conditions in pipe lines or tanks noted above, unless specifically approved in this certificate, will require re-inspection and a new Certificate for spaces so affected. All piping, heating coils, pumps and floating roof gaskets attached to or contained within spaces listed above shall be considered "NOT SAFE" unless otherwise specifically designated.

STANDARD SAFETY DESIGNATIONS

(These detail the minimum conditions for Safe Entry and Hot Work.) The Marine Chemist may request additional measures if workplace conditions so dictate.

ATMOSPHERE SAFE FOR WORKERS means that in a space (a) the oxygen content is between 19.5% and 22% by volume, and (b) combustible gas is less than 10% of the Lower Explosive Limit, and (c) airborne toxic materials are within permissible concentrations as listed in OSHA's Subpart Z or in ACGIH's current list of Threshold Limit Values.

SAFE FOR HOT WORK means that (a) oxygen within the space is less than 22% by volume; and (b) the combustible gas is less than 10% of the Lower Explosive Limit; and (c) cargo residues within the space will not combust during hot work; and (d) pipes that can deliver hazardous materials to the workspace have been separated, blanked, or locked out, and nearby hazardous spaces have been evaluated and noted on the certificate.

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

"The undersigned acknowledges receipt of this Certificate and understands conditions and limitations under which it was issued."

Signed _____
Name Company Date

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

Signed Don Sly Nº 598
Marine Chemist Certificate No.

POSTING

STRAIGHT BILL OF LADING

ORIGINAL — NOT NEGOTIABLE

Shipper No. 21821

Carrier No. 32353

Page _____ of _____

Marine Vacuum Service Inc.
(Name of carrier) (SCAC)

Date 8/1/2019

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee Marine Vacuum Service Inc.
Street 1516 South Graham Street
City Seattle State WA Zip Code 98108

FROM:
Shipper WYSER construction
Street 13230 SE 32nd st
City Bellevue State WA Zip Code
24 hr. Emergency Contact Tel. No. ChemTel 1-800-255-3924 Contract MIS3627926

Route

Vehicle Number H 204

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 TT	X	(DOT Spec Tank Required) UN1863 Fuel, Aviation, Turbin Engine, Class 3, PG I				
1 TT	X	(DOT Spec Tank Required) UN1203 Gasoline, Mixture Class 3, PG II				
1 TT	X	(DOT Spec Tank Required) UN1203 Gasoline, Class 3, PG II				
1 TT	X	NA1993 Diesel Mixture, Class 3, PG III	600	GAL		
1 TT	X	NA1993 Diesel, Class 3, PG III				
1 TT	X	NA1270 Petroleum Oil, Class 3, PG I				
1 TT	X	NA1270 Petroleum Oil, Mixture, Class 3, PG I				
1 TT		Oily Waste Water Non Reg by DOT				
1 TT		Waste Water Non Reg by DOT				
1 TT		Used Oil Non Reg by DOT				
1 TT		Used Coolant Non Reg by DOT				
		Sludge	5	GL		

PLACARDS TENDERED: YES ☑ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____." (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172. (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER WYSER Construction

PER X

CARRIER Marine Vacuum Service

PER Sue

DATE 8/1/2019

Permanent post-office address of shipper.

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

AST/UST STORAGE TANK PUMP & RINSE CERTIFICATE

Tank Size: 10.000 Gallone

Last Contents Diesel water

Tank Location: 13230 SE 32 ND st

Bellevue, WA

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard as outlined in 40 CFR PART 280.70, WAC 173-360-380(I), API 1604, API 2015 and that all residual product and rinsate has been disposed of in accordance with Federal, State and Local regulations. Tanks listed above are **NOT GAS FREE** or **NOT SAFE FOR HOT WORK**

Tank Owner: P&E

Contractor: Wyser Contructon

M.V.S. Representative: Sarl Cung Mar-Vac

Date: 8/1/2019

Notes:

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

AST/UST STORAGE TANK PUMP & RINSE CERTIFICATE

Tank Size: 10.000 GAL

Last Contents GASoline Water

Tank Location: 13230 SE 32nd St

Bellevue, WA

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard as outlined in 40 CFR PART 280.70, WAC 173-360-380(I), API 1604, API 2015 and that all residual product and rinsate has been disposed of in accordance with Federal, State and Local regulations. Tanks listed above are **NOT GAS FREE** or **NOT SAFE FOR HOT WORK**

Tank Owner: PSE

Contractor: WYSER Construction

M.V.S. Representative: Sak Eung Mar-Vac

Date: 8/1/2019

Notes:

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

AST/UST STORAGE TANK PUMP & RINSE CERTIFICATE

Tank Size: 4k - 6k STORMWATER

Last Contents Water.

Tank Location: 13230 SE 32nd st

Bellevue, WA

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard as outlined in 40 CFR PART 280.70, WAC 173-360-380(I), API 1604, API 2015 and that all residual product and rinsate has been disposed of in accordance with Federal, State and Local regulations. Tanks listed above are **NOT GAS FREE** or **NOT SAFE FOR HOT WORK**

Tank Owner: PSE

Contractor: Wyser Construction

M.V.S. Representative: Sac Cung, Mar-Vac

Date: 8/1/2019

Notes:

WYSER INC CONSTRUCTION

EXPORT MATERIALS LOG

Puget Sound Energy - Factoria Service Station **PSE-19-1576** **DATE: November 7, 2019**

LOAD NO.	TRUCKING COMPANY	MANIFEST #	DUMP TIME	ESTIMATED QUANTITY	LOCATION	DATE	TYPE OF MATERIALS	TONNAGE SLIPS
1	Wyser Construction	4001/1163802	11:32 AM	3.42 ton	Regional Disposal	11/7/2019	CDL	3.42
2	Wyser Construction	4001/1163841	1:25 PM	2.67 ton	Regional Disposal	11/7/2019	CDL	2.67
3					(Black River)			
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16					Class	3 Soil	Total Tons	6.09
17								
18								
19								

SITE AW Regional Disposal - Black River 425-235-0269
501 MONSTER ROAD -Renton, WA 98059

CUSTOMER 010030
Cash Customers - Black River T/S
Do Not Mail
Renton, WA 11111
Contract:CDL - RED CARD

SITE 01 | TICKET # 1163841 | CELL
WEIGHMASTER IN - Cherie K. OUT - LATISHA I.
DATE/TIME IN 11/7/19 1:19 pm | DATE/TIME OUT 11/7/19 1:25 pm
VEHICLE CASH COMMERCIAL | CONTAINER
REFERENCE WYSER CONST TRK # W40
BILL OF LADING

SCALE IN GROSS WEIGHT 33,180 NET TONS 2.67
SCALE OUT TARE WEIGHT 27,840 NET WEIGHT 5,340

INBOUND
CASH

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
2.67	tn	C&D Origin:FACTORIA/KING 100%				

DRIVER SIGNATURE

ISSUE AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE

SITE AW Regional Disposal - Black River 425-235-0269
501 MONSTER ROAD -Renton, WA 98059

CUSTOMER 010030
Cash Customers - Black River T/S
Do Not Mail
Renton, WA 11111
Contract:CDL - RED CARD

SITE 01 | TICKET # 1163802 | CELL
WEIGHMASTER IN - Cherie K. OUT - LATISHA I.
DATE/TIME IN 11/7/19 11:32 am | DATE/TIME OUT 11/7/19 11:38 am
VEHICLE CASH COMMERCIAL | CONTAINER
REFERENCE WYSER CONST #W-40
BILL OF LADING

SCALE IN GROSS WEIGHT 34,540 NET TONS 3.42
SCALE OUT TARE WEIGHT 27,700 NET WEIGHT 6,840

INBOUND
CASH

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
3.42	tn	C&D Origin:FACTORIA/KING 100%				

DRIVER SIGNATURE

$49.24 AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (07/12)

SIGNATURE

APPENDIX E

Soil and Groundwater Disposal Documentation

WYSER INC CONSTRUCTION

EXPORT MATERIALS LOG

Puget Sound Energy - Factoria Service Station **PSE-19-1576** **DATE: November 12, 2019**

LOAD NO.	TRUCKING COMPANY	MANIFEST #	DUMP TIME	ESTIMATED QUANTITY	LOCATION	DATE	TYPE OF MATERIALS	TONNAGE SLIPS	
1	Wyser Construction	4006/152407	10:40 AM	28.50 ton	WM	11/12/2019	Class 3 Soil	28.50	
2	Wyser Construction	4006/152421	12:26 PM	32.11 ton	WM	11/12/2019	Class 3 Soil	32.11	60.61
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16					Class	3 Soil	Total Tons	60.61	
17									
18									
19									

WYSER INC CONSTRUCTION

EXPORT MATERIALS LOG

Puget Sound Energy - Factoria Service Station **PSE-19-1576** **DATE: November 13, 2019**

LOAD NO.	TRUCKING COMPANY	MANIFEST #	DUMP TIME	ESTIMATED QUANTITY	LOCATION	DATE	TYPE OF MATERIALS	TONNAGE SLIPS
1	Wyser Construction	4007/152432	7:35 AM	32.47 ton	WM	11/13/2019	Class 3 Soil	32.47
2	Wyser Construction	4007/152440	9:48 AM	24.08 ton	WM	11/13/2019	Class 3 Soil	24.08
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16					Class	3 Soil	Total Tons	56.55
17								
18								
19								

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Original
Ticket# 152407

Ph: 206 763 5025

Customer Name PUGET SOUND ENERGY 114637WA P
Ticket Date 11/12/2019
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# PSE 19 1576/114637WA

Carrier SELF HAULER *
Vehicle# W-40
Container
Driver KURTS JONES
Check#
Billing# 0000679
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/12/2019 10:40:44	SCALE 1	GALTHEIM		Gross	99700 lb
Out	11/12/2019 10:45:44	SCALE 1	GALTHEIM		Tare	42700 lb
					Net	57000 lb
					Tons	28.50

Comments WYBER
GA

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCB-Tons-Pet	100	28.50	Tons				KING
2	GONDOLA T-GONDOLA TON	100	28.50	Tons				KING

Total Tax
Total Ticket

Driver's Signature

203WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Original
Ticket# 152421

Phn 206 763 5025

Customer Name PUGET SOUND ENERGY 114697WA P
Ticket Date 11/12/2019
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# PSE 19 1576/114697WA

Carrier SELF HAULER *
Vehicle# M-40
Container
Driver KURTS JONES
Check#
Billing# 0000679
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/12/2019 12:26:14	SCALE 1	GALTHEIM		Gross	106920 lb
Out	11/12/2019 12:26:14		GALTHEIM		Tare	42700 lb
					Net	64220 lb
					Tons	32.11

Comments PSE
GA

Product	LDK	Qty	UOM	Rate	Tax	Amount	Origin
1 Daily Cover-PCS-Tons-Pet	100	32.11	Tons				
2 GONDOLA T-GONDOLA TON	100	32.11	Tons				KING

Total Tax
Total Ticket

Driver's Signature

203WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Original
Ticket# 152432

Ph: 206 763 5025

Customer Name PUGET SOUND ENERGY 114697WA P
Ticket Date 11/13/2019
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# PSE 19 1576/114697WA

Carrier SELF HAULER *
Vehicle# W-40
Container
Driver KURTS JONES
Check#
Billing# 0000879
Grid

Volume

	Time	Scale	Operator	Inbound		
In	11/13/2019 07:35:36	SCALE 1	GALTHEIM		Gross	107640 lb
Out	11/13/2019 07:35:36		GALTHEIM		Tare	42700 lb
					Net	64940 lb
					Tons	32.47

Comments WYSER
BA

	Product	LDM	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	32.47	Tons				KING
2	GONDOLA T-GONDOLA TON	100	32.47	Tons				KING

Total Tax
Total Ticket

Driver's Signature

203WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134 Phn 206 763 5025

Original
Ticket# 152440

Customer Name PUGET SOUND ENERGY 114697WA P
Ticket Date 11/13/2019
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# PSE 19 1576/114697WA

Carrier SELF HAULER *
Vehicle# W-40 Volume
Container
Driver KURTS JONES
Check#
Billing# 0000679
Grid

	Time	Scale	Operator	Inbound	Gross	90860 lb
In	11/13/2019 09:48:33	SCALE 1	GALTHEIM		Tare	42700 lb
Out	11/13/2019 09:48:33		GALTHEIM		Net	48160 lb
					Tons	24.08

Comments WYSER
GA

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pat	100	24.08	Tons				KING
2	GONDOLA T-GONDOLA TON	100	24.08	Tons				KING

Total Tax
Total Ticket

Driver's Signature

203WM

APPENDIX F

Underground Storage Tank Site Assessment Checklist

DEPARTMENT OF ECOLOGY
State of Washington

UST ID #: 8546
County: King

SITE CHECK/SITE ASSESSMENT CHECKLIST
FOR UNDERGROUND STORAGE TANKS

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360A WAC. Instructions are found on the last page.

I. UST FACILITY		II. OWNER/OPERATOR INFORMATION	
Facility Compliance Tag #: 179 010 055 001 0017		Owner/Operator Name: Puget Sound Energy	
UST ID #: 8546		Business Name: Puget Sound Energy	
Site Name: PSE Factoria Service Center		Address: 10885 NE 4th Street	
Site Address: 13230 SE 32nd Street		City: Bellevue	State: WA Zip: 98004
City: Bellevue		Phone: 425-462-3198	
Phone: 425-499-7513		Email: greg.andrina@pse.com	

III. CERTIFIED SITE ASSESSOR			
Service Provider Name: Andrey J. Huerta-Avila		Company Name: Landau Associates, Inc	
Cell Phone: 206-650-1781	Email: jhuerta@landauinc.com	Address: 130 2nd Avenue South	
Certification #: 8452484	Exp. Date: 4/19/2021	City: Edmonds	State: WA Zip: 98020

IV. TANK INFORMATION

TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	DATE SITE CHECK OR ASSESSMENT CONDUCTED
281	10,000-gallon	Unleaded Gasoline	11/8/19
282	10-000-gallon	Diesel	11/8/19

V. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT (check one)

☒ Release investigation following permanent UST system closure (i.e. tank removal or closure-in-place).

☐ Release investigation following a failed tank and/or line tightness test.

☐ Release investigation following discovery of contaminated soil and/or groundwater.

☐ Release investigation directed by Ecology to determine if the UST system is the source of offsite impacts.

☐ UST system is undergoing a "change-in-service", which is changing from storing a regulated substance (e.g. gasoline) to storing a non-regulated substance (e.g. water).

☐ Directed by Ecology for UST system permanently closed or abandoned before 12/22/1988.

☐ Other (describe):

VI. CHECKLIST

The site assessor must check each of the following items and include it in the report. Sections referenced below can be found in the Ecology publication *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*.	YES	NO
1. The location of the UST site is shown on a vicinity map.	☒	☐
2. A brief summary of information obtained during the site inspection is provided (Section 3.2)	☐	☐
3. A summary of UST system data is provided (Section 3.1)	☐	☐
4. The soils characteristics at the UST site are described. (Section 5.2)	☐	☐
5. Is there any apparent groundwater in the tank excavation?	☐	☐
6. A brief description of the surrounding land use is provided. (Section 3.1)	☒	☐
7. The name and address of the laboratory used to perform analyses is provided. The methods used to collect and analyze the samples, including the number and types of samples collected, are also documented in the report. The data from the laboratory is appended to the report.	☒	☐
8. The following items are provided in one or more sketches:		
• Location and ID number for all field samples collected	☒	☐
• If applicable, groundwater samples are distinguished from soil samples	☒	☐
• Location of samples collected from stockpiled excavated soil	☒	☐
• Tank and piping locations and limits of excavation pit	☒	☐
• Adjacent structures and streets	☒	☐
• Approximate locations of any on-site and nearby utilities	☒	☐
9. If sampling procedures are different from those specified in the guidance, has justification for using these alternative sampling procedures been provided? (Section 3.4)	☒	☐
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method, and detection limit for that method. Any sample exceeding MTCA Method A cleanup standards are highlighted or bolded.	☒	☐
11. Any factors that may have compromised the quality of the data or validity of the results are described.	☒	☐
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred. The requirements for reporting confirmed releases can be found in WAC 173-360-372.	☒	☐

VII. REQUIRED SIGNATURES

Signature acknowledges the Site Check or Site Assessment complies with UST regulations WAC 173-360A-0730 through 0750.

Andrey J Huerta-Avila	Andrey Huerta	12/16/19
Print or Type Name	Signature of Certified Site Assessor	Date

SITE CHECK/SITE ASSESSMENT CHECKLIST
FOR UNDERGROUND STORAGE TANKS

INSTRUCTIONS

This checklist must accompany the results of a Site Check Report, which is performed if a release of petroleum or other regulated substance is suspected. It is also required to accompany a Site Assessment Report, which is required following the permanent closure or "change-in-service" of an underground storage tank system. This form is required to be filled out whether or not contamination is found. This checklist is to be completed by the Site Assessor and submitted **within thirty days of completing** these activities to the following address:

Dept. of Ecology
UST Section
PO Box 47655
Olympia, WA 98504-7655

I./II. UST Facility and Owner/Operator Information: Fill out these sections completely. If you do not know your UST ID number, include the facility compliance tag number.

III. Service Provider Information: It is the responsibility of the ICC-certified Site Assessor to ensure that sampling and documentation procedures are completed in accordance with Ecology's *Guidance for Site Checks and Site Assessment for Underground Storage Tanks*.

IV. Tank Information: Use the same Tank identification numbers listed on the facility's Business License which is based on the most recent UST Addendum on file with Ecology. List the last substance stored in each tank, the tank sizes and the date the site check or site assessment was completed.

V. Required Signature: The Site Assessor signature certifies these procedures were followed.

All confirmed releases must be reported to Ecology by the owner within 24 hours and by service providers within 72 hours of discovery. A Site Characterization Report must be submitted to Ecology within 90 days after confirming a release.

Further questions? *Please contact your regional office below and ask for a tank inspector to assist you.*

Regional Office	Counties Served
Central (509) 575-2490	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima
Eastern (509) 329-3400	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman
HQ (360) 407-7170	Federal facilities in Western Washington
Northwest (425) 649-7000	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom
Southwest (360) 407-6300	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum

or find a complete list of UST inspectors at:
www.ecy.wa.gov/programs/tcp/ust-lust/people.html