



**Focused Phase II Environmental
Site Assessment**

Lampson Property
131 North Front Street
Central Point, Oregon 97502

Cooperative Agreement Number:
BF-01J40701

March 18, 2020

Prepared for:

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Sign-off Sheet

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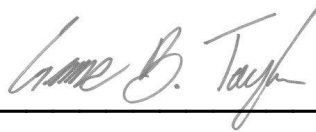
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Introduction
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1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has completed a Focused Phase II Environmental Site Assessment (ESA) of the property located at 131 North Front Street in Central Point, Oregon (Property), on behalf of the Property Owners (Debbie and Eldon Lampson) and the Rogue Valley Council of Governments (RVCOG). The purpose of this Phase II ESA was to explore for evidence of significant and widespread releases associated with recognized environmental conditions (RECs) identified during the completion of a Phase I ESA completed at the Property in March 2019 (Stantec 2019a).

The Phase II ESA was performed in general accordance with the following Site-Specific Sampling and Analysis Plans (SSSAPs).

- A Geophysical Survey SSSAP dated June 6, 2019 (Stantec 2019b). This SSSAP was approved by the United States Environmental Protection Agency (EPA) on June 13, 2019.
- A Phase II ESA SSSAP dated September 11, 2019 (Stantec 2019c). This SSSAP was approved by the EPA on September 16, 2019 and by the Oregon Department of Environmental Quality (DEQ) on September 12, 2019.

All work described herein was completed in accordance with the Master Quality Assurance Project Plan (QAPP) (Stantec, 2018) prepared for the RVCOG Brownfield Community-Wide Assessment Project (Cooperative Agreement Number BF-01J40701). The EPA approved the QAPP for the project in an email message dated August 27, 2018.



2.0 PROPERTY DESCRIPTION AND HISTORY

The 0.46-acre Property is located at the western end of downtown Central Point and is owned by Debbie and Eldon Lampson. The Property is identified by Jackson County as tax lot 372W03DC-2300 and zoned Commercial Industrial class 231. The Property contains one 760-square-foot building used as a restaurant (El Poblano Mexican Restaurant). The building is surrounded by paved driveways and parking areas. The area of the Property west of the building is unpaved. According to the Property owner the building was constructed in the 1960s.

Railroad tracks border the western Property boundary and surrounding properties are a mix of commercial and residential land use. A Property Location Map is provided as **Figure 1**. A Property Area Map illustrating the main Property features and Phase II ESA direct-push exploration locations is provided as **Figure 2**.

First use of the Property, as indicated by 1890, 1899 and 1911 Sanborn maps, was “rail road grounds” (Stantec 2019a). The 1911 map also indicated that lumber was stored on the Property. Historical city directories indicated that the Property was occupied by a retail service station in 1968. During the Phase I ESA interview, Property owner Eldon Lampson confirmed that the Property was formerly occupied by a retail service station operated by Time Oil. This information was confirmed in a warranty deed that documents the sale of the Property by Time Oil to David and Sylvia Rowell in February 1989. Mr. Lampson stated that fuel for the facility was stored in aboveground storage tanks (ASTs). He stated that two underground storage tanks (USTs) were still in place at the Property. Reportedly, one UST was used to store used oil. Mr. Lampson stated that the second UST may have been used to store hydraulic fluid for an in-ground lift associated with the former service station. Mr. Lampson suspected that there may be a hydraulic lift still in place that was covered with concrete during past building renovations.



3.0 PRIOR ENVIRONMENTAL REPORTS

Stantec conducted a Phase I ESA of the Property in March 2019 (Stantec, 2019a). The Phase I ESA identified the following RECs for the Property:

1. The potential for releases associated with the Property's past use as a retail service station including historical ASTs, USTs, and hydraulic lift(s) represents a REC and a vapor encroachment condition (VEC).
2. A 2015 environmental assessment of a release of petroleum hydrocarbons and chlorinated solvents at the facility located at 16 North Front Street (approximately 250 feet southeast of the Property, across North Front Street) included collecting a groundwater sample from the eastern edge of the Property (BB&A 2015). 1,2-Dichloroethene (identified as "EDC" in assessment and DEQ records) was detected in the groundwater sample collected from the Property. 1,2-Dichloroethene was not detected in groundwater samples collected from 16 North Front Street. The constituents of concern detected at 16 North Front Street (methyl tert-butyl ether [MTBE], tetrachloroethene, trichloroethene) were not detected in the groundwater sample from the Property. DEQ issued a No Further Action (NFA) letter for the releases at 16 North Front Street in 2016. It does not appear that the releases at 16 North Front Street have impacted the Property; however, the detection of 1,2-dichloroethene in Property groundwater indicates an impact potentially from an on-site or other source and represents a REC and a VEC for the Property.
3. Historical city directories document that the adjoining site to the south was occupied by a lumber yard, and a 1911 historical map indicates that the Property was used for lumber storage. The adjoining site to the east (132 Front Street) has been occupied by an automotive repair business from at least 1968 to the present. The potential for releases of petroleum or hazardous substances from past uses on adjoining properties to impact the Property represents a REC and a VEC.

Based on these findings, Stantec recommended additional Property environmental assessment in the Phase I ESA.



4.0 JUNE 2019 GEOPHYSICAL SURVEY

A geophysical subsurface mapping survey (SMS) to explore for indications of current or past USTs on the Property was conducted on June 26, 2019 by GeoPotential of Fairview, Oregon. The geophysical survey was conducted in accordance with the EPA-approved SSSAP for a geophysical survey dated June 6, 2019 (Stantec 2019b). Two approximately 675-gallon nested USTs and connecting product/vent lines were identified by GeoPotential near the southeastern end of the Property building. A hydraulic lift was identified beneath the Property building. Planned Phase II ESA borehole locations were scanned for subsurface utilities. The SMS Report prepared by Geopotential is provided as **Appendix A**.



5.0 FIELD SAMPLING ACTIVITIES

5.1 PRE-FIELD ACTIVITIES

5.1.1 Utility Clearance

Prior to any intrusive work at the Property, Stantec called the Utility Notification Center and requested a public underground utility locate. Stantec additionally subcontracted with GeoPotential and Applied Professional Services of North Bend, Washington to provide utility clearance of each borehole location.

5.1.2 Health and Safety

A Site-Specific Health and Safety Plan (HASP), as required by Oregon Occupational Safety and Health Division (OR-OSHA) Safety and Health Act and 40 Code of Federal Regulations 1910.120, was prepared to describe field sampling activity safety protocols for Stantec employees engaged in the project. At the start of each day of field sampling activities a “tailgate” meeting was held and safety protocols reviewed.

5.2 SAMPLING ACTIVITIES AND SUBSURFACE CONDITIONS

The purpose of the Phase II ESA described herein was to explore for evidence of significant and widespread releases associated with the RECs identified in the Phase I ESA prepared for the Property. These RECs are listed in Section 3.0 of this report. The scope of Phase II ESA sampling activities is described in the subsections that follow.

5.2.1 Direct-Push Sampling Methodologies

Under the direction of a Stantec registered geologist, 10 total direct-push borings were completed on the Property. Stantec subcontracted with Stratus Corporation of Gaston, Oregon for direct-push drilling services for the project. Direct-push drilling methods were conducted in accordance with the SSSAP and standard operating procedure (SOP) 02 in the QAPP. Six direct-push borings were advanced on the Property on September 17-20, 2019 (GP-01 through GP-06) for the purpose of soil and groundwater sampling. Four direct-push borings were advanced on the Property on September 19, 2019 (FS-01 through FS-04) for the purpose of soil screening. However, evidence of a release was noted at the soil-groundwater interface in each boring, and as a result, soil samples were collected in each of these borings. Boring locations are shown on **Figure 2**.

5.2.2 Backhoe UST Assessment Sampling Methodologies

Under the direction of a Stantec registered geologist a backhoe UST assessment was completed on the Property. Stantec subcontracted with Stratus Corporation of Gaston, Oregon for backhoe exploration services for the project. All backhoe exploration methods were conducted in accordance with the SSSAP and SOP 02 in the QAPP. Backhoe assessment activities were limited to the area where the geophysical SMS had identified two USTs (**Figures 2 and 3**).

UST assessment activities were initiated on September 17 and concluded on September 20, 2019. UST assessment activities included the following.



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Field Sampling Activities

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- Surface asphalt and concrete from above Tank 1 and Tank 2 was sawcut and removed. This material was transported off the Property for recycling.
- Overburden soil overlying Tank 1 and Tank 2 beneath the asphalt and concrete surface exhibited evidence of contamination (odor, staining and elevated photoionization detector [PID] readings). This petroleum-containing soil (PCS) was placed into two 10-yard roll-off boxes pending waste profiling and disposal.
- After exposing the tops of the tanks, approximately 1,000 gallons of a hydrocarbon-water mixture was removed from Tank 1 and 500 gallons of a hydrocarbon-water mixture was removed from Tank 2.
- Using appropriate UST decommissioning methods, Tank 1 and Tank 2 were removed. Tank 1 measured 4 feet in diameter and 12 feet in length (estimated 1,000-gallon capacity). Tank 1 appeared in good conditions with no holes. Tank 2 measured 3 feet in diameter and 8 feet in length (estimated 675-gallon capacity). Tank 2 appeared in poor condition with an approximately 3-inch diameter hole noted on its bottom near its north end.
- A third UST was discovered northwest of Tank 1. This UST was not removed due to its proximity to the Property building, and concerns that removing it might destabilize the building foundation.
- Following tank removal, loose soils were removed from the excavation to facilitate soil sampling. These soils were classified in the field as PCS and placed into the two 10-yard roll-off boxes pending waste profiling and disposal.
- Six soil samples were collected from the base and sidewalls of the excavation.
- On September 20, 2019, the excavation was backfilled with imported granular fill material to grade.
- On October 3, 2019, a soil sample was collected for laboratory analysis from each drop box. Test methods utilized were stipulated by the Dry Creek Landfill. Select soil sample testing results are summarized in **Tables 1 and 4**. A lab report providing all testing results is included in **Appendix D**.
- An approved waste profile for disposal of soils in the drop boxes was received from the Dry Creek Landfill on October 22, 2019.
- On October 24, 2019, the roll-off boxes containing contaminated soil were transported to the Dry Creek Landfill in Medford, Oregon where soils were disposed.

A completed UST Decommissioning Checklist and Site Assessment Report prepared by the project UST Service Provider for the two USTs that were removed are provided in **Appendix B**.

5.2.3 Soil Sampling

All soil sampling and analysis was completed in accordance with the SSSAP with the following exceptions:

1. Evidence of soil contamination was observed in each of borings FS-01 through FS-04 beginning at a depth of between 8 and 9 feet below ground surface (bgs). Because no evidence of contamination was observed at a shallower depth in any of these borings, or in nearby boring GP-02, it is inferred that observed contamination was within the zone of seasonal groundwater fluctuations.
2. The SSSAP specified that up to six soil samples would be collected from the base of the exploration excavation, and that one soil sample would be collected from each excavation sidewall. Four soil samples were collected from the base of the excavation, one each from beneath the two ends of each UST. Sidewall samples were collected from the southwest and southeast sidewalls of the excavation.

During drilling and sample collection, soil from each boring was observed for visual and olfactory evidence of hazardous substance/petroleum impacts. PID readings were collected approximately every 5



vertical feet from soil in each boring. No staining/odors and/or elevated PID readings were observed in boring unsaturated zone soils (inferred to seasonally be as shallow as 8 feet bgs) with the following exceptions:

1. Hydrocarbon odors and staining were observed in the unsaturated zone in boring GP-01. PID readings of 172 parts per million (ppm), 62 ppm and 50 ppm were measured at depths of 2.5, 4 and 6 feet bgs, respectively.
2. Hydrocarbon odors and staining were observed in the unsaturated zone in boring GP-02. A PID reading of 20 ppm was measured at a depth of 1.5 feet bgs.
3. Hydrocarbon odors and staining were observed in the unsaturated zone in boring GP-03. A PID reading of 19 ppm was measured at a depth of 6 feet bgs.
4. Hydrocarbon odors and staining were observed in the unsaturated zone in boring GP-06. A PID reading of 66 ppm was measured at a depth of 6.5 feet bgs.

5.2.4 Groundwater Sampling

All groundwater sampling and analysis was completed in accordance with the SSSAP with the following exception:

1. A pipe was encountered at a depth of 7.5 feet bgs in boring GP-01, and as a result, the boring was terminated. Groundwater was not encountered or sampled in this boring.

5.2.5 Subsurface Conditions

During boring advancement at the Property, soils were logged by a Stantec registered geologist. Subsurface materials encountered at the Property generally consisted of clay with variable quantities of gravel and sand. Boring logs containing a soil conditions log, PID screening results, temporary well information and depth intervals for soil samples collected for laboratory analysis are provided in **Appendix C**. Groundwater levels measured in temporary Property monitoring wells ranged between 8 feet bgs in boring GP-04 and 21.5 feet bgs in boring GP-06. However, the distribution of contamination in soil indicates seasonal high groundwater is approximately 8 feet bgs at the Property.

5.2.6 Borehole Abandonment and Investigative-Derived Waste

Following environmental sampling, each borehole was abandoned in accordance with Oregon Water Resources Department (OWRD) standards by filling the borehole with granular bentonite to approximately one foot below surface grade hydrated in-place. Surface restoration at each location was accomplished with either cold-patch asphalt or native soil in unpaved areas. Soil cuttings generated during drilling operations were placed in the roll-off boxes also used for contaminated soils encountered during the UST assessment. As indicated in Section 5.2.2, soil cuttings were disposed of at the Dry Creek Landfill.



6.0 CONCEPTUAL SITE MODEL

The Conceptual Site Model (CSM) for the Property is based on the limited land use and beneficial water use determinations described below. The CSM is illustrated in **Figure 4**.

6.1.1 Land Use Determination

The Property is zoned Commercial Industrial class 231. The Property is currently developed for commercial use. The Property owner plans to continue and potentially expand commercial use of the Property. Based on these current and reasonably likely future uses, potential receptors for the Property include occupational users, and construction and excavation workers.

6.1.2 Beneficial Water Use Determination

A search of Oregon Water Resources Department records indicated only one well log that could be confirmed to be located within 1,000 feet of the Property. The well log indicated abandonment of a former domestic well 34 feet in depth in March 2004.

Potable water is provided to the Property and vicinity by the City of Central Point. There are no private water supply wells on the Property. Groundwater is not anticipated to be accessed in the future for beneficial uses of any kind on the Property or within 1,000 feet of the Property.

6.1.3 Potentially Complete Exposure Pathways

Based on the current and anticipated continued commercial use of the Property, and the fact that there is no current or reasonably likely future groundwater use within 1,000 feet of the Property, the following exposure pathways are considered potentially complete or reasonably likely to be complete in the future at the Property:

1. Direct contact with soil within 3 feet of the ground surface (occupational workers and construction/excavation workers);
2. Direct contact with soil greater than 3 feet bgs (construction and excavation workers);
3. Inhalation of indoor and outdoor vapors from volatile contaminants in soil and groundwater (occupational workers); and,
4. Groundwater in an excavation (construction and excavation workers).

Analytical data collected during the Phase II ESA was evaluated against the DEQ Risk-Based Concentrations (RBCs) for these potentially complete exposure pathways to assess potential risks to human health.



7.0 LABORATORY TESTING RESULTS

In the subsections that follow, laboratory testing results are summarized for each environmental media sampled. All samples were analyzed in accordance with the SSSAP except where noted. Comparison of testing results to potentially applicable DEQ RBCs and to DEQ clean fill screening values for soil also are discussed.

7.1 SOIL TESTING RESULTS

A total of 23 soil samples (including one duplicate soil samples) were collected during Phase II ESA completion and submitted to Apex Labs for laboratory testing. The field duplicate soil sample was labeled as GP-X (duplicate to soil sample GP-03-8). Soil analytical results are described by analyte group in the subsections that follow. Detected soil concentrations were compared to DEQ RBCs (DEQ, 2018) and DEQ clean fill screening values (DEQ, 2019). Soil testing data are summarized for detected concentrations only in **Tables 1 - 4**. The Apex Labs laboratory reports are provided in **Appendix D**.

7.1.1 Petroleum Hydrocarbons – Soil

7.1.1.1 Volatile and Extractible Petroleum Hydrocarbons - Soil

For the purpose of calculating site-specific gasoline range organic (GRO) and non-gasoline fraction organic RBCs, two soil samples collected during the UST assessment that were located at opposite ends of the UST assessment exploration pit were analyzed for volatile petroleum hydrocarbons (VPH) by method NWVPH and extractible petroleum hydrocarbons (EPH) by method NWEPH. VPH/EPH data for each sample were input into a Microsoft Excel® spreadsheet developed by the DEQ following Method 2 guidelines provided in section 3.1.5.2 *Compare TPH Levels to Site-Specific TPH RBCs* of the DEQ guidance document *Risk-Based Decision Making for the Remediation of Contaminated Sites* (DEQ 2017). The most conservative site-specific RBCs calculated for the two samples using VPH/EPH data are included in **Table 1**. Detected VPH and EPH concentrations are summarized in **Table 2**. Site-specific RBC calculation documentation is provided in **Appendix E**.

7.1.1.2 Gasoline-Range Organics - Soil

All 23 soil samples (includes one field duplicate sample) were analyzed for gasoline-range organics (GRO) by method NWTPH-Gx. GRO was detected in 16 samples. In direct-push boring soil samples, a maximum GRO concentration of 655 milligrams per kilogram (mg/kg) was detected in boring FS-03. In UST assessment soil samples, GRO concentrations ranged from 1,560 mg/kg to 8,020 mg/kg (**Table 1**).

Only one soil sample (UST-01-T2-NB), collected at a depth of 6 feet bgs in the UST assessment excavation, yielded a GRO concentration (8,020 mg/kg) exceeding the site-specific gasoline fraction RBC (construction worker direct contact RBC of 6,900 mg/kg) calculated for the Property. Of the six direct-push boring soil samples collected in the depth interval 1-2 feet bgs, none yielded GRO concentrations exceeding DEQ clean fill screening values. Of the six direct-push boring soil samples collected below a depth of 5 feet bgs, five yielded GRO concentrations exceeding DEQ clean fill screening values. All six UST assessment soil samples yielded GRO concentrations exceeding DEQ clean fill screening values.



7.1.1.3 Diesel- and Oil-Range Organics - Soil

All 23 soil samples (includes one field duplicate sample) were analyzed for diesel- (DRO) and oil-range organics (ORO) by method NWTPH-Dx. DRO and/or ORO was detected in nine samples. DRO and ORO sample results were summed to compare to calculated non-gasoline fraction site-specific RBCs. DRO and ORO concentrations below the reporting limit were considered zero for this summation. In direct-push boring soil samples, DRO/ORO were detected in three soil samples (and the duplicate) at a maximum summed concentration of 600 mg/kg in sample GP04-1. DRO and/or ORO were detected in all UST assessment soil samples at summed concentrations ranging from 129 mg/kg to 1,057 mg/kg (**Table 1**).

Comparison of summed DRO/ORO concentrations to the site-specific non-gasoline fraction RBCs calculated for the Property indicates no exceedances. Comparison of summed DRO/ORO concentrations to the DEQ DRO clean fill screening value (no DEQ screening value has been published for ORO) also indicates no exceedances.

7.1.2 Volatile Organic Compounds – Soil

All 23 soil samples (includes one field duplicate sample) were analyzed for VOCs by EPA Method 8260C. One or more VOCs were detected in 17 of these 23 samples. Only ethylbenzene in all six UST assessment soil samples was detected at a concentration exceeding potentially applicable RBCs (vapor intrusion into building RBC of 17 mg/kg). Only benzene in one (GP-01-2) of six shallow direct-push soil samples was detected at a concentration exceeding DEQ clean fill screening values. In soil samples collected at a depth of 5 feet or more bgs, one or more VOC exceeding clean fill screening values were detected in 11 of 17 soil samples collected, including all six UST assessment soil samples (**Table 1**).

7.1.3 Metals - Soil

All 17 (including the duplicate sample) direct-push boring soil samples were analyzed for eight Resource Conservation and Recovery Act (RCRA) metals. Concentrations of each analyzed metal except selenium and silver were detected in one or more soil samples. None of the reported metal detections exceeded potentially applicable RBCs and published background levels. Cadmium, lead, and/or mercury were detected at concentrations exceeding DEQ clean fill screening values in six of the 17 direct-push boring soil samples. Detected concentrations of metals in direct-push soil samples are summarized in **Table 3**.

All six UST assessment soil samples were analyzed for cadmium, chromium and lead. Neither lead nor cadmium were detected in the soil samples. Chromium concentrations ranging between 25.2 mg/kg to 37.0 mg/kg were detected in UST assessment soil samples. The chromium concentrations detected did not exceed applicable DEQ RBCs or clean fill screening values. Detected concentrations of metals in UST assessment soil samples are summarized in **Table 3**.

7.1.4 Polycyclic Aromatic Hydrocarbons - Soil

All soil samples in which DRO and/or ORO were detected were analyzed for PAHs. This included three direct-push boring samples (including the duplicate soil sample) and all six UST assessment soil samples. No PAHs were detected above potentially applicable DEQ RBCs. Two noncarcinogenic PAHs (1-methylnaphthalene in all six UST assessment samples and naphthalene in all samples except GP04-1) were detected at concentrations above DEQ clean fill values. Detected concentrations of PAHs in soil samples are summarized in **Table 4**.



7.2 GROUNDWATER TESTING RESULTS

Groundwater samples were collected from five temporary groundwater wells installed in direct-push borings GP-02 through GP-06. Groundwater testing results are described by analyte group in the subsections that follow. Groundwater testing data is summarized for detected concentrations only in **Table 5** (petroleum hydrocarbons and VOCs), **Table 6** (metals) and **Table 7** (PAHs). Apex Labs laboratory reports are provided in **Appendix D**.

7.2.1 Petroleum Hydrocarbons - Groundwater

All five groundwater samples, a duplicate sample, and an equipment rinsate blank sample were analyzed for petroleum hydrocarbons (GRO, DRO and ORO). GRO was detected in all samples except the rinsate blank sample at a maximum concentration of 2.46 milligrams per liter (mg/L). All detected GRO concentrations were below potentially applicable RBCs.

DRO was detected only in groundwater samples collected from direct-push borings GP-02 and GP-03 at a maximum concentration of 0.322 mg/L. All detected DRO concentrations were below potentially applicable RBCs. ORO was not detected in the seven groundwater samples (including the duplicate and rinsate blank samples). Results of hydrocarbon analysis for groundwater are summarized in **Table 5**.

7.2.2 Volatile Organic Compounds - Groundwater

All five groundwater samples, the duplicate sample, the equipment rinsate blank sample, and two trip blank samples, were analyzed for VOCs. VOCs were detected in all analyzed groundwater samples and the rinsate blank sample but not in the two trip blank samples. Chloroform was detected in the rinsate blank sample but not in collected groundwater samples. All detected VOC concentrations were below potentially applicable RBCs. Results of VOC analysis for groundwater are summarized in **Table 5**.

7.2.3 Metals – Groundwater

All five temporary well samples, the duplicate sample and a rinsate blank sample were analyzed for total and dissolved RCRA-eight metals. Total metals were detected in most groundwater samples, but all at concentrations below potentially applicable RBCs. The prevalence of dissolved metals detections was lower and all at concentrations below potentially applicable RBCs. Results of metals analysis for groundwater are presented in **Table 6**.

7.2.4 Polynuclear Aromatic Hydrocarbons – Groundwater

The two groundwater samples (GP-02 and GP-03) in which DRO was detected were analyzed for PAHs. Up to five noncarcinogenic PAHs were detected in both groundwater samples, but at concentrations below potentially applicable RBCs. Results of PAH analysis for groundwater are summarized in **Table 7**.



8.0 DATA VALIDATION

The laboratory reports received from Apex Labs were validated by Stantec to verify compliance with the project QAPP, and to confirm the usability of the laboratory data. No data was rejected as a result of data validation completion. All data qualified as a result of data validation is indicated in the data validation reports in **Appendix F** and in **Tables 1-7**.



Conclusions
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9.0 CONCLUSIONS

A Phase II ESA was completed at the Lampson Property in Central Point, Oregon in order to evaluate the nature, extent and concentration of contaminants in soil and groundwater associated with potential on-site (former service station) and off-site (multiple former service station and auto repair facilities) releases. The Phase II ESA included the collection of 16 soil samples and five groundwater samples in direct-push borings, and the collection of six soil samples in a UST assessment exploration pit. During UST assessment activities, one 1,000-gallon UST and one 675-gallon UST were decommissioned by removal. A third UST was observed northwest of the two decommissioned tanks. This third UST remains at the Property.

Based upon laboratory analysis, the following assessment findings have been made:

- A petroleum release has been documented at the Property. A release report for the Property was made to the DEQ on September 20, 2019.
- Soil sampling completed for the project indicates that the highest petroleum concentrations (up to 8,020 mg/kg GRO and 1,057 mg/kg DRO/ORO) are in the UST area. GRO was not detected in unsaturated zone soils outside the UST area with one exception: a GRO concentration of 30.7 mg/kg was detected at a depth of 1-foot bgs in boring GP-02. It can be inferred based upon this data that the single source of petroleum detected in soil and groundwater at the Property is the UST area.
- Groundwater sampling completed for the project indicates that the highest petroleum and VOC concentrations, detected in borings GP-02, GP03 and GP-06, also are located in the UST area.
- Comparison of detected soil contaminant concentrations indicates only two exceedances of applicable DEQ RBCs:
 - GRO was detected at a concentration exceeding the DEQ RBC for construction worker direct contact in a single soil sample collected in the UST area at a depth of 6 feet bgs; and
 - Ethylbenzene was detected at concentrations exceeding the DEQ RBC for occupational vapor intrusion in five soil samples collected in the UST area.
- Comparison of detected groundwater contaminant concentrations to applicable DEQ RBCs indicates no exceedances.



Limitations
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10.0 LIMITATIONS

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential liabilities associated with the identified property.

This report provides an evaluation of selected environmental conditions associated with the identified portion of the property that was assessed at the time the work was conducted and is based on information obtained by and/or provided to Stantec at that time. There are no assurances regarding the accuracy and completeness of this information. All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

The conclusions are based on the site conditions encountered by Stantec at the time the work was performed at the specific testing and/or sampling locations, and conditions may vary among sampling locations. Factors such as areas of potential concern identified in previous studies, site conditions (e.g., utilities) and cost may have constrained the sampling locations used in this assessment. In addition, analysis has been carried out for only a limited number of chemical parameters, and it should not be inferred that other chemical species are not present. Due to the nature of the investigation and the limited data available, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire site. As the purpose of this report is to identify site conditions which may pose an environmental risk; the identification of non-environmental risks to structures or people on the site is beyond the scope of this assessment.

The opinions in this report can only be relied upon as they relate to the condition of the portion of the identified property that was assessed at the time the work was conducted. Activities at the property subsequent to Stantec's assessment may have significantly altered the property's condition. Stantec cannot comment on other areas of the property that were not assessed.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. They are not a certification of the property's environmental condition. This report should not be construed as legal advice.



11.0 REFERENCES

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TABLES

TABLE 1
Soil Sample Analytical Results - Petroleum Hydrocarbons and Volatile Organic Compounds
Lampson Property
131 North Front Street
Central Point, Oregon

Sample ID	Date Sampled	NWTPH-Gx (GRO)	NWTPH-Dx (DRO)	NWTPH-Dx (ORO)	Non-Gasoline Fraction	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyl-toluene	Benzene	Ethylbenzene	Isopropyl-benzene	m,p-Xylene	Naphthalene	n-Butyl-benzene	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene	Toluene	Xylenes, Total
FS-01-8	9/20/2019	112	25.0 U	50.0 U	ND	0.0714 U	0.0714 U	0.0828	0.0143 U	0.192	0.246	0.0714 U	0.143 U	0.224	0.770	0.0357 U	0.103	0.0714 U	0.0714 U
FS-02-8	9/20/2019	222	25.0 U	50.0 U	ND	0.0667 U	0.0667 U	0.116	0.0133 U	0.0540	0.0973	0.0667 U	0.133 U	0.356	0.415	0.0333 U	0.161	0.0667 U	0.0667 U
FS-04-9	9/18/2019	6.11 U	25.0 U	50.0 U	ND	0.0611 U	0.0611 U	0.0611 U	0.0122 U	0.0305 U	0.0611 U	0.0611 U	0.122 U	0.0611 U	0.0305 U	0.0305 U	0.0611 U	0.0611 U	0.0611 U
FS-03-9	9/18/2019	366	28.2 J+	50.0 U	28	0.125 U	2.40	0.259 J	0.111	3.03	0.906	0.125 U	0.392	0.773 J	3.02	0.0626 U	0.367	0.125 U	0.125 U
GP-01-2	9/19/2019	5.06 U	25.0 U	50.0 U	ND	0.117	0.0506 U	0.0506 U	0.0294	0.0474	0.0506 U	0.156	0.101 U	0.0506 U	0.0303	0.0567	0.0506 U	0.129	0.213
GP-01-5	9/19/2019	62.2	25.0 U	50.0 U	ND	0.0606 U	0.0606 U	0.0606 U	0.0132	0.0303 U	0.0606 U	0.0874	0.121 U	0.0606 U	0.0303 U	0.0327	0.0606 U	0.0627	0.120
GP-02-1	9/19/2019	30.7	25.0 U	50.0 U	ND	0.177	0.0546 U	0.0546 U	0.0109 U	0.0273 U	0.0546 U	0.140	0.109 U	0.0546 U	0.0273 U	0.0273 U	0.0546 U	0.0546 U	0.140
GP-02-12	9/19/2019	99.4	25.0 U	50.0 U	ND	2.00	0.593	0.0460 U	0.0432	1.33	0.175	4.62	0.0942	0.0694 J	0.438	1.07	0.0473	0.413	5.69
GP-05-1	9/20/2019	4.91 U	25.0 U	50.0 U	ND	0.0491 U	0.0491 U	0.0491 U	0.00982 U	0.0246 U	0.0491 U	0.0491 U	0.0982 U	0.0491 U	0.0246 U	0.0246 U	0.0491 U	0.0491 U	0.0491 U
GP-05-8	9/20/2019	249	25.0 U	50.0 U	ND	0.343	2.99	0.114 J	0.0224 U	2.25	0.509	2.47	0.647	0.328 J	1.67	0.0560 U	0.158	0.112 U	2.47
GP04-1	9/20/2019	5.72 U	25.0 U	600	600	0.0572 U	0.0572 U	0.0572 U	0.0114 U	0.0286 U	0.0572 U	0.0572 U	0.114 U	0.0572 U	0.0286 U	0.0286 U	0.0572 U	0.0572 U	0.0572 U
GP04-12	9/20/2019	67.6	25.0 U	50.0 U	ND	0.0549 U	0.0549 U	0.0549 U	0.0110 U	0.0275 U	0.0890	0.0549 U	0.110 U	0.148	0.245	0.0275 U	0.0692	0.0549 U	0.0549 U
GP03-2	9/20/2019	5.73 U	25.0 U	50.0 U	ND	0.0573 U	0.0573 U	0.0573 U	0.0115 U	0.0286 U	0.0573 U	0.0573 U	0.115 U	0.0573 U	0.0286 U	0.0286 U	0.0573 U	0.0573 U	0.0573 U
GP03-8	9/20/2019	324 J	58.3	170	228	1.36 J	2.84 J	0.131 J	0.0774	1.60 J	0.446	0.720 J	1.33 J	0.391 J	1.38 J	0.0647 U	0.162	0.129 U	0.720 J
GP-X (FD of GP-03-8)	9/17/2019	655 J	31.0	63.6	95	2.87 J	5.03 J	0.228 J	0.203	3.06 J	0.819	1.61 J	2.25 J	0.646 J	2.41 J	0.0647 U	0.263	0.129 U	1.61 J
GP06-2	9/17/2019	5.56 U	25.0 U	50.0 U	ND	0.0556 U	0.0556 U	0.0556 U	0.0111 U	0.0278 U	0.0556 U	0.0556 U	0.111 U	0.0556 U	0.0278 U	0.0278 U	0.0556 U	0.0556 U	0.0556 U
GP06-6	9/18/2019	4.74 U	25.0 U	50.0 U	ND	0.0474 U	0.0474 U	0.0474 U	0.00947 U	0.0237 U	0.0474 U	0.0474 U	0.0947 U	0.0474 U	0.0237 U	0.0237 U	0.0474 U	0.0474 U	0.0474 U
UST-01-T2-NB	9/18/2019	8020 J	339	50.0 U	339	219 J	11.8 J	3.74 J	0.724	87.3 J	13.0 J	137 J	20.8 J	11.2 J	52.9 J	1.40	4.93	1.04 U	138 J
UST-02-T2-SB	9/18/2019	4900	574	483	1,057	101	31.4	1.30 J	0.849	38.5	4.46	182	12.3	3.16 J	13.2	0.976	1.59	1.06 U	183
UST-03-T2-SE	9/18/2019	2360	238	257	495	55.4	4.37	1.08 U	0.216 U	13.0	2.33	29.3	8.16	2.51	6.98	3.08	1.18	1.08 U	32.4
UST-04-T1-NB	9/18/2019	3280	376	50.0 U	376	118	4.46	1.60 J	0.619	33.5	5.48	63.3	10.8	3.92	18.6	0.519 U	2.03	1.04 U	63.3
UST-05-T1-SB	9/20/2019	1560	129	50.0 U	129	58.0	1.06 U	1.69	0.212 U	3.60	2.10	4.63	2.12 U	4.68	10.0	0.531 U	2.36	1.06 U	4.63
UST-06-T1-SW	9/19/2019	3240	746	117	863	122	14.9	1.32 J	0.219 U	36.6	5.30	96.0	13.3	4.16	18.5	0.547 U	2.09	1.09 U	96.0
A43-Stockpile	10/3/2019	1350	--	--	--	--	--	--	0.0165 U	0.667	--	--	3.13	--	--	--	--	0.0824 U	0.0824 U
A44-Stockpile	10/3/2019	1760	--	--	--	--	--	--	0.0210 U	0.780	--	--	1.38	--	--	--	--	0.105 U	0.105 U
Clean Fill Screening Values		31	1,100	NA	NA	10	11	NA	0.023	0.22	96	11	0.077	190	72	1	350	23	1.4
Occupational Direct Contact RBC		15,000	16,000		16,000	6,900	6,900	NA	37	150	57,000	NA	23	NA	NA	NA	NA	88,000	25,000
Construction Worker Direct Contact RBC		5,800	5,800		5,800	2,900	2,900	NA	380	1,700	27,000	NA	580	NA	NA	NA	NA	28,000	20,000
Excavation Worker Direct Contact RBC		>Max	>Max		>Max	81,000	81,000	NA	11,000	49,000	750,000	NA	16,000	NA	NA	NA	NA	770,000	560,000
Occupational Volatilization to Outdoor Air RBC		69,000	>Max		>Max	>Csat	>Csat	NA	50	160	>Csat	NA	83	NA	NA	NA	NA	>Csat	>Csat
Occupational Vapor Intrusion into Buildings RBC		>Max	>Max		>Max	>Csat	>Csat	NA	2.1	17	>Csat	NA	83	NA	NA	NA	NA	>Csat	>Csat

Notes:

All results expressed as milligrams per kilogram

Volatile organic compound results not included in this table were non-detect for all samples analyzed

bold = indicates concentrations detected above method reporting limits

shaded gray = indicates concentration exceeds clean fill screening value

highlighted yellow = indicates concentration exceeds one or more potentially applicable RBCs

>Csat = The soil RBC exceeds the limit of three-phase partitioning

>Max = Substance is deemed not to pose a risk at any concentration

-- = sample not analyzed

FD = field duplicate

ND = not detected

NA = Not Available, no screening value is listed for this analyte

Non-gasoline fraction = Sum of DRO and ORO

RBCs listed for m,p-xylene and o-xylene are for total xylenes

J = The result is an estimated value; "--" indicates a potential low bias, "+" indicates a potential high bias

U = Not detected, the associated value is the method reporting limit

Clean Fill Screening Values, Oregon DEQ April 2019 revision

RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision

RBCs for GRO and DRO/ORO based on site-specific calculations using volatile and extractible petroleum hydrocarbon testing results

TABLE 2
Soil Sample Analytical Results - Volatile and Extractable Petroleum Hydrocarbons
Lampson Property
131 North Front Street
Central Point, Oregon

Sample ID	Date Sampled	NWVPH - Volatile Petroleum Hydrocarbons														NWEPH - Extractable Petroleum Hydrocarbons									
		Aliphatic Hydrocarbon (C5-C6)	Aliphatic Hydrocarbon (C6-C8)	Aliphatic Hydrocarbon (C9-C10)	Aliphatic Hydrocarbon (C10-C12)	Aromatic Hydrocarbon (C9-C10)	Aromatic Hydrocarbon (C10-C12)	Aromatic Hydrocarbon (C12-C13)	Benzene	Ethylbenzene	m,p-Xylene	Methyl tert-butyl ether	Naphthalene	o-Xylene	Toluene	Aliphatic Hydrocarbon (C8-C10)	Aliphatic Hydrocarbon (C10-C12)	Aliphatic Hydrocarbon (C12-C15)	Aliphatic Hydrocarbon (C16-C21)	Aliphatic Hydrocarbon (C21-C24)	Aromatic Hydrocarbon (C9-C10)	Aromatic Hydrocarbon (C10-C12)	Aromatic Hydrocarbon (C12-C16)	Aromatic Hydrocarbon (C16-C21)	Aromatic Hydrocarbon (C21-C24)
UST-02-T2-SB	9/18/2019	175 J	327 J	96.5 J	71.6 J	199 J	200 J	182 J	1.22 J	38.5 J	76.0 J	0.0756 UJ	21.4 J	8.49 J	10.6 J	342	192	60.7	16.2	33.3 J*	184 J*	163 J*	74.6 J	26.7 J	1.69 UJ
UST-06-T1-SW	9/18/2019	127 J	387 J	163 J	109 J	394 J	373 J	181 J	1.02 J	40.9 J	122 J	0.0815 UJ	22.4 J	5.00 J	9.93 J	104	73.1	163	134	2.38 U	93.5 J*	99.7	71.9 J*	78.1 J*	1.67 U

Notes:
All results expressed as milligrams per kilogram
bold = indicates concentrations detected above method reporting limits
J = The result is an estimated value; "-" indicates a potential low bias, "+" indicates a potential high bias
U = Not detected, the associated value is the method reporting limit
UJ = Not detected; the associated method reporting limit is approximate

TABLE 3
Soil Sample Analytical Results - Metals
Lampson Property
131 North Front Street
Central Point, Oregon

Sample ID	Date Sampled	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
FS-01-8	9/20/2019	9.49	146	0.269 U	70.3	8.59	0.137	1.34 U	0.269 U
FS-02-8	9/20/2019	1.73	110	0.281 U	49.5	3.25	0.377	1.41 U	0.281 U
FS-04-9	9/18/2019	3.80	80.8	0.233 U	36.1	3.16	0.174	1.17 U	0.233 U
FS-03-9	9/18/2019	16.3	152	0.258 U	64.7	7.39	0.139	1.29 U	0.258 U
GP-01-2	9/19/2019	3.00	140	0.582	28.0	24.8	0.101 U	1.27 U	0.253 U
GP-01-5	9/19/2019	1.23 U	99.9	0.245 U	46.9	2.38	0.117	1.23 U	0.245 U
GP-02-1	9/19/2019	5.66	126	0.262 U	38.4	3.84	0.105 U	1.31 U	0.262 U
GP-02-12	9/19/2019	1.82	108	0.244 U	35.4	3.57	0.649	1.22 U	0.244 U
GP-05-1	9/20/2019	2.94	97.4	0.208 U	33.7	2.93	0.0830 U	1.04 U	0.208 U
GP-05-8	9/20/2019	13.0	146	0.238 U	56.6	7.35	0.164	1.19 U	0.238 U
GP04-1	9/20/2019	3.49	119	0.224 U	41.3	322	1.58	1.12 U	0.224 U
GP04-12	9/20/2019	11.0	171	0.254 U	60.6	38.0	0.155	1.27 U	0.254 U
GP03-2	9/20/2019	4.19	97.3	0.219 U	52.5	2.30	0.0876 U	1.10 U	0.219 U
GP03-8	9/20/2019	7.77	130	0.256 U	64.2	5.57	0.147	1.28 U	0.256 U
GP-X (FD of GP-03-8)	9/17/2019	5.34	142	0.240 U	63.6	5.09	0.146	1.20 U	0.240 U
GP06-2	9/17/2019	3.30	126	0.253 U	29.7	28.2	0.101 U	1.27 U	0.253 U
GP06-6	9/18/2019	5.52	95.3	0.242 U	30.9	1.87	0.0969 U	1.21 U	0.242 U
UST-01-T2-NB	9/18/2019	--	--	0.241 U	37.0	0.0500 U	--	--	--
UST-02-T2-SB	9/18/2019	--	--	0.263 U	27.2	0.0500 U	--	--	--
UST-03-T2-SE	9/18/2019	--	--	0.247 U	25.2	0.0500 U	--	--	--
UST-04-T1-NB	9/18/2019	--	--	0.237 U	36.3	0.0500 U	--	--	--
UST-05-T1-SB	9/20/2019	--	--	0.238 U	29.8	0.0500 U	--	--	--
UST-06-T1-SW	9/19/2019	--	--	0.251 U	28.9	0.0500 U	--	--	--
Clean Fill/Background Screening Values		12	630	0.52	890	36	0.17	0.8	0.16
Occupational Direct Contact RBC		1.9	220,000	1,100	>Max	800	350	NA	5,800
Construction Worker Direct Contact RBC		15	69,000	350	530,000	800	110	NA	1,800
Excavation Worker Direct Contact RBC		420	>Max	9,700	>Max	800	2,900	NA	49,000
Occupational Volatilization to Outdoor Air RBC		NV	NV	NV	NV	NV	NV	NA	NV
Occupational Vapor Intrusion into Buildings RBC		NV	NV	NV	NV	NV	NV	NA	NV

Notes:

All results expressed as milligrams per kilogram

bold = indicates concentrations detected above method reporting limits

shaded gray = indicates concentration exceeds clean fill screening value

highlighted yellow = indicates concentration exceeds background and one or more potentially applicable RBCs

>Max = Substance is deemed not to pose a risk at any concentration

-- = sample not analyzed

FD = field duplicate

NV = Undicates chemical is non-volatile

NA = Not Available, no screening value is listed for this analyte

U = Not detected, the associated value is the method reporting limit

Clean Fill/Background Screening Values (Klamath Mountains), Oregon DEQ April 2019 revision

RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision

TABLE 4
Soil Sample Analytical Results - Polycyclic Aromatic Hydrocarbons
Lampson Property
131 North Front Street
Central Point, Oregon

Sample ID	Date Sampled	1-Methyl-naphthalene	2-Methyl-naphthalene	Benz(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo[g,h,j]-perylene	Benzo(k)-fluoranthene	Chrysene	Dibenzo-furan	Fluoranthene	Fluorene	Indeno(1,2,3-cd)-pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo[a]-pyrene TEQ
FS-01-8	9/20/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FS-02-8	9/20/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FS-04-9	9/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FS-03-9	9/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-01-2	9/19/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-01-5	9/19/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-02-1	9/19/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-02-12	9/19/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-05-1	9/20/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-05-8	9/20/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP04-1	9/20/2019	0.0102 U	0.0102 U	0.0102 U	0.0102 U	0.0102 U	0.0229	0.0102 U	0.0102 U	--	0.0102 U	0.0102 U	0.0102 U	0.0102 U	0.0102 U	0.0102 U	0.000229
GP04-12	9/20/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP03-2	9/20/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP03-8	9/20/2019	0.136 J	0.343 J	0.0122 U	0.0122 U	0.0122 U	0.0122 U	0.0122 U	0.0122 U	--	0.0122 U	0.0122 U	0.0122 U	0.314 J	0.0126	0.0122 U	ND
GP-X (FD of GP-03-8)	9/17/2019	0.197 J	0.453 J	0.0119 U	0.0119 U	0.0119 U	0.0119 U	0.0119 U	0.0119 U	--	0.0119 U	0.0119 U	0.0119 U	0.432 J	0.0123	0.0119 U	ND
GP06-2	9/17/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP06-6	9/18/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UST-01-T2-NB	9/18/2019	3.11	5.76	0.0108 U	0.0108 U	0.0108 U	0.0108 U	0.0108 U	0.0108 U	--	0.0119	0.169	0.0108 U	6.66	0.239	0.0185	ND
UST-02-T2-SB	9/18/2019	3.78	7.40	0.0117 U	0.0117 U	0.0117 U	0.0117 U	0.0117 U	0.0117 U	--	0.0118	0.153	0.0117 U	7.68	0.248	0.0192	ND
UST-03-T2-SE	9/18/2019	3.23	5.97	0.0117 U	0.0117 U	0.0117 U	0.0117 U	0.0117 U	0.0117 U	--	0.0158	0.146	0.0117 U	5.24	0.258	0.0232	ND
UST-04-T1-NB	9/18/2019	5.03	9.15	0.0120 U	0.0120 U	0.0120 U	0.0120 U	0.0120 U	0.0120 U	--	0.0207	0.292	0.0120 U	10.3	0.426	0.0315	ND
UST-05-T1-SB	9/20/2019	0.874	1.72	0.0111 U	0.0111 U	0.0111 U	0.0111 U	0.0111 U	0.0111 U	--	0.0111 U	0.0781	0.0111 U	0.276	0.108	0.0111 U	ND
UST-04-T1-NB	9/18/2019	5.03	9.15	0.0120 U	0.0120 U	0.0120 U	0.0120 U	0.0120 U	0.0120 U	--	0.0207	0.292	0.0120 U	10.3	0.426	0.0315	ND
A43-Stockpile	10/3/2019	0.540	0.890	0.0504	0.0561	0.0986	0.0606	0.0331	0.0750	0.0497	0.0969	0.139	0.0522	0.0288	0.312	0.129	0.077
A44-Stockpile	10/3/2019	1.55	2.45	0.0326	0.0304	0.0523	0.0296	0.0174	0.0434	0.0107 U	0.0625	0.323	0.0273	1.22	0.751	0.0806	0.042
Clean Fill Screening Values		0.36	11	0.73	0.11	1.1	25	11	3.1	0.002	10	3.7	1.1	0.077	NA	10	0.11
Occupational Direct Contact RBC		NA	NA	21	2.1	21	NA	210	2,100	NA	30,000	47,000	21	23	NA	23,000	2.1
Construction Worker Direct Contact RBC		NA	NA	170	17	170	NA	1,700	17,000	NA	10,000	14,000	170	580	NA	7,500	17
Excavation Worker Direct Contact RBC		NA	NA	4,800	490	4,900	NA	49,000	490,000	NA	280,000	390,000	4,900	16,000	NA	210,000	490
Occupational Volatilization to Outdoor Air RBC		NA	NA	>Csat	NV	NV	NA	NV	NV	NA	NV	>Csat	NA	83	NA	>Max	NV
Occupational Vapor Intrusion into Buildings RBC		NA	NA	>Csat	NV	NV	NA	NV	NV	NA	NV	>Csat	NA	83	NA	>Max	NV

Notes:
All results expressed as milligrams per kilogram
bold = indicates concentrations detected above method reporting limits
shaded gray = indicates concentration exceeds clean fill screening value
>Csat = The soil RBC exceeds the limit of three-phase partitioning
>Max = Substance is deemed not to pose a risk at any concentration
-- = sample not analyzed
FD = field duplicate
NA = Not Available, no screening value is listed for this analyte.
ND = No carcinogenic PAHs were detected in this sample
TEQ = Toxic Equivalence Quotient

J = The result is an estimated value.
U = Not detected, the associated value is the method reporting limit

Clean Fill Screening Values, Oregon DEQ April 2019 revision
RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision

TABLE 5
Groundwater Sample Analytical Results - Petroleum Hydrocarbons and Volatile Organic Compounds
Lampson Property
131 North Front Street
Central Point, Oregon

Sample ID	Date Sampled	NWTPH-Gx (GRO)	NWTPH-Dx (DRO)	NWTPH-Dx (ORO)	1,2,4-Trimethyl-benzene	1,2-Dichloro-ethane	1,3,5-Trimethyl-benzene	4-Isopropyl-toluene	Acetone	Benzene	Chloroform	Ethyl-benzene	Isopropyl-benzene	m,p-Xylene	Methyl tert-butyl ether	Naphthalene	n-Butyl-benzene	n-Propyl-benzene	o-Xylene	sec-Butyl-benzene	Toluene
GP02	9/18/2019	2,460 J	322 J	556 U	82.5 J+	159 J	22.0	1.89 J+	40.0 U	6.25 J+	1.00 U	41.3	5.83	143 J+	5.73	10.1 J+	2.86 J+	13	45.3	1.81	16.4
GP-03	9/20/2019	1,110	241	426 U	14.3	2.58	8.72	1.00 U	56.5	35.8	1.00 U	19.9	2.23	19.3	1.00 U	10.1	1.00 U	3.75	0.982	1.00 U	1.00 U
GP-04	9/19/2019	613	282 U	563 U	6.04	0.400 U	3.04	1.00 U	25.1	1.43	1.00 U	24.5	3.66	20.1	1.00 U	4.26	1.15 J	8.81	0.842	1.00 U	3.29
GP05	9/19/2019	232	233 U	465 U	1.00 U	0.400 U	5.49	1.00 U	20 U	0.200 U	1.00 U	8.53	1.44	7.68	1.00 U	0.200 U	1.00 U	4.23	0.500 U	1.00 U	1.00 U
GP-06	9/19/2019	925	211 U	421 U	1.00 U	0.860	1.00 U	1.00 U	34.3	20.6	1.00 U	2.84	2.55	4.00	1.00 U	2.00 U	1.00 U	1.56	0.500 U	2.60	1.38
GP-Y (FD of GP-06)	9/19/2019	1,040	270 U	541 U	1.00 U	0.784	1.00 U	1.00 U	32.6	20.0	1.00 U	2.91	2.67	4.24	1.00 U	2.00 U	1.00 U	1.61	0.500 U	2.90	1.35
EQ-092019	9/19/2019	100 U	202 U	404 U	1.00 U	0.400 U	1.00 U	1.00 U	20.0 U	0.200 U	5.68	0.500 U	1.00 U	1.00 U	1.00 U	0.200 U	1.00 U	0.500 U	0.500 U	1.00 U	1.00 U
TB-091919	9/19/2019	--	--	--	1.00 U	0.400 U	1.00 U	1.00 U	20.0 U	0.200 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	0.500 U	0.500 U	1.00 U	1.00 U
TB-092319-1	9/19/2019	--	--	--	1.00 U	0.400 U	1.00 U	1.00 U	20.0 U	0.200 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	0.200 U	1.00 U	0.500 U	0.500 U	1.00 U	1.00 U
Occupational Volatilization to Outdoor Air RBC		>S	>S	>S	>S	9,000	>S	NA	NA	14,000	6,300	43,000	>S	>S	1,500,000	16,000	NA	NA	>S	NA	>S
Occupational Vapor Intrusion into Buildings RBC		>S	>S	>S	>S	3,900	>S	NA	NA	2,800	1,600	8,200	>S	>S	870,000	11,000	NA	NA	>S	NA	>S
Construction and Excavation Worker Groundwater in Excavation RBC		22,000	22,000	22,000	6,300	630	7,500	NA	NA	1,800	720	4,500	51,000	23,000	63,000	500	NA	NA	23,000	NA	220,000

Notes:

All results expressed as micrograms per liter

Volatile organic compound results not included in this table were non-detect for all samples analyzed

bold = indicates concentrations detected above method reporting limits

>S = This RBC exceeds the solubility limit, and does not pose an unacceptable risk provided free product is not present

-- = sample not analyzed

FD = field duplicate

NA = Not Available, no RBC screening value is listed for this analyte

RBCs listed for m,p-xylene and o-xylene are for total xylenes

J = The result is an estimated value; "+" indicates a potential high bias

U = Not detected, the associated value is the method reporting limit

RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision

TABLE 6
Groundwater Sample Analytical Results - Metals
Lampson Property
131 North Front Street
Central Point, Oregon

Sample ID	Date Sampled	Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver	
		Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
GP02	9/18/2019	17.7	2.15	826	110	0.38	0.200 U	320	1.00 U	26.9	0.24	1.29	0.0800 U	1.00 U	1.00 U	0.22	0.200 U
GP-03	9/20/2019	45.6	1.97	1040	185	1.00 U	0.200 U	327	4.99	23.8	0.646	0.730	0.0800 U	5.00 U	1.00 U	1.00 U	0.200 U
GP-04	9/19/2019	40.2	3.08	858	111	1.00 U	0.200 U	314	1.00 U	462	1.69	1.08	0.0800 U	5.00 U	1.00 U	1.00 U	0.200 U
GP05	9/19/2019	106	36.6	4620	549	1.66	2.00 U	1590	277	144	19.2	11.0	1.33	1.66	10 U	1.58	2.00 U
GP-06	9/19/2019	17.1	1.75	404 J	126	1.00 U	0.200 U	73.3 J	1.00 U	9.96 J	0.200 U	0.400 U	0.0800 U	5.00 U	1.00 U	1.00 U	0.200 U
GP-Y (FD of GP-06)	9/19/2019	25.7	1.79	566 J	131	1.00 U	0.200 U	123 J	1.00 U	15.1 J	0.200 U	0.419	0.0800 U	5.00 U	1.00 U	1.00 U	0.200 U
EQ-092019	9/19/2019	1.00 U	1.00 U	1.00 U	1.00 U	0.2 U	0.200 U	1.00 U	1.00 U	0.2 U	0.200 U	0.0800 U	0.0800 U	1.00 U	1.00 U	0.200 U	0.200 U
Occupational Volatilization to Outdoor Air RBC		NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NA	NA	NV	NV
Occupational Vapor Intrusion into Buildings RBC		NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NA	NA	NV	NV
Construction and Excavation Worker Groundwater in Excavation RBC		6,300	6,300	>S	>S	130,000	130,000	>S	>S	>S	>S	>S	>S	NA	NA	1,100,000	1,100,000

Notes:

All results expressed as micrograms per liter

bold = indicates concentrations detected above method reporting limits

FD = field duplicate

NV = Indicates chemical is non-volatile

NA = Not Available, no RBC screening value is listed for this analyte.

J = The result is an estimated value; "+" indicates a potential high bias

U = Not detected, the associated value is the method reporting limit

RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision.

TABLE 7
Groundwater Sample Analytical Results - Polycyclic Aromatic Hydrocarbons
Lampson Property
131 North Front Street
Central Point, Oregon

Sample ID	Date Sampled	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Naphthalene	Phenanthrene	Benzo[a]-pyrene TEQ
GP02	9/18/2019	3.41	5.17	0.0444 U	9.89	0.0444 U	0
GP-03	9/20/2019	1.53	2.69	0.0492	9.19	0.0860	0
GP-04	9/19/2019	--	--	--	--	--	--
GP05	9/19/2019	--	--	--	--	--	--
GP-06	9/19/2019	--	--	--	--	--	--
GP-Y (FD of GP-06)	9/19/2019	--	--	--	--	--	--
EQ-092019	9/19/2019	--	--	--	--	--	--
Occupational Volatilization to Outdoor Air RBC		NA	NA	>S	16,000	NA	NV
Occupational Vapor Intrusion into Buildings RBC		NA	NA	>S	11,000	NA	NV
Construction and Excavation Worker Groundwater in Excavation RBC		NA	NA	>S	500	NA	>S

Notes:

All results expressed as micrograms per liter

bold = indicates concentrations detected above method reporting limits

-- = sample not analyzed

FD = field duplicate

NA = Not Available, no screening value is listed for this analyte.

NV = Indicates chemical is non-volatile

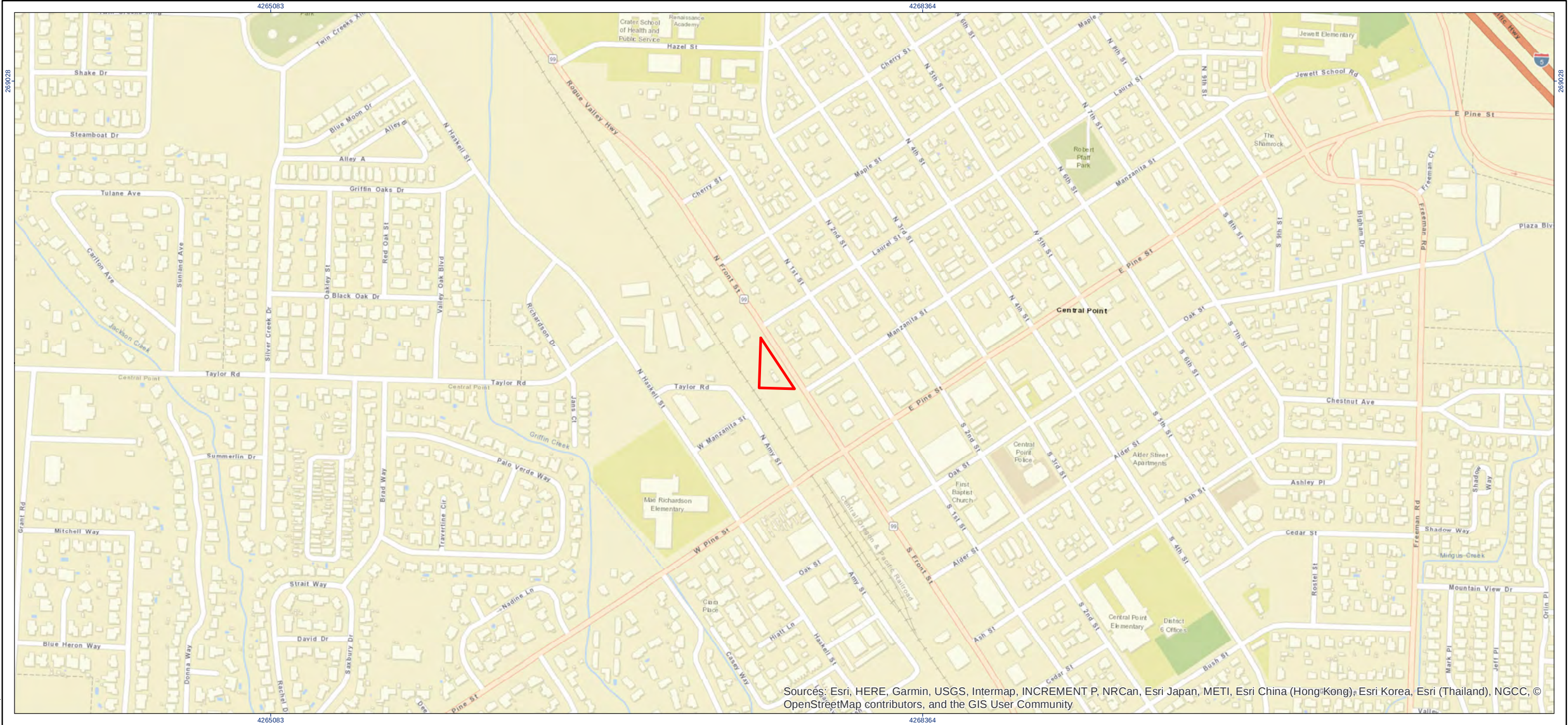
>S = This RBC exceeds the solubility limit. Groundwater concentrations in excess of S indicate that free product may be present.

TEQ = Toxic Equivalence Quotient

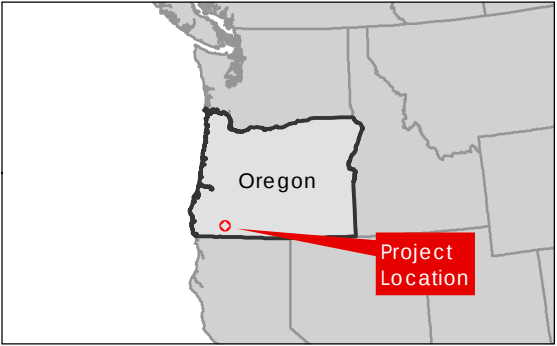
U = Not detected, the associated value is the method reporting limit

RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision

FIGURES

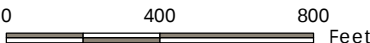


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



Legend

 Approximate Property Area



0 400 800 Feet

1:6,000 (At original document size of 11x17)



Project Location	185750581
131 North Front Street	Prepared by DH on 2019-02-14
Central Point, Oregon	Technical Review by LF on 2019-02-20
	Independent Review by RM on 2019-02-20
Client/Project	
Rogue Valley COG	
Lampson Property	
Phase II ESA	
Figure No.	
1	
Title	

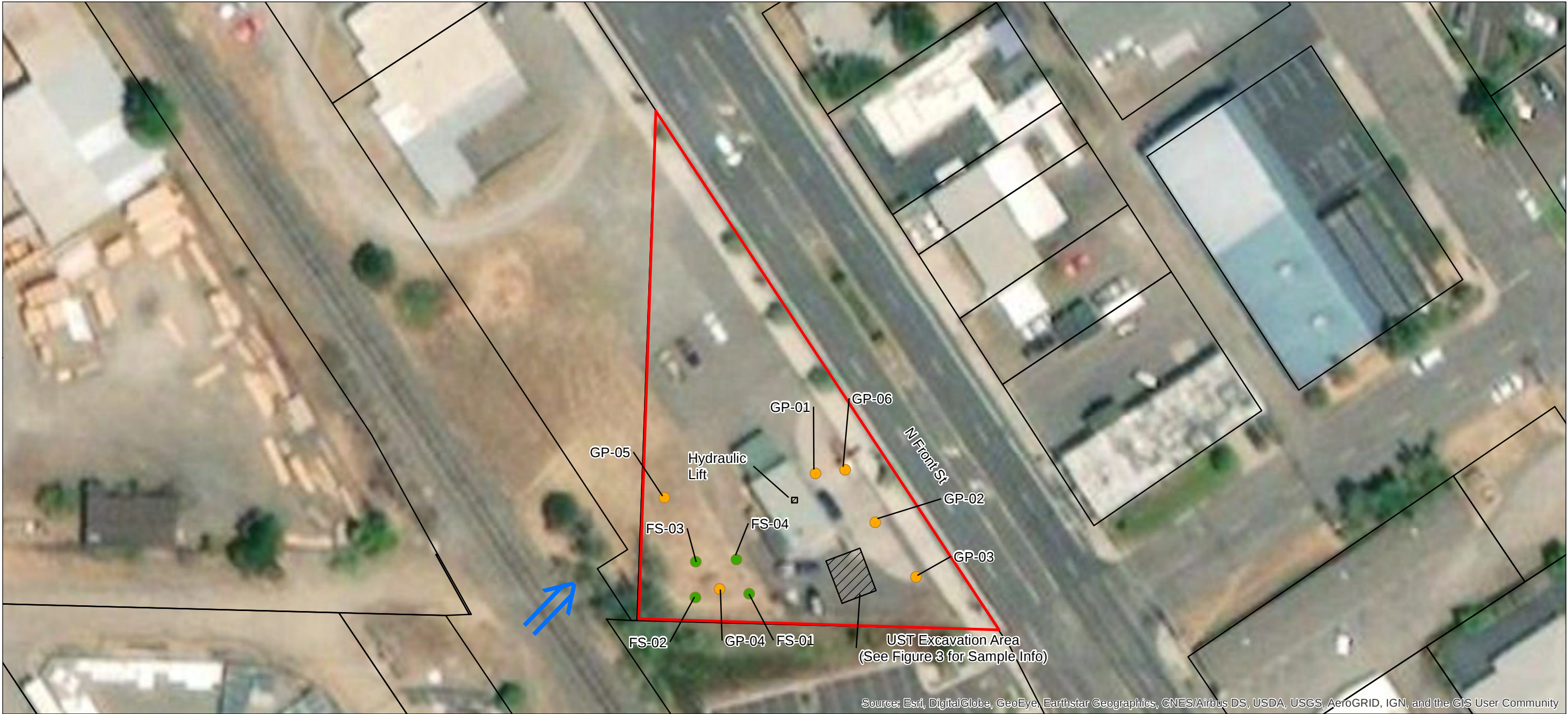
Notes

1. Coordinate System: NAD 1983 2011 StatePlane Oregon South FIPS 3602 Ft Intl

2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

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Property Location Map



Legend

- Approximate Property Area
- Tax Lots
- Geoprobe Sampling Boring Location
- Geoprobe Field Screening Boring Location
- ➡ Groundwater Flow Direction

0 40 80 Feet
1:600 (At original document size of 11x17)



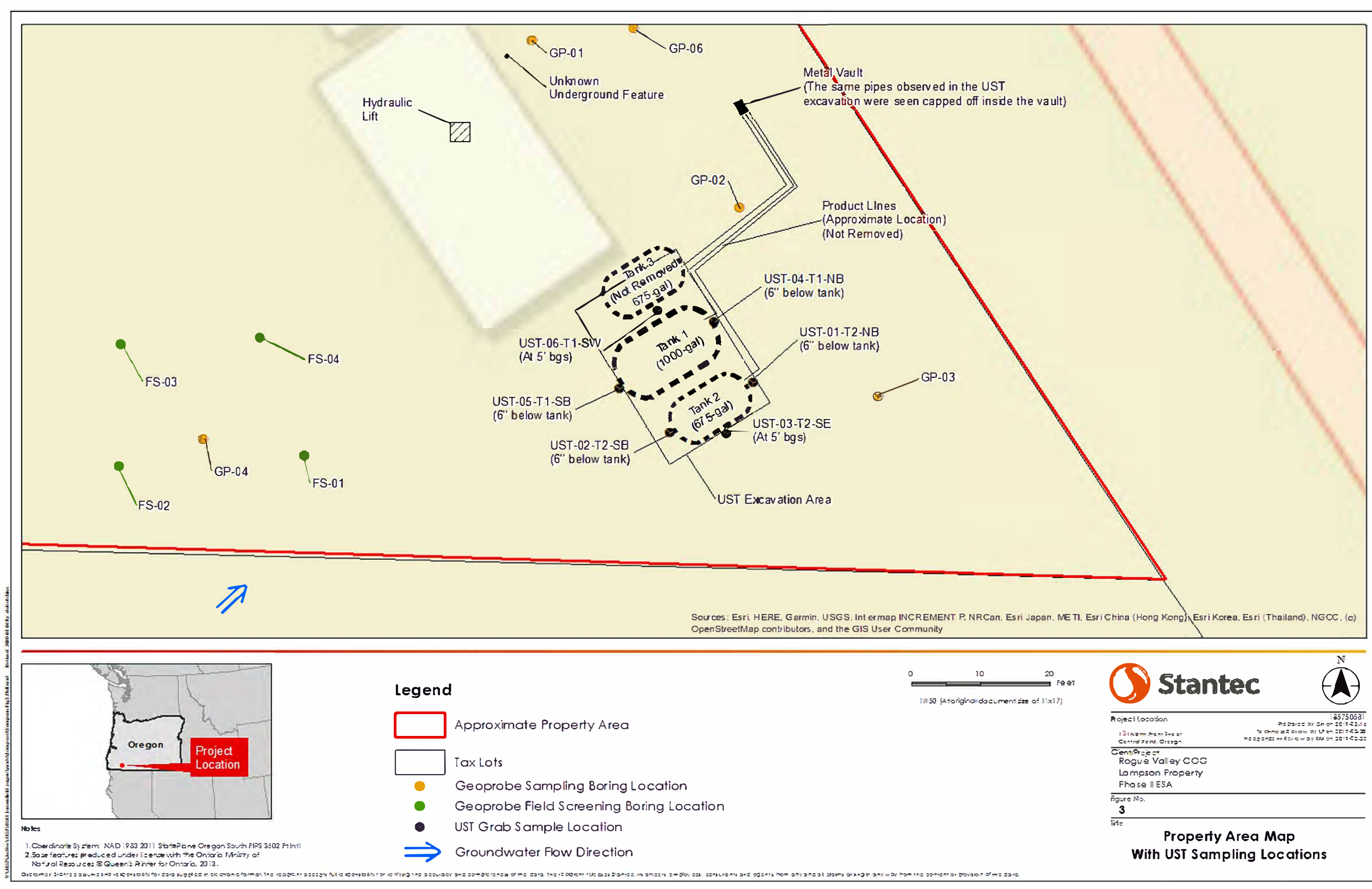
Project Location		185750581
131 North Front Street		Prepared by DH on 2019-02-14
Central Point, Oregon		Technical Review by LF on 2019-02-20
Independent Review by RM on 2019-02-20		
Client/Project		
Rogue Valley COG		
Lampson Property		
Phase II ESA		
Figure No.		
2		
Title		

Property Area Map With Sampling Locations

Notes

1. Coordinate System: NAD 1983 2011 StatePlane Oregon South FIPS 3602 Ft Intl
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

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Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



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- Legend**
- Approximate Property Area
 - Tax Lots
 - Geoprobe Sampling Boring Location
 - Geoprobe Field Screening Boring Location
 - UST Grab Sample Location
 - Groundwater Flow Direction



Project Location Prepared by: JH on 2017-03-16
1311 Main Street
Central Falls, Oregon
Reviewed by: JH on 2017-03-16
Revised by: JH on 2017-03-16

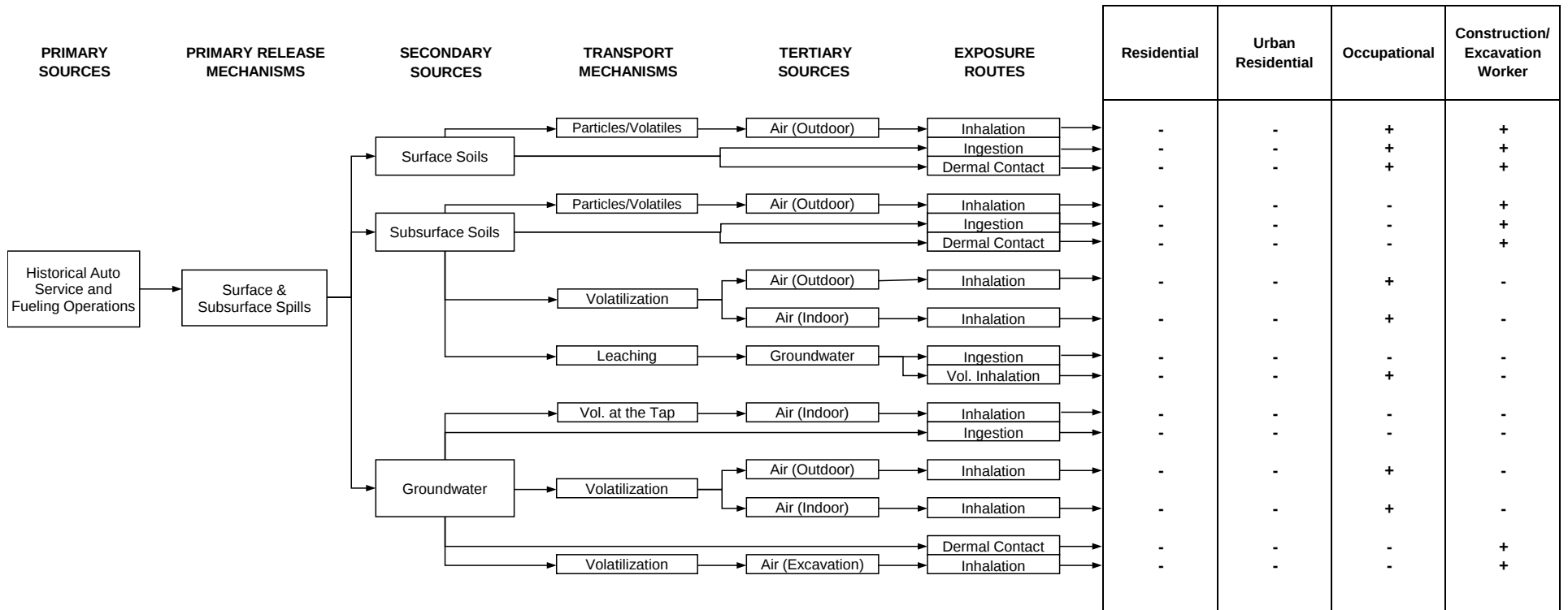
Client
Rogue Valley COG
Lampson Property
Phase II ESA

Figure No.
3

Title

**Property Area Map
With UST Sampling Locations**

FIGURE 4
Lampson Property
131 North Front Street, Central Point, Oregon

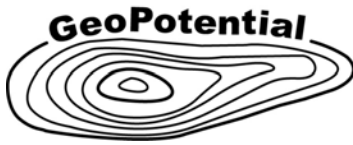


Notes:

- + This route is a primary source of exposure.
- There is no exposure by this route.

APPENDIX A

Geopotential Geophysical Survey Report



ENVIRONMENTAL & EXPLORATION GEOPHYSICS

330 Creekside Terrace, Fairview, OR 97024 Phone: (503) 912-6441 Fax: (503) 912-6448
WEB <http://www.geopotential.biz/> E-MAIL GeoPotential@geopotential.biz

SUMMARY REPORT

***SUBSURFACE MAPPING SURVEY
TO DETECT
UNDERGROUND STORAGE TANKS***

***Taylor Lampson Site
431 North Front Street
Central Point, Oregon***

CLIENT

***Stantec
225 NE Hillcrest Drive Suite 5
Grants Pass, OR 97526***

DATE OF SURVEY

June 26, 2019

GeoPotential Project Number: 1050

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Survey Objectives.....	3
Survey Site	3
Survey Equipment	4
Procedure.....	4
Results	4
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SUMMARY

A Subsurface Mapping Survey (SMS) was conducted over the portions of the Taylor Lampson Property located at 1313 North Front Street in Central Point, Oregon to search for possible Underground Storage Tanks (USTS). In addition a Subsurface Clearance Survey was conducted over proposed boring locations.

A Ground Penetrating Radar (GPR) Survey and hand held magnetic and electromagnetic scanners were used for the project.

Two USTS were detected in the area covered by the SMS. One former hydraulic lift was also detected.

INTRODUCTION

Ralph Soule & Tarek Zaher of GeoPotential conducted the Subsurface Mapping Survey. Dana Hutchins was the representative for Stantec. Fieldwork was conducted on June 26, 2019. The report was completed and e-mailed to Stantec on July 1, 2019.

Subsurface mapping surveys are geophysical surveys utilizing geophysical methods and data to detect and locate natural and manmade subsurface features. Magnetic Surveys are used to detect and map the locations of buried **ferrous** (iron-bearing) objects. Ground Penetrating Radar (GPR) Surveys are used to map both natural and manmade subsurface features such as USTs, utilities, backfilled pits, etc. (see Appendix A.). Pipe and cable locators are used to map the locations of buried utilities and piping.

Once subsurface ferrous objects are detected from a magnetic survey then hand held scanners and GPR surveys are used to map the locations, depths, sizes and shapes of the objects.

SURVEY OBJECTIVES

The objectives of this subsurface mapping survey were:

1. Search for USTS.
2. Search for a buried hydraulic lift.
3. Conduct a Subsurface Clearance Survey over proposed boring locations.

SURVEY SITE

The survey Site consisted of an asphalt and gravel covered parking lot and surrounding landscaped areas (see Figures). Surface features include two apparent UST fill ports and a former pump island.

SURVEY EQUIPMENT

The following geophysical instruments were used to conduct the survey:

- Mala RAMAC Ground Penetrating Radar System with a 450 MHz antenna (GPR Survey).
- Schonstedt GA52 Magnetic Gradiometer.
- Aqua-Tronics A6 Pipe & Cable locator.
- Heath Sure Lock pipe & Cable locator.

This equipment and the procedures used to meet the survey objectives of this project have been proven effective in detecting metallic objects and mapping non-metallic features such as disturbed soil from backfilled pits.

Geophysical techniques are excellent at detecting changes in the subsurface caused by natural and manmade objects; however, they are poor at actually identifying subsurface features. Complementary methods may be used to assist in the interpretation; however, the only sure way of identifying a buried feature is by excavation.

Brief descriptions of the magnetic method and the radar method are included in the Appendices.

PROCEDURE

Ground Penetrating Radar Surveys

Over areas that contained suspect USTs GPR Profiles were acquired using a 450 MHz antenna. The data were processed and interpreted to locate USTS as discussed below. An area on the interior of the building was surveyed for a buried hydraulic lift.

Pipe and Cable Survey

Hand held magnetic and electromagnetic scanners were used to help identify USTs and map piping.

Subsurface Clearance Survey

Proposed boring locations were surveyed with GPR and pipe and cable locating instruments. When subsurface obstructions were encountered the borings were relocated to a nearby cleared area.

RESULTS

Results were marked on the Site with marking paint and are shown on Figures 2.

Two 4X8 feet (675 gallon USTS) were mapped. Piping running from the USTS were also mapped and may be product, vent or electrical cables.

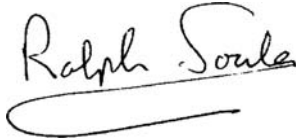
The location of a former hydraulic lift inside of the building was mapped.

Proposed bore hole locations were cleared for boring.

LIMITATIONS

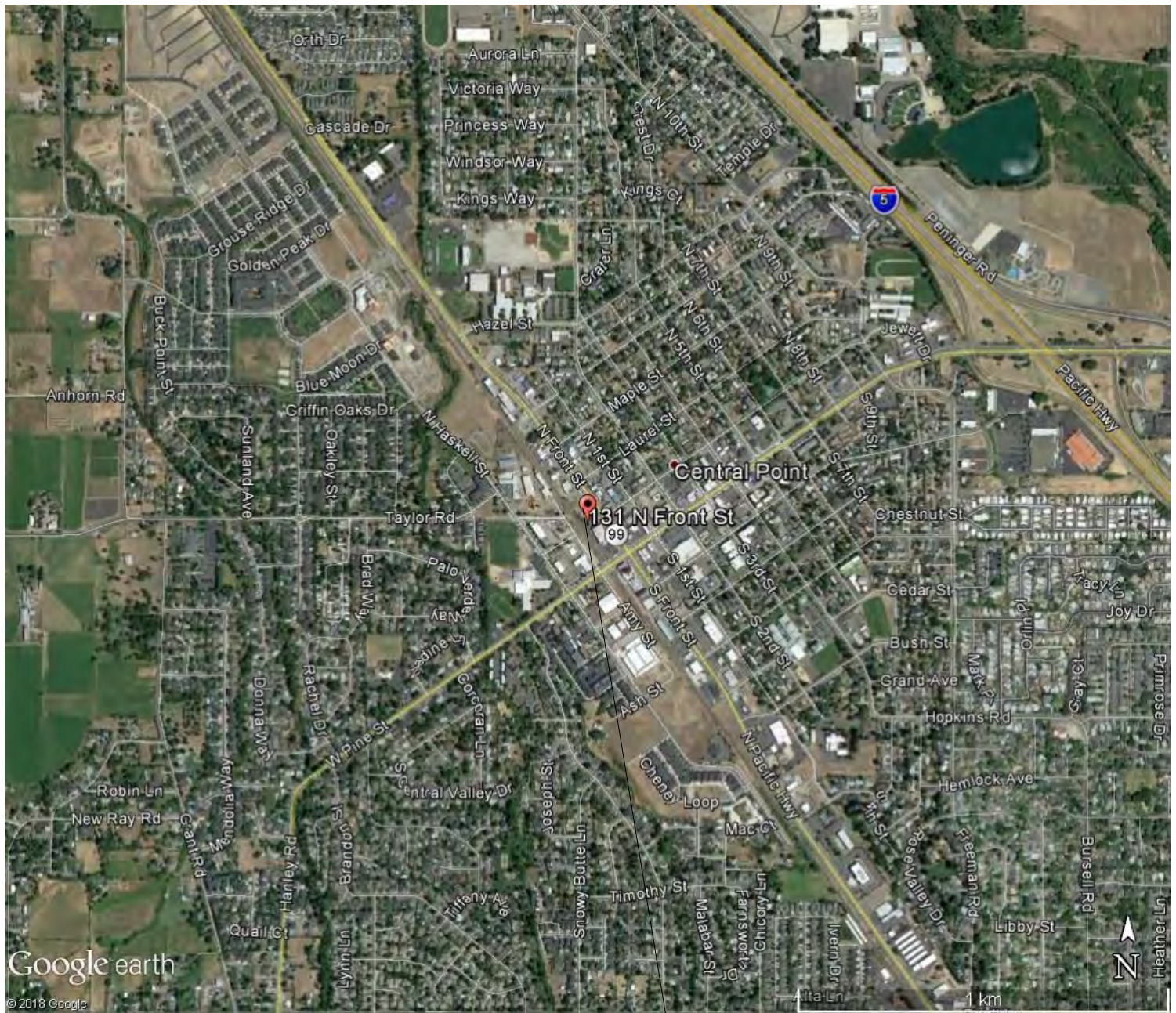
Limitations of magnetometer and GPR surveys can be seen in the Appendices.

Geophysical surveys consist of interpreting geophysical responses from subsurface features. Since a variety of subsurface features can produce identical geophysical responses, it is necessary to confirm the geophysical interpretation with intrusive investigations such as excavating or drilling. In addition, many subsurface features may produce no geophysical response.

A handwritten signature in black ink that reads "Ralph Soule". The signature is written in a cursive style with a long, sweeping underline.

Ralph Soule
GeoPotential

July 1, 2019



	ENVIRONMENTAL & EXPLORATION GEOPHYSICS 330 Creekside Terrace, Fairview, OR 97024 Phone: (503) 912-6441 Fax: (503) 912-6449 WEB: http://www.geopotential.biz E-MAIL: GeoPotential@geopotential.biz	LOCATION: Taylor Lampson Property 131 North Front Street Central Point, OR CLIENT: Stantec	Figure 1. Location Map
DATE: June 26, 2019	SUBSURFACE MAPPING SURVEY	PROJECT No. 1050	





ENVIRONMENTAL & EXPLORATION GEOPHYSICS

330 Creekside Terrace, Fairview, OR 97024 Phone: (503) 912-6441 Fax: (503) 912-6448
WEB <http://www.geopotential.biz/> E-MAIL GeoPotential@geopotential.biz

APPENDIX A GROUND PENETRATING RADAR SURVEYS

Ground Penetrating Radar (GPR) can be a valuable tool to accurately locate both metallic and non-metallic UST's and utilities, buried drums and hazardous material at some sites. It may detect objects below reinforced concrete floors and slabs. GPR may delineate trenches and excavations and, under some conditions, it may be used to locate contaminant plumes. It has been used as an archaeological tool to look for buried artifacts. It may accurately profile fresh water lake bottoms either from a boat or from a frozen lake surface. GPR may be used to locate voids below roads and runways. GPR has numerous engineering applications. It can be used in non-destructive testing of engineering material, for example, locating rebar in concrete structures and determining the thickness of concrete and other structural material.

GPR uses short impulses of high frequency radio waves directed into the ground to acquire information about the subsurface. The energy radiated into the ground is reflected back to the antenna by features having different electrical properties to that of the surrounding material. The greater the contrast, the stronger the reflection. Typical reflectors include water table, bedrock, bedding, fractures, voids, contaminant plumes and man-made objects such as UST's and metal and plastic utilities. Materials having little electrical contrast like clay and concrete pipes may not produce strong reflections and may not be seen. Data are digitally recorded or downloaded to a laptop computer for filtering and processing.

The frequency of the radar signal used for a survey is a trade off. Low frequencies (250 MHz – 50 MHz) give better penetration but low resolution so that pipes and utilities may not be seen. Pipes and utilities may be seen using higher frequencies (500 MHz) but the depth of penetration may be limited to only a few feet especially in the wet, clayey soils found in many areas of the NW USA. The GPR frequency is dependent upon the antenna. Once an antenna is selected, nothing the operator can do can increase the depth of penetration.

Radar data is ambiguous. Many buried objects produce echoes that may be similar to the echo expected from the target object. Boulders and debris produce reflections that are similar to pipes and tanks. Subtle changes in the electrical properties along a traverse caused by changes in soil type, mineralogy, grain size, and moisture content all produce “noise” that can make interpretation difficult. Interpreting radargrams is an art as much as a science.

Under some conditions, although a UST itself may not be clearly visible in a GPR record, the excavation or trench in which the UST is buried is evident. Usually GPR data is used to compliment data from other “tools”. For example, a trench-like reflection but no clear UST reflection, combined with a “tank” shaped magnetic anomaly suggests the presence of a UST. Although the UST itself could not be seen using GPR, the radar showed a trench-like reflection. The magnetic data showed a large ferrous object. We would report a possible UST at that location.

GPR is often used in conjunction with magnetometer surveys. Magnetometer Surveys are very fast and large areas can be covered cost effectively. Magnetic anomalies are marked in the field, and then may be further investigated using radar.

GPR, like other geophysical tools, is excellent at detecting changes across a site, but it is poor at actually identifying the cause of the change. **The only definite way to identify buried objects is through excavation.**

ADVANTAGES - General

- When GPR data is properly interpreted subsurface objects can usually be confidently identified. This often requires the GPR data be combined with other geophysical data, surface features and historical information.
- GPR provides continuous records along traverses which, depending on the goal of the survey, may be interpreted in the field.
- At flat, open sites, for reconnaissance purposes, the antenna can be towed behind a vehicle at several mph.
- Many GPR antennas are shielded and are unaffected by surface and overhead objects and power lines.
- GPR can be used in conjunction with magnetic or EM surveys to accurately locate buried objects.

ADVANTAGES – Site specific

- With a low frequency antenna, in clean, dry, sandy soil, reflections from targets as deep as 100 feet are possible. Geologic features such as bedrock and cross bedding may be seen at some sites.
- The resolution of data is very high particularly for high frequency antennas.
- Shallow, man-made objects generally can be detected.
- Fiberglass UST's and plastic pipes can be detected using GPR.

LIMITATIONS - General

- To acquire the highest quality data, proper coupling between the antenna and the ground surface is necessary. Poor data may be obtained at sites covered with debris, an uneven surface, tall grass and brush. Objects located at curbs are difficult to see.
- Acquiring GPR data is slow. The antenna must be over the target. The signal from the antenna is cone-shaped. Reflections from objects to the side of the antenna may be seen, but their actual location relative to the antenna is not obvious.
- Penetration of the GPR signal is "site specific" and its depth of penetration at a particular site cannot be predicted ahead of time. Near surface conductive material, such as salty or contaminated ground water and wet, clay-rich soil, may attenuate the radar signal, limiting the

effective depth of the survey to several feet. Reinforced concrete also can attenuate the signal. Rebar may produce reflections that look like pipes.

- GPR may not be cost-effective for some projects. For a detailed survey mapping underground storage tanks and utilities, it may be necessary to collect data in orthogonal directions at 5-foot line spacing.

LIMITATIONS – Interpretation

- Interpretation can be difficult. Radar data are ambiguous. Subsurface objects can be detected but, in general, they cannot be identified. USTs and utilities have a characteristic reflection, however, large rocks and boulders have a similar reflection.
- The reflection visible in a GPR record is very complex and may be caused by small changes in the electrical properties of the soil. The target in mind may not produce the reflection. Due to “noise”, the target may be missed. USTs and deep utilities may be missed if they are under debris and/or other pipes.
- Other methods may be necessary to aid in the interpretation of the data (use a magnetometer to detect a large metallic mass, then GPR to determine if the object is tank-like, or a utility locator to determine if there are feed lines and fill pipes leading to the object).
- Adequate contrast between the ground and the target is required to obtain reflections. UST’s may be missed if they are badly corroded. Utilities made of “earth” materials like clay and concrete may not be detected since their electrical properties are similar to the surrounding soil.
- To determine the depth to an object without "ground truth", assumptions must be made regarding soil properties. Even with ground truth at several locations on the same site, changes in material across a site (therefore changes in signal velocity) can cause errors in depth measurements at other locations.

APPENDIX B

UST Decommissioning Checklist and Site Assessment Report



OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY UNDERGROUND STORAGE TANK PROGRAM

UNDERGROUND STORAGE TANK DECOMMISSIONING CHECKLIST AND SITE ASSESSMENT REPORT

A. FACILITY INFORMATION:

This report **MUST** be submitted by the underground storage tank permittee or tank owner, or the licensed DEQ Service Provider on their behalf, **within 30 days following completion of the tank decommissioning or change-in-service regardless of ongoing cleanup work.**

DEQ FACILITY NUMBER: _____

FACILITY NAME: Lampson Property

FACILITY ADDRESS: 131 N. Front Street, Central Point, OR 97502

PERMITTEE PHONE: Eldon Lampson 503-250-4971

DATE: 9/17/19

B. WORK PERFORMED BY:

The checklist and site assessment report should be completed and signed by the DEQ licensed supervisor and signed by an executive officer of the DEQ licensed Service Provider on page 6. The tank owner or permittee must review and sign the report on page 6. **NOTE: AN OWNER OR PERMITTEE MAY PERFORM UST SERVICES ONLY IF THEY HAVE TAKEN AND PASSED THE APPROPRIATE UST SUPERVISOR EXAMINATION OFFERED BY A NATIONAL TESTING SERVICE (SEE OAR 340-150-0156 for requirements).**

DEQ Service Provider's License #: 22710

Construction Contractors Board License #: 90350

Name: Stratus Corp - Scott Flaherty

Telephone: 503-807-8611 or 503-985-7912

DEQ Decommissioning Supervisor's License #: 26624

Name: Brent Bergeron

Telephone: 503-913-7870

DEQ Soil Matrix Service Provider's License #: _____

NA

(If applicable)

Name: _____

Telephone: _____

DEQ Soil Matrix Supervisor's License #: _____

(If applicable)

Name: _____

Telephone: _____

C. DATES:Decommissioning/Change-in-Service Notice - Date Submitted: 8/21/19 (30 days before work starts).Work Start Telephone Notice - Number issued by DEQ: 9/13/19 (3 working days before work starts).DEQ Person Notified: Steve Piko / Andrea GarciaDate Work Started: 9/17/19 Date Work Completed: 9/20/19

Note: Provide the following information if any soil or water contamination is found during the decommissioning or change-in-service. Contamination must be reported by the UST permittee within 24 hours. The licensed service provider must report contamination within 72 hours after discovery unless previously reported.

Date Contamination Reported: 9/20/19 By: Brent BergeronDEQ Person Notified: Andrea Garcia & Jennifer Clausen (9/23/19)**D. OTHER DEQ PERMITS MAY BE NEEDED WHERE SOIL OR WATER CLEANUP IS REQUIRED.**DEQ Water Discharge Permit #: NA Date: NAWater Disposed to (Location): NADEQ Solid Waste Disposal Permit #: NA Date: NASoil Disposal or Treatment Location: NA**E. TANK INFORMATION:**

TANK ID #	DEQ-UST PERMIT #	TANK SIZE IN GALLONS	PRODUCT: GASOLINE, DIESEL, USED OIL, OTHER?		CLOSURE OR CHANGE-IN- SERVICE?			TANK TO BE REPLACED?	
			PRESENT	NEW	TANK REMOVAL	CLOSURE IN PLACE♦	CHANGE IN SERVICE♦	YES	NO
1		1,000 1,100	gas/water		☒	☐	☐	☐	☒
2		675	oil/water		☒	☐	☐	☐	☒
					☐	☐	☐	☐	☐
					☐	☐	☐	☐	☐
					☐	☐	☐	☐	☐

NOTE 1: Where decommissioned tank(s) are replaced by new underground storage tanks the UST permittee must submit a *General Permit Registration Form to Install and Operate USTs* containing information on the new tanks 30 days before installing them.

NOTE 2: Submit a soil sampling plan to the DEQ regional office and receive plan approval prior to starting work if 1) tank is to be decommissioned in-place, 2) tank contents are changed to a non-regulated substance, 3) tank contains a regulated substance other than petroleum, or 4) tank changed to non-regulated use.

F. DISPOSAL INFORMATION:

TANK ID #	TANK AND PIPING DISPOSAL METHOD				DISPOSAL LOCATION OF TANK CONTENTS	
	SCRAP	LAND-FILL	OTHER	IDENTIFY LOCATION & PROPERTY OWNER	LIQUIDS	SLUDGES
1	☒	☐	☐		ORACO	ORRGO
2	☒	☐	☐	Hillsboro, OR (PENDING)	Klamath Falls, OR	Klamath Falls, OR
	☐	☐	☐			
	☐	☐	☐			
	☐	☐	☐			

NOTE 1: The tank contents, the tank and the piping may be subject to the requirements of Hazardous Waste regulations. If you have questions, contact the DEQ regional office for your area.

NOTE 2: Attach copies of the disposal receipts for the tanks and piping. If the tanks are shipped off-site for reuse provide the name, address and phone number of the person or business receiving the tanks for reuse.

NOTE 3: Attach copies of the disposal receipts for the disposal or treatment of liquid or sludge removed from the tanks

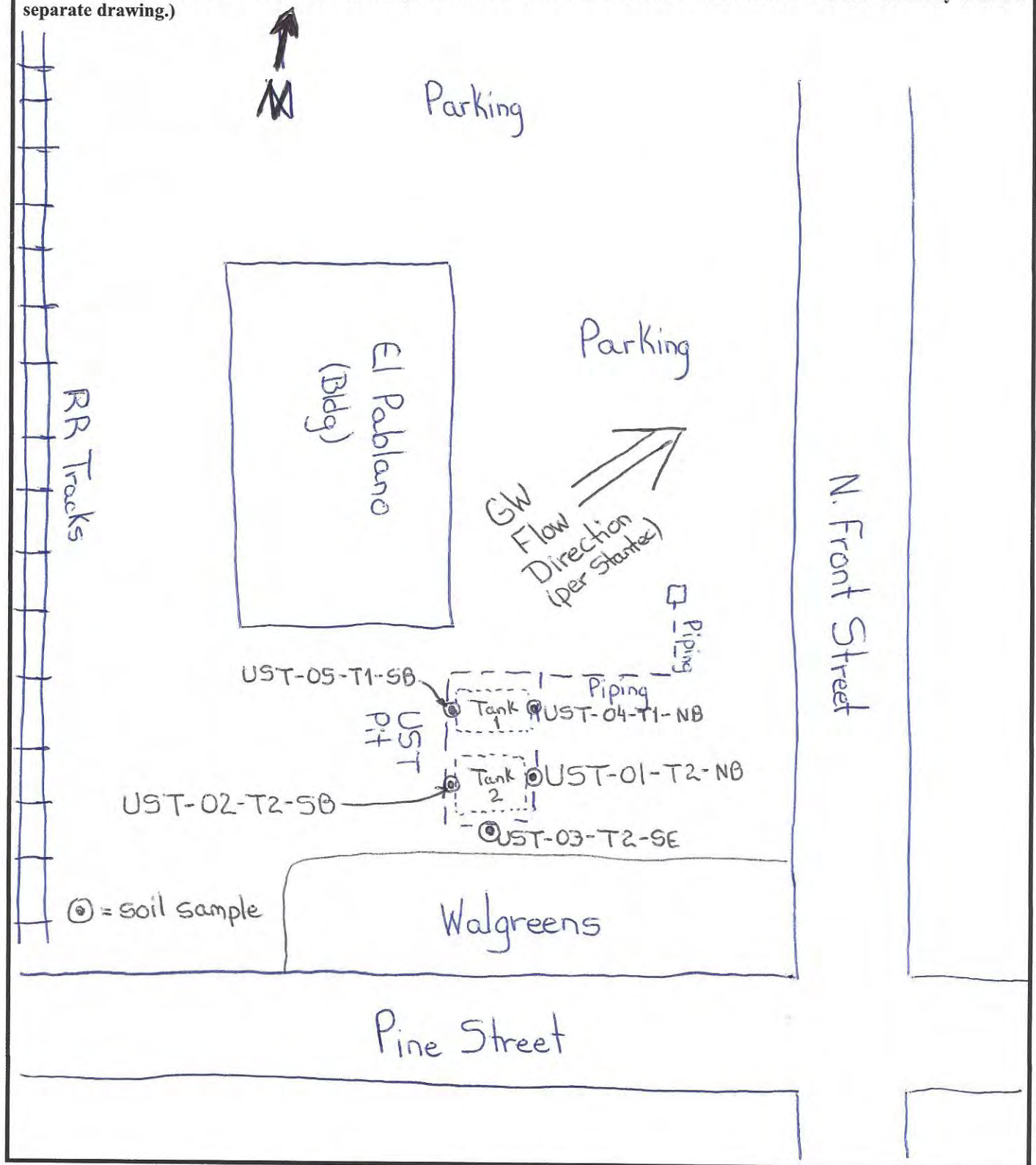
G. CONTAMINATION INFORMATION:

TANK ID #	GROUND WATER IN PIT ?	PRODUCT ODOR IN SOIL ?	PRODUCT STAINS IN SOIL ?	NUMBER OF SAMPLES	LABORATORY (NAME, CITY, STATE, PHONE)
1	☐	☒	☒	2	Apex Labs Tigard, OR
	☐	☐	☐		
2	☐	☒	☒	3	
	☐	☐	☐		
	☐	☐	☐		

NOTE 1: Attach a copy of the laboratory report showing the results of all tests on all soil and water samples. The laboratory report must identify sample collection methods, sample location, sample depth, sample type (soil or water), type of sample container, sample temperature during transportation, types of tests, and copies of analytical laboratory reports, including QA/QC information. Include laboratory name, address and copies of chain-of-custody forms.

NOTE 2: If contamination is detected and a Level 2 or Level 3 soil matrix cleanup standard is applied to the site, attach a copy of the soil matrix analysis including methods of determining soil type, depth to groundwater, and sensitivity of uppermost aquifer.

H. SITE SKETCH: (Show location of adjacent roads, property lines, structures, dispensers, & all USTs. Show North, general direction of ground slope and soil sample locations. Sketch does not need to be drawn to scale. You may attach a separate drawing.)



* Not To Scale *

(Note: This form is to be used as a general guideline, and exact procedures may vary depending on project size, jurisdiction etc.)

Project Name: Lampson UST REMOVAL
 Project Manager: LEN FARR
 Field Personnel: Dana Hutchins

Project Number: 185750581
 Date: 9-17-19 - 9-20-19
 Weather: overcast

Health and Safety:

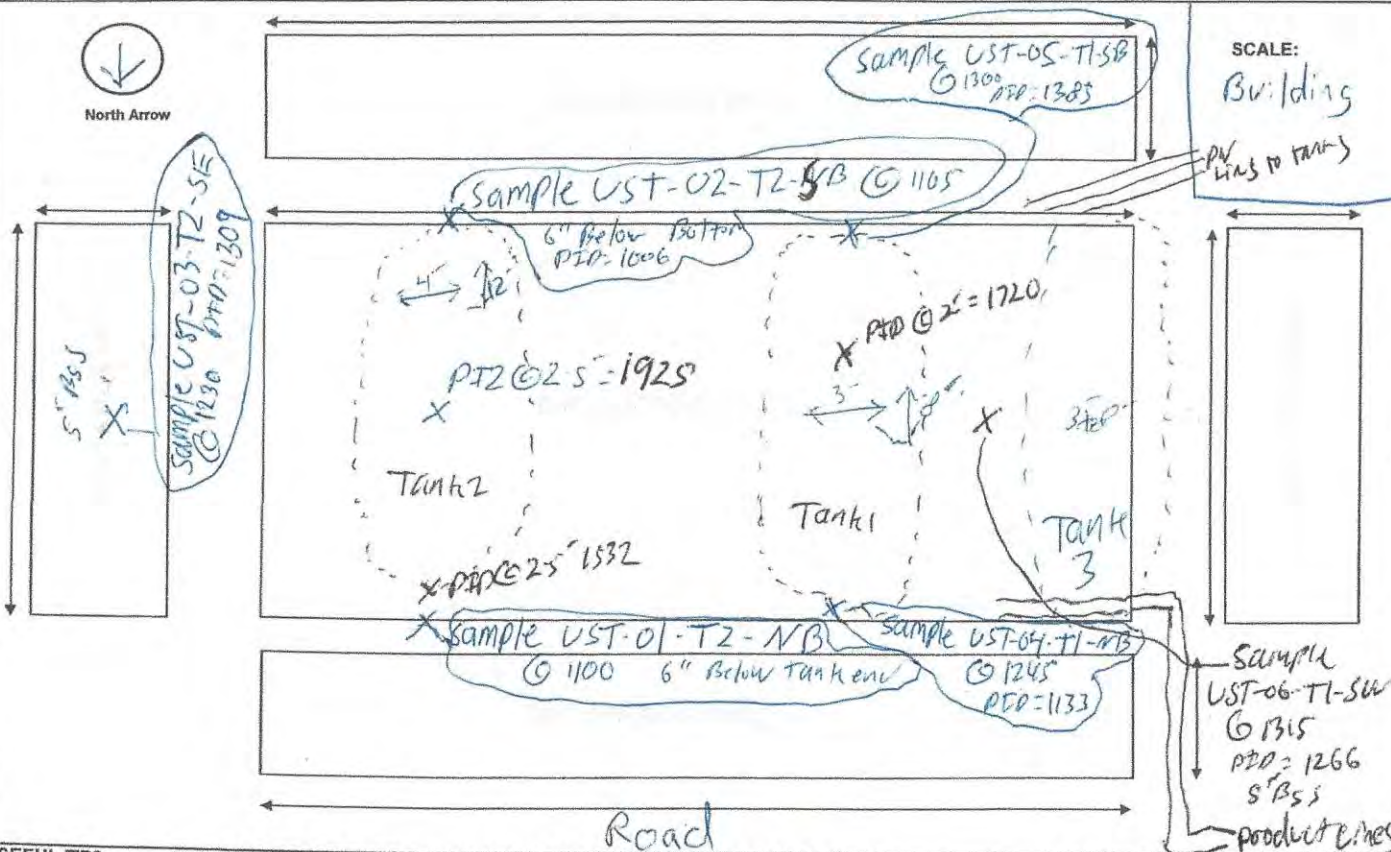
Site specific meeting conducted ☒
 Topics:

H&S concerns documented ☐ and addressed ☒



North Arrow

w/algrens



SCALE:
 Building
 PV Lines to Tanks

NOTES: 9-18-19

- Removal 900-1000 gal of gasoline water mix from Tank 1. Tank was full prior to pumping.
- Removal 450-500 gal of oil water mix from Tank 2. Tank is 1/8" steel tank. 3' in diameter tank is 8' x 3'.
- Tank 1 is also 1/8" steel 12' x 4'.
- Tank 2 Fuel Line under pressure with gasoline, mostly ~~not~~ not an oil tank.
- Tank 2 had a 3" hole on the bottom of the end of the tank.
- NO HOLES seen in Tank 1.

Date: SEE BACK

Signature: Dana Hutchins
 (field personnel)

Signature: _____
 (project manager)

USEFUL TIPS:

NEVER ENTER THE EXCAVATION UNLESS SIDEWALL RATIO IS 1:1 OR GREATER

For verification sampling, use the following protocol:

1. Divide side wall into a 5 square metre grid pattern, and the floor into a 10 square metre grid
2. A soil sample should be collected for TOV measurement from each grid square.
3. Collect "worst-case" samples from areas where staining or odours are noted.
4. Make sure at least one soil sample is collected from each lithological unit.
5. If collecting several samples from a sidewall, stagger the depths from which the samples are collected.
6. These hints are NOT meant for excavations greater than 4 metres deep or with floor areas greater than 1000m².

7. The approximate number of samples to be SUBMITTED FOR ANALYTICAL TESTING is as follows:

Floor Area (M ²)	Floor Samples	Wall Samples
< 25	2	2
> 25 - 50	2	3
> 50 - 100	3	3
> 100 - 250	3	5
> 250 - 500	4	6
> 500 - 750	4	7
> 750 - 1000	5	8

Confirm the numbers on a project by project basis depending on the jurisdiction and application Regulations.

Tank 2

TOT = 3' 4"

BOT = 6' 4"

PL = 2' 4"

Tank 1

TOT = 2' 10"

BOT = 6' 10"

PL = 1' 8"

Tank 3

TOT =

BOT =

PL = 2'

- Tank 3 was not removed during initial sampling on 9-17-14-9-20-14, and product lines were also not removed. These features will be removed and sampled the week of Oct 15th.
- On Oct 15th we will also excavate the area around GP-01 to determine what the metal object is that was encountered during drilling, and to assess pipe that was hit in the alternate GP-01 location that was drilled.

I. SAFETY EQUIPMENT ON JOB SITE:

Fire Extinguisher:	Type/Size: <u>20-lb</u>	Recharge Date: <u>NA</u>
Combustible Gas Detector:	Model: <u>4 gas meter / PID</u>	Calibration Date: <u>9/17/19</u>
Oxygen Analyzer:	Model: <u>NA</u>	Calibration Date: <u>NA</u>

J. DECOMMISSIONING:

All Tanks: N/A = Not Applicable (Check (✓) Appropriate Box)	YES	NO	UNKNOWN	N/A
1. All electrical equipment grounded and explosion proof?	☒	☐	☐	☐
2. Safety equipment on job site?	☒	☐	☐	☐
3. Overhead electrical lines located?	☒	☐	☐	☐
4. Subsurface electrical lines off or disconnected?	☒	☐	☐	☐
5. Natural gas lines off or disconnected?	☒	☐	☐	☐
6. No open fires or smoking material in area?	☒	☐	☐	☐
7. Vehicle and pedestrian traffic controlled?	☒	☐	☐	☐
8. Excavation material area cleared?	☒	☐	☐	☐
9. Rainwater runoff directed to treatment area?	☐	☐	☐	☒
10. Drained and collected product from lines?	☒	☐	☐	☐
11. Removed product and residual from tank?	☒	☐	☐	☐
12. Cleaned tank?	☒	☐	☐	☐
13. Excavated to top of tank?	☒	☐	☐	☐
14. Removed tank fixtures? (pumps, leak detection equipment)	☒	☐	☐	☐
15. Removed product, fill and vent lines?	☒	☐	☐	☐

K. TANK ABANDONMENT IN-PLACE:

All Tanks: N/A = Not Applicable (Check (✓) Appropriate Box)	YES	NO	UNKNOWN	N/A
16. Sampling plan approved by DEQ? Date: <u>NA</u> DEQ Staff: <u>NA</u>	☐	☐	☐	☐
17. Contamination concerns fully resolved? <u>Not Yet (Brownsfield)</u>	☐	☐	☐	☐
18. Fill Material? Type: <u>NA</u>	☐	☐	☐	☒

L. TANK REMOVAL:

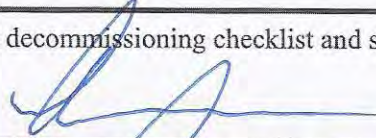
All Tanks: N/A = Not Applicable (Check (✓) Appropriate Box)	YES	NO	UNKNOWN	N/A
19. Tank placement area cleared, chocks placed?	☒	☐	☐	☐
20. Purged or ventilated tank to prevent explosion? Method used: <u>Dry Ice</u> Meter reading: <u>NA</u>	☒	☐	☐	☐
21. Were chains or steel cables wrapped around tank for removal?	☒	☐	☐	☐
22. Tank removed, set on ground, blocked to prevent movement?	☒	☐	☐	☐
23. Tank set on truck and secured with straps(s)?	☒	☐	☐	☐
24. Tank labeled before leaving site?	☒	☐	☐	☐

M. SITE ASSESSMENT:

All Tanks: N/A = Not Applicable (Check (✓) Appropriate Box)	YES	NO	UNKNOWN	N/A
25. Site assessed for contamination? See OAR 340-122-0340	☒	☐	☐	☐
26. Soil samples taken and analyzed?	☒	☐	☐	☐
27. Was contamination found? Date/Time: _____	☒	☐	☐	☐
28. Was hazardous waste determination made for tank contents (Liquids/sludges)?	☐	☒	☐	☐

N. REQUIRED SIGNATURES:

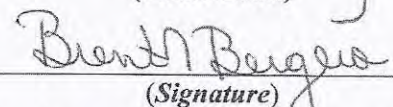
I have personally reviewed this decommissioning checklist and site assessment report and the attachments and find them to be true and complete.

Permittee or Tank Owner:  Eldon Lamkord - Property owner
(Please Print) Not Tank Owner

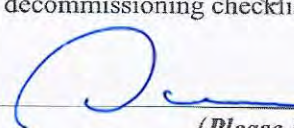
Permittee or Tank Owner:  Date: 12/26/19
(Signature)

I have personally reviewed this decommissioning checklist and site assessment report and the attachments and find them to be true and complete.

Licensed Supervisor: Brent N. Bergeron
(Please Print)

Licensed Supervisor:  Date: 10/17/19
(Signature)

I have personally reviewed this decommissioning checklist and site assessment report and the attachments and find them to be true and complete.

Executive Officer: 
Licensed Service Provider (Please Print)

Executive Officer: Scott Flaherty Date: 09Jan20
Licensed Service Provider (Signature)

APPENDIX C

Boring Logs

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

FS-01

PAGE 1 OF 1



INSTALLATION:
 STARTED **9/19/19** COMPLETED: **9/19/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft): EASTING (ft):
 LAT: LONG:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **Not Encountered** TEMP. WELL DEPTH (ft): ---
 STATIC DTW (ft): **Not Encountered** DEPTH (ft): **10.0**
 TEMP. WELL CASING DIA. (in): --- BOREHOLE DIA. (in): **2**
 LOGGED BY: **Dana Hutchins** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1510		OL	SILT SOME ORGANICS ; OL; topsoil						
		CL	GRAVELLY CLAY LITTLE SAND ; CL; light brown; non plastic; loose; dry; no odor; no staining					0.2	
						100%		0.3	
1515									5
5								0.1	
						100%			
		CL	SANDY CLAY ; CL; green; non plastic; medium dense; dry; slight HC odor; hydrocarbon staining		FS-01-8 @ 1530	100%		666	
10			Borehole terminated at 10 feet.						10

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

FS-02 PAGE 1 OF 1



INSTALLATION:
 STARTED **9/19/19** COMPLETED: **9/19/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft): EASTING (ft):
 LAT: LONG:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **Not Encountered** TEMP. WELL DEPTH (ft): ---
 STATIC DTW (ft): **Not Encountered** DEPTH (ft): **10.0**
 TEMP. WELL CASING DIA. (in): --- BOREHOLE DIA. (in): **2**
 LOGGED BY: **Dana Hutchins** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1535		OL	SILT SOME ORGANICS ; OL; topsoil			100%		0.0	
		CL	GRAVELLY CLAY LITTLE SAND ; CL; light brown; non plastic; loose; dry; no odor; no staining						
1540									
1545						90%		0.0	
		CL	SANDY CLAY ; CL; green; low plasticity; medium dense; dry; slight HC odor; hydrocarbon staining		FS-02-8 @ 1600	90%		233	
1550			Borehole terminated at 10 feet.						10

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

FS-03

PAGE 1 OF 1



INSTALLATION:
 STARTED **9/19/19** COMPLETED: **9/19/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft): EASTING (ft):
 LAT: LONG:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **Not Encountered** TEMP. WELL DEPTH (ft): ---
 STATIC DTW (ft): **Not Encountered** DEPTH (ft): **10.0**
 TEMP. WELL CASING DIA. (in): --- BOREHOLE DIA. (in): **2**
 LOGGED BY: **Dana Hutchins** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1635		OL	SILT SOME ORGANICS ; OL; topsoil		FS-03-9 @ 1700	90%		0.0	5
		CL	SANDY CLAY LITTLE GRAVEL ; CL; light brown to tan; non plastic; medium dense; dry; no odor; no staining						
1638		CL	SANDY CLAY ; CL; green; low plasticity; medium dense; moist; slight HC odor; hydrocarbon staining						
1645			Borehole terminated at 10 feet.			100%	366		10

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

FS-04 PAGE 1 OF 1



INSTALLATION:
 STARTED **9/19/19** COMPLETED: **9/19/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft): EASTING (ft):
 LAT: LONG:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **Not Encountered** TEMP. WELL DEPTH (ft): ---
 STATIC DTW (ft): **Not Encountered** DEPTH (ft): **10.0**
 TEMP. WELL CASING DIA. (in): --- BOREHOLE DIA. (in): **2**
 LOGGED BY: **Dana Hutchins** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
1610		OL	SILT SOME ORGANICS ; OL; topsoil		FS-04-9 @ 1630	90%		0.0	5
		CL	SANDY CLAY LITTLE GRAVEL ; CL; light brown to tan; non plastic; loose to medium dense; dry; no odor; no staining						
1615									
1617		CL	SANDY CLAY ; CL; green; non plastic; medium dense; moist; strong HC odor; hydrocarbon staining		FS-04-9 @ 1630	100%		553	10
1620			Borehole terminated at 10 feet.						

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

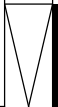
GP-01

PAGE 1 OF 1



INSTALLATION:
 STARTED **9/20/19** COMPLETED: **9/20/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft): EASTING (ft):
 LAT: LONG:
 GROUND ELEV (ft): TOC ELEV (ft):
 INITIAL DTW (ft): **Not Encountered** TEMP. WELL DEPTH (ft): ---
 STATIC DTW (ft): **Not Encountered** DEPTH (ft): **7.5**
 TEMP. WELL CASING DIA. (in): --- BOREHOLE DIA. (in): **2**
 LOGGED BY: **Dana Hutchins** CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
0800			Concrete						
		CL	GRAVELLY CLAY SOME SAND ; CL; low plasticity; medium dense; moist; strong HC odor; hydrocarbon staining		GP-01-2 @ 0900			172	
0805								61.8	
5					GP-01-5 @ 0915			50.0	5
		CL	SANDY CLAY ; CL; gray; low plasticity; very dense; moist; strong HC odor; hydrocarbon staining; First location 6.5 feet from building hit metal pipe or tank at 3-3.5' bgs.						
0810			Log of boring located 6' SE of map location.						
			Hit pipe at 7.5' bgs that was under low pressure filled with water.						
			City confirmed it was not a city water or storm line.						
			Borehole terminated at 7.5 feet.						
10									10

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

GP-02 PAGE 1 OF 1



INSTALLATION:
 STARTED **9/20/19** COMPLETED: **9/20/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **18.0**
 STATIC DTW (ft): **Not Encountered**
 TEMP. WELL CASING DIA. (in): **3/4**
 LOGGED BY: **Dana Hutchins**
 EASTING (ft):
 LONG:
 TOC ELEV (ft):
 TEMP. WELL DEPTH (ft): **27.5**
 DEPTH (ft): **27.5**
 BOREHOLE DIA. (in): **2**
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Temporary well construction details
0915			Concrete							
		CL	SANDY CLAY ; CL; gray; low plasticity; loose; moist; strong HC odor; hydrocarbon staining; sample 3' from product lines		GP-02-1 @ 0930			20.0		
		CL	SANDY CLAY LITTLE GRAVEL ; CL; light brown; non plastic; medium dense; moist; slight HC odor; no staining					1.5		
0920								5.7		
								37.3		Temporary well in open boring.
0930					GP-02-12 @ 1000			73.7		
								288		
								66.0		
		CH	CLAY LITTLE SAND ; CH; light brown; low plasticity; very dense; moist; no odor; hydrocarbon staining; thin layers of gray soil 20-25', wet @ 26'					37.7		
0950								5.5		Well screened from 17.5 to 27.5 feet. Sample GP02 collected on 9/20/2019 at 1300.
1000								61.0		
			Borehole terminated at 27.5 feet.							

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

GP-03

PAGE 1 OF 1



INSTALLATION:
 STARTED **9/18/19** COMPLETED: **9/18/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **14.0**
 STATIC DTW (ft): **Not Encountered**
 TEMP. WELL CASING DIA. (in): **3/4**
 LOGGED BY: **Dana Hutchins**
 EASTING (ft):
 LONG:
 TOC ELEV (ft):
 TEMP. WELL DEPTH (ft): **25.0**
 DEPTH (ft): **25.0**
 BOREHOLE DIA. (in): **2**
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Temporary well construction details
0920		CL	Asphalt SANDY CLAY LITTLE GRAVEL ; CL; light brown; low plasticity; loose; moist; no odor; no staining					0.0		
		CL	GRAVELLY CLAY LITTLE SAND ; CL; tan to olive; non plastic; medium dense; dry to moist; no odor; hydrocarbon staining		GP03-2 @ 0930	100%		0.0		
0925						100%		19.2	5	
		CL	CLAY LITTLE SAND ; CL; greenish brown; non plastic; very dense; dry to moist; strong chemical odor; hydrocarbon staining; increased sand @ 21'		GP03-8 @ 1000 and Dup GP-X @ 1015	100%		658	10	Temporary well in open boring.
0940						0%				
						100%		95.4		
1000						100%		23.5	15	
						100%		9.2		Well screened from 15 to 25 feet. Sample GP03 collected on 9/18/2019 at 1445.
1030						100%		3.4	20	
25			Borehole terminated at 25 feet.						25	

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

GP-04 PAGE 1 OF 1



INSTALLATION:
 STARTED **9/17/19** COMPLETED: **9/17/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **Dry**
 STATIC DTW (ft): **8.00**
 TEMP. WELL CASING DIA. (in): **3/4**
 LOGGED BY: **Dana Hutchins**
 EASTING (ft):
 LONG:
 TOC ELEV (ft):
 TEMP. WELL DEPTH (ft): **22.5**
 DEPTH (ft): **22.5**
 BOREHOLE DIA. (in): **2**
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Temporary well construction details
1305		OL ML	SILT LITTLE SAND LITTLE ORGANICS ; OL; topsoil		GP04-1 @ 1320	100%		0.0		
		CL	SILT LITTLE GRAVEL ; ML; brown; non plastic; loose; dry; no odor; no staining							
			GRAVELLY CLAY SOME SAND ; CL; light reddish tan to brown; non plastic; medium dense; dry to moist; no odor; no staining							
1308 5										
1312										
		CL	SANDY CLAY ; CL; greenish brown; medium plasticity; very dense; moist; slight HC odor; hydrocarbon staining; green color could be hydrocarbon staining or a marine glauconite clay.		GP04-12 @ 1345			6.5		
1318 10										
1330								82.0		
1337 15								14.9		
1350						0%				
20										
1410			Borehole terminated at 22.5 feet.							
25										

Temporary well in open boring.

Well screened from 12.5 to 22.5 feet. Sample GP04 collected on 9/18/2019 at 0900.

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

GP-05

PAGE 1 OF 1



INSTALLATION:
 STARTED **9/20/19** COMPLETED: **9/20/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **Not Encountered**
 STATIC DTW (ft): **8.30**
 TEMP. WELL CASING DIA. (in): **3/4**
 LOGGED BY: **Dana Hutchins**
 EASTING (ft):
 LONG:
 TOC ELEV (ft):
 TEMP. WELL DEPTH (ft): **27.5**
 DEPTH (ft): **27.5**
 BOREHOLE DIA. (in): **2**
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Temporary well construction details
1100		OL GP-GM CL	SILT LITTLE ORGANICS ; OL; topsoil SILTY GRAVEL ; GP-GM; brown to gray; non plastic; loose; dry; no odor; no staining SANDY CLAY SOME GRAVEL ; CL; light brown to greenish tan; non plastic; medium dense; dry; no odor; no staining		GP-05-1 @ 1130	100%		0.0		
1120						100%		0.1	5	
1125		CL	CLAY LITTLE SAND ; CL; green to brown; low plasticity; very dense; moist; no odor; no staining; wet at 26' bgs		GP-05-8 @ 1200	100%		333.0		← Temporary well in open boring.
1130						100%		80.0	10	
1135						100%		26.6	15	
1145						100%		0.2	20	
25						100%		0.1	25	Well screened from 17.5 to 27.5 feet. Sample GP05 collected on 9/20/2019 at 1415.
			Borehole terminated at 27.5 feet.			100%		1.4		

PROJECT: **Lampson Property**
 LOCATION: **131 North Front Street, Central Point, OR**
 PROJECT NUMBER: **185750581**

BORING NO:

GP-06

PAGE 1 OF 1



INSTALLATION:
 STARTED **9/18/19** COMPLETED: **9/18/19**
 DRILLING COMPANY: **Stratus**
 EQUIPMENT: **Geoprobe**
 METHOD: **Direct Push**
 SAMPLING EQUIPMENT: **Continuous Liner**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **Not Encountered**
 STATIC DTW (ft): **6.20, Rain??**
 TEMP. WELL CASING DIA. (in): **3/4**
 LOGGED BY: **Dana Hutchins**

EASTING (ft):
 LONG:
 TOC ELEV (ft):
 TEMP. WELL DEPTH (ft): **22.5**
 DEPTH (ft): **22.5**
 BOREHOLE DIA. (in): **2**
 CHECKED BY:

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Temporary well construction details
1530			Concrete							
		CL	SANDY CLAY ; CL; dark gray to black; low plasticity; medium dense; moist; slight HC odor; no staining		GP06-2 @ 1600	100%		0.7		
1545		CL	SANDY CLAY SOME GRAVEL ; CL; tan to green; non plastic; medium dense; dry to moist; slight HC odor; iron oxide staining		GP06-6 @ 1615	100%		1.1	5	
						100%		43.9	10	
1600		CL	SANDY CLAY ; CL; light brown to tan; non plastic; very dense; moist; no odor; no staining; Saturated @ 21.5' bgs			100%		26.5		
						100%		0.9	15	
1615						100%		0.7		
						100%		0.2	20	
20						100%				
25			Borehole terminated at 22.5 feet.						25	

Temporary well in open boring.

Well screened from 12.5 to 22.5 feet. Sample GP06 collected on 9/19/2019 at 0830 and duplicate GP-Y at 0900.

APPENDIX D

Laboratory Reports and Chain-of-Custody Documentation



Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Friday, October 4, 2019

Len Farr

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

RE: A9I0633 - Lampson - 185750581

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

Enclosed are the results of analyses for work order A9I0633, which was received by the laboratory on 9/20/2019 at 10:29:00AM.

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

Please note: All samples will be disposed of within 30 days of final reporting, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	0.9 degC	Cooler #2	5.3 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

Lisa Domenighini, Client Services Manager

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



Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0633 - 10 04 19 1456

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP-04	A9I0633-01	Water	09/18/19 09:00	09/20/19 10:29
GP-03	A9I0633-02	Water	09/18/19 14:45	09/20/19 10:29
GP-06	A9I0633-03	Water	09/19/19 08:30	09/20/19 10:29
GP-Y	A9I0633-04	Water	09/19/19 09:00	09/20/19 10:29
TB-091919	A9I0633-05	Water	09/18/19 00:00	09/20/19 10:29

Apex Laboratories

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EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-04 (A9I0633-01)				Matrix: Water		Batch: 9091175		
Diesel	ND	---	0.282	mg/L	1	09/24/19 03:27	NWTPH-Dx	
Oil	ND	---	0.563	mg/L	1	09/24/19 03:27	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 107 %		Limits: 50-150 %	1	09/24/19 03:27	NWTPH-Dx	
GP-03 (A9I0633-02)				Matrix: Water		Batch: 9091175		
Diesel	0.241	---	0.213	mg/L	1	09/24/19 03:48	NWTPH-Dx	F-18
Oil	ND	---	0.426	mg/L	1	09/24/19 03:48	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 107 %		Limits: 50-150 %	1	09/24/19 03:48	NWTPH-Dx	
GP-06 (A9I0633-03)				Matrix: Water		Batch: 9091175		
Diesel	ND	---	0.211	mg/L	1	09/24/19 04:08	NWTPH-Dx	
Oil	ND	---	0.421	mg/L	1	09/24/19 04:08	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 103 %		Limits: 50-150 %	1	09/24/19 04:08	NWTPH-Dx	
GP-Y (A9I0633-04)				Matrix: Water		Batch: 9091175		
Diesel	ND	---	0.270	mg/L	1	09/24/19 04:29	NWTPH-Dx	
Oil	ND	---	0.541	mg/L	1	09/24/19 04:29	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %	1	09/24/19 04:29	NWTPH-Dx	

Apex Laboratories

Lisa Domenighini, Client Services Manager

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-04 (A9I0633-01)				Matrix: Water		Batch: 9091146		
Gasoline Range Organics	0.613	---	0.100	mg/L	1	09/23/19 13:31	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	88 %	Limits: 50-150 %	1	09/23/19 13:31	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			103 %	50-150 %	1	09/23/19 13:31	NWTPH-Gx (MS)	
GP-03 (A9I0633-02)				Matrix: Water		Batch: 9091146		
Gasoline Range Organics	1.11	---	0.100	mg/L	1	09/23/19 13:58	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	91 %	Limits: 50-150 %	1	09/23/19 13:58	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			103 %	50-150 %	1	09/23/19 13:58	NWTPH-Gx (MS)	
GP-06 (A9I0633-03)				Matrix: Water		Batch: 9091146		
Gasoline Range Organics	0.925	---	0.100	mg/L	1	09/23/19 14:52	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	92 %	Limits: 50-150 %	1	09/23/19 14:52	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			103 %	50-150 %	1	09/23/19 14:52	NWTPH-Gx (MS)	
GP-Y (A9I0633-04)				Matrix: Water		Batch: 9091146		
Gasoline Range Organics	1.04	---	0.100	mg/L	1	09/23/19 14:25	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	91 %	Limits: 50-150 %	1	09/23/19 14:25	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			104 %	50-150 %	1	09/23/19 14:25	NWTPH-Gx (MS)	

Apex Laboratories

Lisa Domenighini, Client Services Manager

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-04 (A910633-01)		Matrix: Water		Batch: 9091146				
Acetone	25.1	---	20.0	ug/L	1	09/23/19 13:31	EPA 8260C	
Acrylonitrile	ND	---	13.0	ug/L	1	09/23/19 13:31	EPA 8260C	R-02
Benzene	1.43	---	0.200	ug/L	1	09/23/19 13:31	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/23/19 13:31	EPA 8260C	
2-Butanone (MEK)	ND	---	11.0	ug/L	1	09/23/19 13:31	EPA 8260C	R-02
n-Butylbenzene	1.15	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	M-02
sec-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	09/23/19 13:31	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/23/19 13:31	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	

Apex Laboratories

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-04 (A9I0633-01)				Matrix: Water		Batch: 9091146		
Ethylbenzene	24.5	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/23/19 13:31	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/23/19 13:31	EPA 8260C	
Isopropylbenzene	3.66	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/23/19 13:31	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	09/23/19 13:31	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Naphthalene	4.26	---	2.00	ug/L	1	09/23/19 13:31	EPA 8260C	
n-Propylbenzene	8.81	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
Toluene	3.29	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,2,4-Trimethylbenzene	6.04	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
1,3,5-Trimethylbenzene	3.04	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/23/19 13:31	EPA 8260C	
m,p-Xylene	20.1	---	1.00	ug/L	1	09/23/19 13:31	EPA 8260C	
o-Xylene	0.842	---	0.500	ug/L	1	09/23/19 13:31	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/23/19 13:31</i>	<i>EPA 8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 13:31</i>	<i>EPA 8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 13:31</i>	<i>EPA 8260C</i>	

GP-03 (A9I0633-02)				Matrix: Water		Batch: 9091146		
Acetone	56.5	---	20.0	ug/L	1	09/23/19 13:58	EPA 8260C	
Acrylonitrile	ND	---	15.0	ug/L	1	09/23/19 13:58	EPA 8260C	R-02
Benzene	35.8	---	0.200	ug/L	1	09/23/19 13:58	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	

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Lisa Domenighini, Client Services Manager

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Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-03 (A910633-02)				Matrix: Water		Batch: 9091146		
Bromoform	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/23/19 13:58	EPA 8260C	
2-Butanone (MEK)	ND	---	34.0	ug/L	1	09/23/19 13:58	EPA 8260C	R-02
n-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
sec-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	09/23/19 13:58	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/23/19 13:58	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2-Dichloroethane (EDC)	2.58	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Ethylbenzene	19.9	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/23/19 13:58	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/23/19 13:58	EPA 8260C	
Isopropylbenzene	2.23	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/23/19 13:58	EPA 8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-03 (A910633-02)		Matrix: Water		Batch: 9091146				
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	09/23/19 13:58	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Naphthalene	10.1	---	2.00	ug/L	1	09/23/19 13:58	EPA 8260C	
n-Propylbenzene	3.75	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,2,4-Trimethylbenzene	14.3	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
1,3,5-Trimethylbenzene	8.72	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/23/19 13:58	EPA 8260C	
m,p-Xylene	19.3	---	1.00	ug/L	1	09/23/19 13:58	EPA 8260C	
o-Xylene	0.982	---	0.500	ug/L	1	09/23/19 13:58	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	102 %	<i>Limits:</i>	80-120 %	1	09/23/19 13:58	EPA 8260C
<i>Toluene-d8 (Surr)</i>			104 %		80-120 %	1	09/23/19 13:58	EPA 8260C
<i>4-Bromofluorobenzene (Surr)</i>			96 %		80-120 %	1	09/23/19 13:58	EPA 8260C

GP-06 (A910633-03)		Matrix: Water		Batch: 9091146				
Acetone	34.3	---	20.0	ug/L	1	09/23/19 14:52	EPA 8260C	
Acrylonitrile	ND	---	6.00	ug/L	1	09/23/19 14:52	EPA 8260C	R-02
Benzene	20.6	---	0.200	ug/L	1	09/23/19 14:52	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/23/19 14:52	EPA 8260C	
2-Butanone (MEK)	ND	---	20.0	ug/L	1	09/23/19 14:52	EPA 8260C	R-02
n-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	Q-42
sec-Butylbenzene	2.60	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-06 (A910633-03)				Matrix: Water		Batch: 9091146		
Carbon disulfide	ND	---	10.0	ug/L	1	09/23/19 14:52	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/23/19 14:52	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2-Dichloroethane (EDC)	0.860	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Ethylbenzene	2.84	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/23/19 14:52	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/23/19 14:52	EPA 8260C	
Isopropylbenzene	2.55	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/23/19 14:52	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	09/23/19 14:52	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	09/23/19 14:52	EPA 8260C	Q-42
n-Propylbenzene	1.56	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	

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Lisa Domenighini, Client Services Manager

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Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-06 (A910633-03)				Matrix: Water		Batch: 9091146		
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
Toluene	1.38	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/23/19 14:52	EPA 8260C	
m,p-Xylene	4.00	---	1.00	ug/L	1	09/23/19 14:52	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	09/23/19 14:52	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/23/19 14:52</i>	<i>EPA 8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 14:52</i>	<i>EPA 8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 14:52</i>	<i>EPA 8260C</i>	

GP-Y (A910633-04)				Matrix: Water		Batch: 9091146		
Acetone	32.6	---	20.0	ug/L	1	09/23/19 14:25	EPA 8260C	
Acrylonitrile	ND	---	6.00	ug/L	1	09/23/19 14:25	EPA 8260C	R-02
Benzene	20.0	---	0.200	ug/L	1	09/23/19 14:25	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/23/19 14:25	EPA 8260C	
2-Butanone (MEK)	ND	---	19.0	ug/L	1	09/23/19 14:25	EPA 8260C	R-02
n-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
sec-Butylbenzene	2.90	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	09/23/19 14:25	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/23/19 14:25	EPA 8260C	

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Lisa Domenighini, Client Services Manager



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EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-Y (A910633-04)				Matrix: Water		Batch: 9091146		
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2-Dichloroethane (EDC)	0.784	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Ethylbenzene	2.91	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/23/19 14:25	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/23/19 14:25	EPA 8260C	
Isopropylbenzene	2.67	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/23/19 14:25	EPA 8260C	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	09/23/19 14:25	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	09/23/19 14:25	EPA 8260C	
n-Propylbenzene	1.61	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
Toluene	1.35	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-Y (A910633-04)				Matrix: Water		Batch: 9091146		
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/23/19 14:25	EPA 8260C	
m,p-Xylene	4.24	---	1.00	ug/L	1	09/23/19 14:25	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	09/23/19 14:25	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>104 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>09/23/19 14:25</i>	<i>EPA 8260C</i>
<i>Toluene-d8 (Surr)</i>			<i>103 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 14:25</i>	<i>EPA 8260C</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 14:25</i>	<i>EPA 8260C</i>
TB-091919 (A910633-05)				Matrix: Water		Batch: 9091146		
Acetone	ND	---	20.0	ug/L	1	09/23/19 09:56	EPA 8260C	
Acrylonitrile	ND	---	2.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Benzene	ND	---	0.200	ug/L	1	09/23/19 09:56	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/23/19 09:56	EPA 8260C	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	09/23/19 09:56	EPA 8260C	
n-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
sec-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	09/23/19 09:56	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/23/19 09:56	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	

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Lisa Domenighini, Client Services Manager



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6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-091919 (A910633-05)				Matrix: Water		Batch: 9091146		
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/23/19 09:56	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/23/19 09:56	EPA 8260C	
Isopropylbenzene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/23/19 09:56	EPA 8260C	
4-Methyl-2-pentanone (MIBK)	ND	---	10.0	ug/L	1	09/23/19 09:56	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	09/23/19 09:56	EPA 8260C	
n-Propylbenzene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	

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Lisa Domenighini, Client Services Manager

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6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-091919 (A910633-05)				Matrix: Water		Batch: 9091146		
Vinyl chloride	ND	---	0.400	ug/L	1	09/23/19 09:56	EPA 8260C	
m,p-Xylene	ND	---	1.00	ug/L	1	09/23/19 09:56	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	09/23/19 09:56	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/23/19 09:56</i>	<i>EPA 8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>107 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 09:56</i>	<i>EPA 8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 09:56</i>	<i>EPA 8260C</i>	

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EPA ID: OR01039**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****ANALYTICAL SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-03 (A910633-02)		Matrix: Water		Batch: 9091165				
Acenaphthene	0.0492	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Acenaphthylene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Anthracene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Benz(a)anthracene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Chrysene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Fluoranthene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Fluorene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
1-Methylnaphthalene	1.53	---	0.0833	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
2-Methylnaphthalene	2.69	---	0.0833	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Naphthalene	9.19	---	0.0833	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Phenanthrene	0.0860	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
Pyrene	ND	---	0.0417	ug/L	1	10/02/19 16:24	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery:</i>	69 %	<i>Limits:</i>	44-120 %	1	10/02/19 16:24	EPA 8270D (SIM)
<i>p-Terphenyl-d14 (Surr)</i>			72 %		50-133 %	1	10/02/19 16:24	EPA 8270D (SIM)

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503-718-2323

EPA ID: OR01039**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0633 - 10 04 19 1456****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-04 (A9I0633-01) Matrix: Water								
Batch: 9091131								
Arsenic	40.2	---	5.00	ug/L	5	09/23/19 19:32	EPA 200.8	
Barium	858	---	5.00	ug/L	5	09/23/19 19:32	EPA 200.8	
Cadmium	ND	---	1.00	ug/L	5	09/23/19 19:32	EPA 200.8	R-04
Chromium	314	---	5.00	ug/L	5	09/23/19 19:32	EPA 200.8	
Lead	462	---	1.00	ug/L	5	09/23/19 19:32	EPA 200.8	
Mercury	1.08	---	0.400	ug/L	5	09/23/19 19:32	EPA 200.8 (Hg)	
Selenium	ND	---	5.00	ug/L	5	09/23/19 19:32	EPA 200.8	R-04
Silver	ND	---	1.00	ug/L	5	09/23/19 19:32	EPA 200.8	R-04
GP-03 (A9I0633-02) Matrix: Water								
Batch: 9091131								
Arsenic	45.6	---	5.00	ug/L	5	09/23/19 19:37	EPA 200.8	
Barium	1040	---	5.00	ug/L	5	09/23/19 19:37	EPA 200.8	Q-42
Cadmium	ND	---	1.00	ug/L	5	09/23/19 19:37	EPA 200.8	R-04
Chromium	327	---	5.00	ug/L	5	09/23/19 19:37	EPA 200.8	Q-42
Lead	23.8	---	1.00	ug/L	5	09/23/19 19:37	EPA 200.8	
Mercury	0.730	---	0.400	ug/L	5	09/23/19 19:37	EPA 200.8 (Hg)	
Selenium	ND	---	5.00	ug/L	5	09/23/19 19:37	EPA 200.8	R-04
Silver	ND	---	1.00	ug/L	5	09/23/19 19:37	EPA 200.8	R-04
GP-06 (A9I0633-03) Matrix: Water								
Batch: 9091131								
Arsenic	17.1	---	5.00	ug/L	5	09/23/19 19:51	EPA 200.8	
Barium	404	---	5.00	ug/L	5	09/23/19 19:51	EPA 200.8	
Cadmium	ND	---	1.00	ug/L	5	09/23/19 19:51	EPA 200.8	R-04
Chromium	73.3	---	5.00	ug/L	5	09/23/19 19:51	EPA 200.8	
Lead	9.96	---	1.00	ug/L	5	09/23/19 19:51	EPA 200.8	
Mercury	ND	---	0.400	ug/L	5	09/23/19 19:51	EPA 200.8 (Hg)	R-04
Selenium	ND	---	5.00	ug/L	5	09/23/19 19:51	EPA 200.8	R-04
Silver	ND	---	1.00	ug/L	5	09/23/19 19:51	EPA 200.8	R-04
GP-Y (A9I0633-04) Matrix: Water								
Batch: 9091131								
Arsenic	25.7	---	5.00	ug/L	5	09/23/19 19:55	EPA 200.8	
Barium	566	---	5.00	ug/L	5	09/23/19 19:55	EPA 200.8	
Cadmium	ND	---	1.00	ug/L	5	09/23/19 19:55	EPA 200.8	R-04

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EPA ID: OR01039

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9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0633 - 10 04 19 1456

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-Y (A9I0633-04)				Matrix: Water				
Chromium	123	---	5.00	ug/L	5	09/23/19 19:55	EPA 200.8	
Lead	15.1	---	1.00	ug/L	5	09/23/19 19:55	EPA 200.8	
Mercury	0.419	---	0.400	ug/L	5	09/23/19 19:55	EPA 200.8 (Hg)	
Selenium	ND	---	5.00	ug/L	5	09/23/19 19:55	EPA 200.8	R-04
Silver	ND	---	1.00	ug/L	5	09/23/19 19:55	EPA 200.8	R-04

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****ANALYTICAL SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-04 (A910633-01RE1) Matrix: Water								
Batch: 9091133								
Arsenic	3.08	---	1.00	ug/L	1	09/25/19 17:49	EPA 200.8 (Diss)	
Barium	111	---	1.00	ug/L	1	09/25/19 17:49	EPA 200.8 (Diss)	
Cadmium	ND	---	0.200	ug/L	1	09/25/19 17:49	EPA 200.8 (Diss)	
Chromium	ND	---	1.00	ug/L	1	09/25/19 17:49	EPA 200.8 (Diss)	
Lead	1.69	---	0.200	ug/L	1	09/25/19 17:49	EPA 200.8 (Diss)	
Mercury	ND	---	0.0800	ug/L	1	09/25/19 17:49	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	09/25/19 17:49	EPA 200.8 (Diss)	
GP-04 (A910633-01RE2) Matrix: Water								
Batch: 9091133								
Silver	ND	---	0.200	ug/L	1	09/25/19 18:30	EPA 200.8 (Diss)	
GP-03 (A910633-02RE1) Matrix: Water								
Batch: 9091133								
Arsenic	1.97	---	1.00	ug/L	1	09/25/19 17:53	EPA 200.8 (Diss)	
Barium	185	---	1.00	ug/L	1	09/25/19 17:53	EPA 200.8 (Diss)	
Cadmium	ND	---	0.200	ug/L	1	09/25/19 17:53	EPA 200.8 (Diss)	
Chromium	4.99	---	1.00	ug/L	1	09/25/19 17:53	EPA 200.8 (Diss)	
Lead	0.646	---	0.200	ug/L	1	09/25/19 17:53	EPA 200.8 (Diss)	
Mercury	ND	---	0.0800	ug/L	1	09/25/19 17:53	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	09/25/19 17:53	EPA 200.8 (Diss)	
Silver	ND	---	0.200	ug/L	1	09/25/19 17:53	EPA 200.8 (Diss)	
GP-06 (A910633-03RE1) Matrix: Water								
Batch: 9091133								
Arsenic	1.75	---	1.00	ug/L	1	09/25/19 17:58	EPA 200.8 (Diss)	
Barium	126	---	1.00	ug/L	1	09/25/19 17:58	EPA 200.8 (Diss)	
Cadmium	ND	---	0.200	ug/L	1	09/25/19 17:58	EPA 200.8 (Diss)	
Chromium	ND	---	1.00	ug/L	1	09/25/19 17:58	EPA 200.8 (Diss)	
Lead	ND	---	0.200	ug/L	1	09/25/19 17:58	EPA 200.8 (Diss)	
Mercury	ND	---	0.0800	ug/L	1	09/25/19 17:58	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	09/25/19 17:58	EPA 200.8 (Diss)	
Silver	ND	---	0.200	ug/L	1	09/25/19 17:58	EPA 200.8 (Diss)	
GP-Y (A910633-04RE1) Matrix: Water								
Batch: 9091133								

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****ANALYTICAL SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-Y (A910633-04RE1)				Matrix: Water				
Arsenic	1.79	---	1.00	ug/L	1	09/25/19 18:02	EPA 200.8 (Diss)	
Barium	131	---	1.00	ug/L	1	09/25/19 18:02	EPA 200.8 (Diss)	
Cadmium	ND	---	0.200	ug/L	1	09/25/19 18:02	EPA 200.8 (Diss)	
Chromium	ND	---	1.00	ug/L	1	09/25/19 18:02	EPA 200.8 (Diss)	
Lead	ND	---	0.200	ug/L	1	09/25/19 18:02	EPA 200.8 (Diss)	Q-42
Mercury	ND	---	0.0800	ug/L	1	09/25/19 18:02	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	09/25/19 18:02	EPA 200.8 (Diss)	
Silver	ND	---	0.200	ug/L	1	09/25/19 18:02	EPA 200.8 (Diss)	

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091175 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (9091175-BLK1)		Prepared: 09/23/19 12:49 Analyzed: 09/23/19 20:55										
NWTPH-Dx												
Diesel	ND	---	0.182	mg/L	1	---	---	---	---	---	---	
Oil	ND	---	0.364	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						
LCS (9091175-BS1)		Prepared: 09/23/19 12:49 Analyzed: 09/23/19 21:16										
NWTPH-Dx												
Diesel	1.06	---	0.200	mg/L	1	1.25	---	85	58 - 115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B						Water						
Blank (9091146-BLK1)		Prepared: 09/23/19 07:00 Analyzed: 09/23/19 09:29										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 85 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
LCS (9091146-BS2)		Prepared: 09/23/19 07:00 Analyzed: 09/23/19 09:02										
NWTPH-Gx (MS)												
Gasoline Range Organics	0.420	---	0.100	mg/L	1	0.500	---	84	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 85 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		101 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B						Water						
Blank (9091146-BLK1)		Prepared: 09/23/19 07:00 Analyzed: 09/23/19 09:29										
EPA 8260C												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B						Water						
Blank (9091146-BLK1)		Prepared: 09/23/19 07:00		Analyzed: 09/23/19 09:29								
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B						Water						
Blank (9091146-BLK1)		Prepared: 09/23/19 07:00		Analyzed: 09/23/19 09:29								
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		105 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
LCS (9091146-BS1)		Prepared: 09/23/19 07:00		Analyzed: 09/23/19 08:35								
EPA 8260C												
Acetone	37.3	---	20.0	ug/L	1	40.0	---	93	80 - 120%	---	---	
Acrylonitrile	19.5	---	2.00	ug/L	1	20.0	---	98	80 - 120%	---	---	
Benzene	19.7	---	0.200	ug/L	1	20.0	---	98	80 - 120%	---	---	
Bromobenzene	21.0	---	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	
Bromochloromethane	20.3	---	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
Bromodichloromethane	19.6	---	1.00	ug/L	1	20.0	---	98	80 - 120%	---	---	
Bromoform	22.1	---	1.00	ug/L	1	20.0	---	111	80 - 120%	---	---	
Bromomethane	21.8	---	5.00	ug/L	1	20.0	---	109	80 - 120%	---	---	
2-Butanone (MEK)	38.4	---	10.0	ug/L	1	40.0	---	96	80 - 120%	---	---	
n-Butylbenzene	21.0	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
sec-Butylbenzene	20.1	---	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
tert-Butylbenzene	20.0	---	1.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
Carbon disulfide	18.9	---	10.0	ug/L	1	20.0	---	94	80 - 120%	---	---	
Carbon tetrachloride	19.1	---	1.00	ug/L	1	20.0	---	95	80 - 120%	---	---	
Chlorobenzene	21.1	---	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
Chloroethane	16.1	---	5.00	ug/L	1	20.0	---	81	80 - 120%	---	---	
Chloroform	19.1	---	1.00	ug/L	1	20.0	---	96	80 - 120%	---	---	
Chloromethane	16.7	---	5.00	ug/L	1	20.0	---	83	80 - 120%	---	---	
2-Chlorotoluene	20.5	---	1.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
4-Chlorotoluene	21.5	---	1.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
Dibromochloromethane	21.4	---	1.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	21.3	---	5.00	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	21.4	---	0.500	ug/L	1	20.0	---	107	80 - 120%	---	---	
Dibromomethane	20.5	---	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
1,2-Dichlorobenzene	21.5	---	0.500	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,3-Dichlorobenzene	21.2	---	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,4-Dichlorobenzene	20.0	---	0.500	ug/L	1	20.0	---	100	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B						Water						
LCS (9091146-BS1)		Prepared: 09/23/19 07:00		Analyzed: 09/23/19 08:35								
Dichlorodifluoromethane	17.0	---	1.00	ug/L	1	20.0	---	85	80 - 120%	---	---	
1,1-Dichloroethane	18.9	---	0.400	ug/L	1	20.0	---	95	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	18.9	---	0.400	ug/L	1	20.0	---	94	80 - 120%	---	---	
1,1-Dichloroethene	19.0	---	0.400	ug/L	1	20.0	---	95	80 - 120%	---	---	
cis-1,2-Dichloroethene	17.9	---	0.400	ug/L	1	20.0	---	90	80 - 120%	---	---	
trans-1,2-Dichloroethene	18.7	---	0.400	ug/L	1	20.0	---	94	80 - 120%	---	---	
1,2-Dichloropropane	18.9	---	0.500	ug/L	1	20.0	---	95	80 - 120%	---	---	
1,3-Dichloropropane	20.5	---	1.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
2,2-Dichloropropane	19.9	---	1.00	ug/L	1	20.0	---	99	80 - 120%	---	---	
1,1-Dichloropropene	18.9	---	1.00	ug/L	1	20.0	---	95	80 - 120%	---	---	
cis-1,3-Dichloropropene	20.9	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
trans-1,3-Dichloropropene	21.5	---	1.00	ug/L	1	20.0	---	108	80 - 120%	---	---	
Ethylbenzene	20.9	---	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	
Hexachlorobutadiene	18.0	---	5.00	ug/L	1	20.0	---	90	80 - 120%	---	---	
2-Hexanone	40.6	---	10.0	ug/L	1	40.0	---	102	80 - 120%	---	---	
Isopropylbenzene	20.6	---	1.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
4-Isopropyltoluene	21.3	---	1.00	ug/L	1	20.0	---	106	80 - 120%	---	---	
Methylene chloride	18.3	---	5.00	ug/L	1	20.0	---	92	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	42.4	---	10.0	ug/L	1	40.0	---	106	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	19.1	---	1.00	ug/L	1	20.0	---	95	80 - 120%	---	---	
Naphthalene	18.6	---	2.00	ug/L	1	20.0	---	93	80 - 120%	---	---	
n-Propylbenzene	20.0	---	0.500	ug/L	1	20.0	---	100	80 - 120%	---	---	
Styrene	21.4	---	1.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	22.2	---	0.400	ug/L	1	20.0	---	111	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	22.0	---	0.500	ug/L	1	20.0	---	110	80 - 120%	---	---	
Tetrachloroethene (PCE)	20.3	---	0.400	ug/L	1	20.0	---	101	80 - 120%	---	---	
Toluene	20.2	---	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
1,2,3-Trichlorobenzene	21.5	---	2.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2,4-Trichlorobenzene	19.5	---	2.00	ug/L	1	20.0	---	98	80 - 120%	---	---	
1,1,1-Trichloroethane	18.5	---	0.400	ug/L	1	20.0	---	93	80 - 120%	---	---	
1,1,2-Trichloroethane	21.0	---	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	
Trichloroethene (TCE)	18.6	---	0.400	ug/L	1	20.0	---	93	80 - 120%	---	---	
Trichlorofluoromethane	19.7	---	2.00	ug/L	1	20.0	---	98	80 - 120%	---	---	
1,2,3-Trichloropropane	21.8	---	1.00	ug/L	1	20.0	---	109	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B						Water						
LCS (9091146-BS1)		Prepared: 09/23/19 07:00		Analyzed: 09/23/19 08:35								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	18.9	---	2.00	ug/L	1	20.0	---	94	80 - 120%	---	---	
1,2,4-Trimethylbenzene	22.0	---	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
1,3,5-Trimethylbenzene	21.0	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
Vinyl chloride	17.8	---	0.400	ug/L	1	20.0	---	89	80 - 120%	---	---	
m,p-Xylene	43.1	---	1.00	ug/L	1	40.0	---	108	80 - 120%	---	---	
o-Xylene	19.4	---	0.500	ug/L	1	20.0	---	97	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 100 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		92 %		80-120 %		"						
Matrix Spike (9091146-MS1)						Prepared: 09/23/19 09:32 Analyzed: 09/23/19 15:19						
QC Source Sample: GP-06 (A910633-03)												
EPA 8260C												
Acetone	73.2	---	20.0	ug/L	1	40.0	34.3	97	39 - 160%	---	---	
Acrylonitrile	27.0	---	2.00	ug/L	1	20.0	ND	110	63 - 135%	---	---	
Benzene	44.0	---	0.200	ug/L	1	20.0	20.6	117	79 - 120%	---	---	
Bromobenzene	22.9	---	0.500	ug/L	1	20.0	ND	115	80 - 120%	---	---	
Bromochloromethane	21.9	---	1.00	ug/L	1	20.0	ND	109	78 - 123%	---	---	
Bromodichloromethane	21.1	---	1.00	ug/L	1	20.0	ND	105	79 - 125%	---	---	
Bromoform	21.4	---	1.00	ug/L	1	20.0	ND	107	66 - 130%	---	---	
Bromomethane	22.5	---	5.00	ug/L	1	20.0	ND	112	53 - 141%	---	---	
2-Butanone (MEK)	62.4	---	10.0	ug/L	1	40.0	ND	106	56 - 143%	---	---	
n-Butylbenzene	26.4	---	1.00	ug/L	1	20.0	0.543	130	75 - 128%	---	---	Q-01
sec-Butylbenzene	26.5	---	1.00	ug/L	1	20.0	2.60	119	77 - 126%	---	---	
tert-Butylbenzene	23.0	---	1.00	ug/L	1	20.0	ND	115	78 - 124%	---	---	
Carbon disulfide	21.2	---	10.0	ug/L	1	20.0	ND	106	64 - 133%	---	---	
Carbon tetrachloride	21.5	---	1.00	ug/L	1	20.0	ND	107	72 - 136%	---	---	
Chlorobenzene	22.3	---	0.500	ug/L	1	20.0	ND	111	80 - 120%	---	---	
Chloroethane	16.7	---	5.00	ug/L	1	20.0	ND	83	60 - 138%	---	---	
Chloroform	21.0	---	1.00	ug/L	1	20.0	ND	105	79 - 124%	---	---	
Chloromethane	19.4	---	5.00	ug/L	1	20.0	ND	97	50 - 139%	---	---	
2-Chlorotoluene	23.1	---	1.00	ug/L	1	20.0	ND	115	79 - 122%	---	---	
4-Chlorotoluene	23.5	---	1.00	ug/L	1	20.0	ND	117	78 - 122%	---	---	

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EPA ID: OR01039**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B							Water					
Matrix Spike (9091146-MS1)		Prepared: 09/23/19 09:32 Analyzed: 09/23/19 15:19										
QC Source Sample: GP-06 (A910633-03)												
Dibromochloromethane	21.2	---	1.00	ug/L	1	20.0	ND	106	74 - 126%	---	---	
1,2-Dibromo-3-chloropropane	24.5	---	5.00	ug/L	1	20.0	ND	122	62 - 128%	---	---	
1,2-Dibromoethane (EDB)	22.3	---	0.500	ug/L	1	20.0	ND	111	77 - 121%	---	---	
Dibromomethane	22.8	---	1.00	ug/L	1	20.0	ND	114	79 - 123%	---	---	
1,2-Dichlorobenzene	23.6	---	0.500	ug/L	1	20.0	ND	118	80 - 120%	---	---	
1,3-Dichlorobenzene	23.0	---	0.500	ug/L	1	20.0	ND	115	80 - 120%	---	---	
1,4-Dichlorobenzene	21.4	---	0.500	ug/L	1	20.0	ND	107	79 - 120%	---	---	
Dichlorodifluoromethane	19.2	---	1.00	ug/L	1	20.0	ND	96	32 - 152%	---	---	
1,1-Dichloroethane	20.9	---	0.400	ug/L	1	20.0	ND	105	77 - 125%	---	---	
1,2-Dichloroethane (EDC)	19.9	---	0.400	ug/L	1	20.0	0.860	95	73 - 128%	---	---	
1,1-Dichloroethene	21.5	---	0.400	ug/L	1	20.0	ND	107	71 - 131%	---	---	
cis-1,2-Dichloroethene	20.4	---	0.400	ug/L	1	20.0	ND	102	78 - 123%	---	---	
trans-1,2-Dichloroethene	21.5	---	0.400	ug/L	1	20.0	ND	108	75 - 124%	---	---	
1,2-Dichloropropane	22.1	---	0.500	ug/L	1	20.0	ND	111	78 - 122%	---	---	
1,3-Dichloropropane	21.1	---	1.00	ug/L	1	20.0	ND	106	80 - 120%	---	---	
2,2-Dichloropropane	20.2	---	1.00	ug/L	1	20.0	ND	101	60 - 139%	---	---	
1,1-Dichloropropene	23.2	---	1.00	ug/L	1	20.0	ND	116	79 - 125%	---	---	
cis-1,3-Dichloropropene	21.4	---	1.00	ug/L	1	20.0	ND	107	75 - 124%	---	---	
trans-1,3-Dichloropropene	20.6	---	1.00	ug/L	1	20.0	ND	103	73 - 127%	---	---	
Ethylbenzene	25.5	---	0.500	ug/L	1	20.0	2.84	113	79 - 121%	---	---	
Hexachlorobutadiene	22.9	---	5.00	ug/L	1	20.0	ND	114	66 - 134%	---	---	
2-Hexanone	45.8	---	10.0	ug/L	1	40.0	ND	115	57 - 139%	---	---	
Isopropylbenzene	26.7	---	1.00	ug/L	1	20.0	2.55	121	72 - 131%	---	---	
4-Isopropyltoluene	25.4	---	1.00	ug/L	1	20.0	0.770	123	77 - 127%	---	---	
Methylene chloride	19.9	---	5.00	ug/L	1	20.0	ND	100	74 - 124%	---	---	
4-Methyl-2-pentanone (MiBK)	45.5	---	10.0	ug/L	1	40.0	ND	114	67 - 130%	---	---	
Methyl tert-butyl ether (MTBE)	20.4	---	1.00	ug/L	1	20.0	ND	102	71 - 124%	---	---	
Naphthalene	27.2	---	2.00	ug/L	1	20.0	1.30	129	61 - 128%	---	---	Q-01
n-Propylbenzene	24.1	---	0.500	ug/L	1	20.0	1.56	113	76 - 126%	---	---	
Styrene	21.2	---	1.00	ug/L	1	20.0	ND	106	78 - 123%	---	---	
1,1,1,2-Tetrachloroethane	21.9	---	0.400	ug/L	1	20.0	ND	109	78 - 124%	---	---	
1,1,2,2-Tetrachloroethane	23.3	---	0.500	ug/L	1	20.0	ND	117	71 - 121%	---	---	
Tetrachloroethene (PCE)	22.5	---	0.400	ug/L	1	20.0	ND	112	74 - 129%	---	---	

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091146 - EPA 5030B							Water					
Matrix Spike (9091146-MS1)		Prepared: 09/23/19 09:32 Analyzed: 09/23/19 15:19										
QC Source Sample: GP-06 (A910633-03)												
Toluene	22.7	---	1.00	ug/L	1	20.0	1.38	107	80 - 121%	---	---	
1,2,3-Trichlorobenzene	26.3	---	2.00	ug/L	1	20.0	ND	131	69 - 129%	---	---	Q-01
1,2,4-Trichlorobenzene	28.5	---	2.00	ug/L	1	20.0	ND	142	69 - 130%	---	---	Q-01
1,1,1-Trichloroethane	20.4	---	0.400	ug/L	1	20.0	ND	102	74 - 131%	---	---	
1,1,2-Trichloroethane	23.3	---	0.500	ug/L	1	20.0	ND	114	80 - 120%	---	---	
Trichloroethene (TCE)	22.8	---	0.400	ug/L	1	20.0	ND	114	79 - 123%	---	---	
Trichlorofluoromethane	20.3	---	2.00	ug/L	1	20.0	ND	102	65 - 141%	---	---	
1,2,3-Trichloropropane	22.2	---	1.00	ug/L	1	20.0	ND	111	73 - 122%	---	---	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	22.3	---	2.00	ug/L	1	20.0	ND	111	70 - 136%	---	---	
1,2,4-Trimethylbenzene	23.9	---	1.00	ug/L	1	20.0	0.811	116	76 - 124%	---	---	
1,3,5-Trimethylbenzene	23.0	---	1.00	ug/L	1	20.0	ND	115	75 - 124%	---	---	
Vinyl chloride	21.6	---	0.400	ug/L	1	20.0	ND	108	58 - 137%	---	---	
m,p-Xylene	50.7	---	1.00	ug/L	1	40.0	4.00	117	80 - 121%	---	---	
o-Xylene	23.7	---	0.500	ug/L	1	20.0	0.476	116	78 - 122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		95 %		80-120 %		"						

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091165 - EPA 3510C (Acid Extraction)							Water					
Blank (9091165-BLK1)		Prepared: 09/23/19 10:29 Analyzed: 10/02/19 15:08										
EPA 8270D (SIM)												
Acenaphthene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0400	ug/L	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 69 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		77 %		50-133 %		"						

LCS (9091165-BS1)

Prepared: 09/23/19 10:29 Analyzed: 10/02/19 15:33

EPA 8270D (SIM)												
Acenaphthene	5.73	---	0.0400	ug/L	1	8.00	---	72	47 - 122%	---	---	
Acenaphthylene	5.54	---	0.0400	ug/L	1	8.00	---	69	41 - 130%	---	---	
Anthracene	5.98	---	0.0400	ug/L	1	8.00	---	75	57 - 123%	---	---	
Benz(a)anthracene	6.24	---	0.0400	ug/L	1	8.00	---	78	58 - 125%	---	---	
Benzo(a)pyrene	6.29	---	0.0400	ug/L	1	8.00	---	79	54 - 128%	---	---	
Benzo(b)fluoranthene	6.39	---	0.0400	ug/L	1	8.00	---	80	53 - 131%	---	---	
Benzo(k)fluoranthene	6.27	---	0.0400	ug/L	1	8.00	---	78	57 - 129%	---	---	
Benzo(g,h,i)perylene	6.36	---	0.0400	ug/L	1	8.00	---	79	50 - 134%	---	---	
Chrysene	6.22	---	0.0400	ug/L	1	8.00	---	78	59 - 123%	---	---	

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091165 - EPA 3510C (Acid Extraction)							Water					
LCS (9091165-BS1)		Prepared: 09/23/19 10:29		Analyzed: 10/02/19 15:33								
Dibenz(a,h)anthracene	6.56	---	0.0400	ug/L	1	8.00	---	82	51 - 134%	---	---	
Dibenzofuran	5.76	---	0.0400	ug/L	1	8.00	---	72	53 - 120%	---	---	
Fluoranthene	6.18	---	0.0400	ug/L	1	8.00	---	77	57 - 128%	---	---	
Fluorene	5.93	---	0.0400	ug/L	1	8.00	---	74	52 - 124%	---	---	
Indeno(1,2,3-cd)pyrene	6.32	---	0.0400	ug/L	1	8.00	---	79	52 - 133%	---	---	
1-Methylnaphthalene	5.27	---	0.0800	ug/L	1	8.00	---	66	41 - 120%	---	---	
2-Methylnaphthalene	5.25	---	0.0800	ug/L	1	8.00	---	66	40 - 121%	---	---	
Naphthalene	5.17	---	0.0800	ug/L	1	8.00	---	65	40 - 121%	---	---	
Phenanthrene	6.00	---	0.0400	ug/L	1	8.00	---	75	59 - 120%	---	---	
Pyrene	6.28	---	0.0400	ug/L	1	8.00	---	78	57 - 126%	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 70 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		77 %		50-133 %		"						

LCS Dup (9091165-BSD1)		Prepared: 09/23/19 10:29 Analyzed: 10/02/19 15:59											Q-19
EPA 8270D (SIM)													
Acenaphthene	5.87	---	0.0400	ug/L	1	8.00	---	73	47 - 122%	2	30%		
Acenaphthylene	5.68	---	0.0400	ug/L	1	8.00	---	71	41 - 130%	3	30%		
Anthracene	6.01	---	0.0400	ug/L	1	8.00	---	75	57 - 123%	0.5	30%		
Benz(a)anthracene	6.24	---	0.0400	ug/L	1	8.00	---	78	58 - 125%	0.01	30%		
Benzo(a)pyrene	6.38	---	0.0400	ug/L	1	8.00	---	80	54 - 128%	1	30%		
Benzo(b)fluoranthene	6.46	---	0.0400	ug/L	1	8.00	---	81	53 - 131%	1	30%		
Benzo(k)fluoranthene	6.45	---	0.0400	ug/L	1	8.00	---	81	57 - 129%	3	30%		
Benzo(g,h,i)perylene	6.45	---	0.0400	ug/L	1	8.00	---	81	50 - 134%	1	30%		
Chrysene	6.51	---	0.0400	ug/L	1	8.00	---	81	59 - 123%	5	30%		
Dibenz(a,h)anthracene	6.65	---	0.0400	ug/L	1	8.00	---	83	51 - 134%	1	30%		
Dibenzofuran	5.89	---	0.0400	ug/L	1	8.00	---	74	53 - 120%	2	30%		
Fluoranthene	6.25	---	0.0400	ug/L	1	8.00	---	78	57 - 128%	1	30%		
Fluorene	6.05	---	0.0400	ug/L	1	8.00	---	76	52 - 124%	2	30%		
Indeno(1,2,3-cd)pyrene	6.36	---	0.0400	ug/L	1	8.00	---	80	52 - 133%	0.7	30%		
1-Methylnaphthalene	5.41	---	0.0800	ug/L	1	8.00	---	68	41 - 120%	3	30%		
2-Methylnaphthalene	5.44	---	0.0800	ug/L	1	8.00	---	68	40 - 121%	3	30%		
Naphthalene	5.44	---	0.0800	ug/L	1	8.00	---	68	40 - 121%	5	30%		
Phenanthrene	6.16	---	0.0400	ug/L	1	8.00	---	77	59 - 120%	3	30%		
Pyrene	6.39	---	0.0400	ug/L	1	8.00	---	80	57 - 126%	2	30%		

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0633 - 10 04 19 1456

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091165 - EPA 3510C (Acid Extraction)						Water						
LCS Dup (9091165-BSD1)		Prepared: 09/23/19 10:29 Analyzed: 10/02/19 15:59										Q-19
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 70 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>77 %</i>		<i>50-133 %</i>		<i>"</i>						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091131 - EPA 3015A												
Water												
Blank (9091131-BLK1)												
Prepared: 09/20/19 14:19 Analyzed: 09/23/19 19:14												
<u>EPA 200.8</u>												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
<u>EPA 200.8 (Hg)</u>												
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
LCS (9091131-BS1)												
Prepared: 09/20/19 14:19 Analyzed: 09/23/19 19:19												
<u>EPA 200.8</u>												
Arsenic	51.6	---	1.00	ug/L	1	55.6	---	93	85 - 115%	---	---	
Barium	53.5	---	1.00	ug/L	1	55.6	---	96	85 - 115%	---	---	
Cadmium	51.1	---	0.200	ug/L	1	55.6	---	92	85 - 115%	---	---	
Chromium	53.5	---	1.00	ug/L	1	55.6	---	96	85 - 115%	---	---	
Lead	53.8	---	0.200	ug/L	1	55.6	---	97	85 - 115%	---	---	
Selenium	25.9	---	1.00	ug/L	1	27.8	---	93	85 - 115%	---	---	
Silver	28.1	---	0.200	ug/L	1	27.8	---	101	85 - 115%	---	---	
<u>EPA 200.8 (Hg)</u>												
Mercury	1.02	---	0.0800	ug/L	1	1.11	---	92	85 - 115%	---	---	
Duplicate (9091131-DUP1)												
Prepared: 09/20/19 14:19 Analyzed: 09/23/19 19:41												
<u>QC Source Sample: GP-03 (A910633-02)</u>												
<u>EPA 200.8</u>												
Arsenic	39.4	---	5.00	ug/L	5	---	45.6	---	---	15	20%	
Barium	1000	---	5.00	ug/L	5	---	1040	---	---	4	20%	
Cadmium	ND	---	1.00	ug/L	5	---	0.336	---	---	***	20%	R-04
Chromium	293	---	5.00	ug/L	5	---	327	---	---	11	20%	
Lead	23.2	---	1.00	ug/L	5	---	23.8	---	---	2	20%	
Selenium	ND	---	5.00	ug/L	5	---	2.82	---	---	***	20%	R-04
Silver	ND	---	1.00	ug/L	5	---	ND	---	---	---	20%	R-04
<u>EPA 200.8 (Hg)</u>												

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091131 - EPA 3015A							Water					
Duplicate (9091131-DUP1)		Prepared: 09/20/19 14:19		Analyzed: 09/23/19 19:41								
QC Source Sample: GP-03 (A910633-02)												
Mercury	0.726	---	0.400	ug/L	5	---	0.730	---	---	0.6	20%	
Matrix Spike (9091131-MS1)		Prepared: 09/20/19 14:19		Analyzed: 09/23/19 19:46								
QC Source Sample: GP-03 (A910633-02)												
EPA 200.8												
Arsenic	94.7	---	5.00	ug/L	5	55.6	45.6	88	70 - 130%	---	---	Q-03, Q-04
Barium	1080	---	5.00	ug/L	5	55.6	1040	61	70 - 130%	---	---	
Cadmium	52.2	---	1.00	ug/L	5	55.6	0.336	93	70 - 130%	---	---	Q-03, Q-04
Chromium	407	---	5.00	ug/L	5	55.6	327	145	70 - 130%	---	---	
Lead	74.8	---	1.00	ug/L	5	55.6	23.8	92	70 - 130%	---	---	
Selenium	23.0	---	5.00	ug/L	5	27.8	2.82	73	70 - 130%	---	---	
Silver	27.8	---	1.00	ug/L	5	27.8	ND	100	70 - 130%	---	---	
EPA 200.8 (Hg)												
Mercury	1.76	---	0.400	ug/L	5	1.11	0.730	92	70 - 130%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091133 - Matrix Matched Direct Inject							Water					
Blank (9091133-BLK2)		Prepared: 09/20/19 14:29			Analyzed: 09/25/19 17:40							
EPA 200.8 (Diss)												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	Q-16
Barium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	Q-16
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Chromium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	Q-16
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	Q-16
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	Q-16
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	Q-16
EPA 200.8 (Hg)												
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	Q-16
LCS (9091133-BS2)		Prepared: 09/20/19 14:29			Analyzed: 09/25/19 17:44							
EPA 200.8 (Diss)												
Arsenic	51.5	---	1.00	ug/L	1	55.6	---	93	85 - 115%	---	---	Q-16
Barium	50.3	---	1.00	ug/L	1	55.6	---	91	85 - 115%	---	---	Q-16
Cadmium	51.0	---	0.200	ug/L	1	55.6	---	92	85 - 115%	---	---	Q-16
Chromium	51.6	---	1.00	ug/L	1	55.6	---	93	85 - 115%	---	---	Q-16
Lead	57.4	---	0.200	ug/L	1	55.6	---	103	85 - 115%	---	---	Q-16
Selenium	25.7	---	1.00	ug/L	1	27.8	---	93	85 - 115%	---	---	Q-16
Silver	29.4	---	0.200	ug/L	1	27.8	---	106	85 - 115%	---	---	Q-16
EPA 200.8 (Hg)												
Mercury	1.11	---	0.0800	ug/L	1	1.11	---	100	85 - 115%	---	---	Q-16
Duplicate (9091133-DUP2)		Prepared: 09/20/19 14:29			Analyzed: 09/25/19 18:07							
QC Source Sample: GP-Y (A910633-04RE1)												
EPA 200.8 (Diss)												
Arsenic	1.80	---	1.00	ug/L	1	---	1.79	---	---	0.8	20%	Q-16
Barium	132	---	1.00	ug/L	1	---	131	---	---	0.7	20%	Q-16
Cadmium	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	Q-16
Chromium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	Q-16
Lead	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	Q-05, Q-16
Selenium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	Q-16
Silver	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	Q-16
EPA 200.8 (Hg)												

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****QUALITY CONTROL (QC) SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091133 - Matrix Matched Direct Inject							Water					
Duplicate (9091133-DUP2)		Prepared: 09/20/19 14:29		Analyzed: 09/25/19 18:07								
QC Source Sample: GP-Y (A9I0633-04RE1)												
Mercury	ND	---	0.0800	ug/L	1	---	ND	---	---	---	20%	Q-16
Matrix Spike (9091133-MS2)		Prepared: 09/20/19 14:29		Analyzed: 09/25/19 18:16								
QC Source Sample: GP-Y (A9I0633-04RE1)												
EPA 200.8 (Diss)												
Arsenic	56.3	---	1.00	ug/L	1	55.6	1.79	98	70 - 130%	---	---	Q-16
Barium	190	---	1.00	ug/L	1	55.6	131	106	70 - 130%	---	---	Q-16
Cadmium	53.4	---	0.200	ug/L	1	55.6	ND	96	70 - 130%	---	---	Q-16
Chromium	53.0	---	1.00	ug/L	1	55.6	ND	95	70 - 130%	---	---	Q-16
Lead	54.9	---	0.200	ug/L	1	55.6	ND	99	70 - 130%	---	---	Q-16
Selenium	28.0	---	1.00	ug/L	1	27.8	ND	101	70 - 130%	---	---	Q-16
Silver	28.9	---	0.200	ug/L	1	27.8	ND	104	70 - 130%	---	---	Q-16
EPA 200.8 (Hg)												
Mercury	1.09	---	0.0800	ug/L	1	1.11	ND	99	70 - 130%	---	---	Q-16

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3510C (Fuels/Acid Ext.)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9091175</u>							
A910633-01	Water	NWTPH-Dx	09/18/19 09:00	09/23/19 15:04	710mL/5mL	1000mL/5mL	1.41
A910633-02	Water	NWTPH-Dx	09/18/19 14:45	09/23/19 15:04	940mL/5mL	1000mL/5mL	1.06
A910633-03	Water	NWTPH-Dx	09/19/19 08:30	09/23/19 15:04	950mL/5mL	1000mL/5mL	1.05
A910633-04	Water	NWTPH-Dx	09/19/19 09:00	09/23/19 15:04	740mL/5mL	1000mL/5mL	1.35

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9091146</u>							
A910633-01	Water	NWTPH-Gx (MS)	09/18/19 09:00	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00
A910633-02	Water	NWTPH-Gx (MS)	09/18/19 14:45	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00
A910633-03	Water	NWTPH-Gx (MS)	09/19/19 08:30	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00
A910633-04	Water	NWTPH-Gx (MS)	09/19/19 09:00	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00

Volatile Organic Compounds by EPA 8260C**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9091146</u>							
A910633-01	Water	EPA 8260C	09/18/19 09:00	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00
A910633-02	Water	EPA 8260C	09/18/19 14:45	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00
A910633-03	Water	EPA 8260C	09/19/19 08:30	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00
A910633-04	Water	EPA 8260C	09/19/19 09:00	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00
A910633-05	Water	EPA 8260C	09/18/19 00:00	09/23/19 09:32	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**Prep: EPA 3510C (Acid Extraction)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9091165</u>							
A910633-02	Water	EPA 8270D (SIM)	09/18/19 14:45	09/23/19 10:29	960mL/2mL	1000mL/2mL	1.04

Total Metals by EPA 200.8 (ICPMS)

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0633 - 10 04 19 1456****SAMPLE PREPARATION INFORMATION****Total Metals by EPA 200.8 (ICPMS)****Prep: EPA 3015A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091131							
A9I0633-01	Water	EPA 200.8	09/18/19 09:00	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00
A9I0633-01	Water	EPA 200.8 (Hg)	09/18/19 09:00	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00
A9I0633-02	Water	EPA 200.8	09/18/19 14:45	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00
A9I0633-02	Water	EPA 200.8 (Hg)	09/18/19 14:45	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00
A9I0633-03	Water	EPA 200.8	09/19/19 08:30	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00
A9I0633-03	Water	EPA 200.8 (Hg)	09/19/19 08:30	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00
A9I0633-04	Water	EPA 200.8	09/19/19 09:00	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00
A9I0633-04	Water	EPA 200.8 (Hg)	09/19/19 09:00	09/20/19 14:19	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 200.8 (ICPMS)**Prep: Matrix Matched Direct Inject**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091133							
A9I0633-01RE1	Water	EPA 200.8 (Diss)	09/18/19 09:00	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-01RE1	Water	EPA 200.8 (Hg)	09/18/19 09:00	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-01RE2	Water	EPA 200.8 (Diss)	09/18/19 09:00	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-02RE1	Water	EPA 200.8 (Diss)	09/18/19 14:45	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-02RE1	Water	EPA 200.8 (Hg)	09/18/19 14:45	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-03RE1	Water	EPA 200.8 (Diss)	09/19/19 08:30	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-03RE1	Water	EPA 200.8 (Hg)	09/19/19 08:30	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-04RE1	Water	EPA 200.8 (Diss)	09/19/19 09:00	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00
A9I0633-04RE1	Water	EPA 200.8 (Hg)	09/19/19 09:00	09/20/19 14:29	45mL/50mL	45mL/50mL	1.00

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- F-18** Result for Diesel (Diesel Range Organics, C12-C24) is due to overlap from Gasoline or a Gasoline Range product.
- M-02** Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-04** Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910633 - 10 04 19 1456

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported.
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0633 - 10 04 19 1456

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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Report ID:

A9I0633 - 10 04 19 1456

LABORATORY ACCREDITATION INFORMATION**TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
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All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910633 - 10 04 19 1456****APEX LABS COOLER RECEIPT FORM**Client: StantecElement WO#: A9 10633Project/Project #: Lampson / 185750581**Delivery Info:**Date/time received: 9/20/19 @ 1029By: (signature)Delivered by: Apex Client ESS FedEx ☒ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐**Cooler Inspection** Date/time inspected: 9/20/19 @ 1029By: (signature)Chain of Custody included? Yes ☒ No ☐Custody seals? Yes ☒ No ☒Signed/dated by client? Yes ☒ No ☐Signed/dated by Apex? Yes ☒ No ☐

date 9/20/19

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>0.9</u>	<u>5.3</u>					
Received on ice? (Y/N)	<u>Y</u>	<u>Y</u>					
Temp. blanks? (Y/N)	<u>Y</u>	<u>Y</u>					
Ice type: (Gel/Real/Other)	<u>Real</u>	<u>Real</u>					
Condition:	<u>Melty</u>	<u>Melty</u>					

Cooler out of temp? (Y/N) ☒ Possible reason why:If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/NA ☒Out of temperature samples form initiated? Yes/No/NA ☒**Samples Inspection:** Date/time inspected: 9/20/19 @ 1250By: (signature)All samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☒ No ☒Comments: TB-091919 lists 1 cont., 2 conts. provided.COC/container discrepancies form initiated? Yes ☐ No ☐ NA ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:Do VOA vials have visible headspace? Yes ☐ No ☒ NA ☐Comments: Vis. sed in all vials except TB-091919Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐

Comments:

Additional information: TB # 2118 - No info on 1/2 Trip BlanksLabeled by: (signature)Witness: (signature)Tracking #: 7899 2984 8390Cooler Inspected by: (signature)

See Project Contact Form: Y

Lisa Domenighini



Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Monday, October 14, 2019

Len Farr

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

RE: A9I0687 - Lampson - 185750581

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

Enclosed are the results of analyses for work order A9I0687, which was received by the laboratory on 9/20/2019 at 11:10:00AM.

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

Please note: All samples will be disposed of within 30 days of final reporting, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.2 degC	Cooler #2	3.4 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****ANALYTICAL REPORT FOR SAMPLES****SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP04-1	A9I0687-01	Soil	09/17/19 13:20	09/20/19 11:10
GP04-12	A9I0687-02	Soil	09/17/19 13:45	09/20/19 11:10
GP03-2	A9I0687-03	Soil	09/18/19 09:30	09/20/19 11:10
GP03-8	A9I0687-04	Soil	09/18/19 10:00	09/20/19 11:10
GP-X	A9I0687-05	Soil	09/18/19 10:15	09/20/19 11:10
GP06-2	A9I0687-06	Soil	09/18/19 16:00	09/20/19 11:10
GP06-6	A9I0687-07	Soil	09/18/19 16:15	09/20/19 11:10
UST-01-T2-NB	A9I0687-08	Soil	09/19/19 11:00	09/20/19 11:10
UST-02-T2-SB	A9I0687-09	Soil	09/19/19 11:05	09/20/19 11:10
UST-03-T2-SE	A9I0687-10	Soil	09/19/19 12:30	09/20/19 11:10
UST-04-T1-NB	A9I0687-11	Soil	09/19/19 12:45	09/20/19 11:10
UST-05-T1-SB	A9I0687-12	Soil	09/19/19 13:00	09/20/19 11:10
UST-06-T1-SW	A9I0687-13	Soil	09/19/19 13:15	09/20/19 11:10

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Lisa Domenighini, Client Services Manager

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EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL CASE NARRATIVE

Work Order: A9I0687

Subcontract

This report is not complete without the attached subcontract laboratory report for NWTPH EPH and NWTPH VPH from Fremont Analytical.

Apex Laboratories

A handwritten signature in black ink, reading "Lisa A. Domenighini".

Lisa Domenighini, Client Services Manager

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**Apex Laboratories, LLC**

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503-718-2323
EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-1 (A9I0687-01RE1)				Matrix: Soil		Batch: 9091259		
Diesel	ND	---	25.0	mg/kg dry	1	09/25/19 10:05	NWTPH-Dx	
Oil	600	---	50.0	mg/kg dry	1	09/25/19 10:05	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 104 %		Limits: 50-150 %	1	09/25/19 10:05	NWTPH-Dx	
GP04-12 (A9I0687-02)				Matrix: Soil		Batch: 9091236		
Diesel	ND	---	25.0	mg/kg dry	1	09/24/19 23:44	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/24/19 23:44	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %	1	09/24/19 23:44	NWTPH-Dx	
GP03-2 (A9I0687-03)				Matrix: Soil		Batch: 9091236		
Diesel	ND	---	25.0	mg/kg dry	1	09/25/19 00:07	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/25/19 00:07	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 110 %		Limits: 50-150 %	1	09/25/19 00:07	NWTPH-Dx	
GP03-8 (A9I0687-04)				Matrix: Soil		Batch: 9091236		
Diesel	58.3	---	25.0	mg/kg dry	1	09/25/19 00:29	NWTPH-Dx	F-19
Oil	170	---	50.0	mg/kg dry	1	09/25/19 00:29	NWTPH-Dx	F-16
Surrogate: o-Terphenyl (Surr)		Recovery: 109 %		Limits: 50-150 %	1	09/25/19 00:29	NWTPH-Dx	
GP-X (A9I0687-05)				Matrix: Soil		Batch: 9091236		
Diesel	31.0	---	25.0	mg/kg dry	1	09/24/19 23:12	NWTPH-Dx	F-19
Oil	63.6	---	50.0	mg/kg dry	1	09/24/19 23:12	NWTPH-Dx	F-16
Surrogate: o-Terphenyl (Surr)		Recovery: 93 %		Limits: 50-150 %	1	09/24/19 23:12	NWTPH-Dx	
GP06-2 (A9I0687-06)				Matrix: Soil		Batch: 9091236		
Diesel	ND	---	25.0	mg/kg dry	1	09/24/19 20:48	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/24/19 20:48	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %	1	09/24/19 20:48	NWTPH-Dx	
GP06-6 (A9I0687-07)				Matrix: Soil		Batch: 9091236		
Diesel	ND	---	25.0	mg/kg dry	1	09/24/19 21:07	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/24/19 21:07	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 115 %		Limits: 50-150 %	1	09/24/19 21:07	NWTPH-Dx	
UST-01-T2-NB (A9I0687-08)				Matrix: Soil		Batch: 9091236		
Diesel	339	---	25.0	mg/kg dry	1	09/24/19 21:27	NWTPH-Dx	F-20

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Lisa Domenighini, Client Services Manager

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601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A9I0687-08)				Matrix: Soil		Batch: 9091236		
Oil	ND	---	50.0	mg/kg dry	1	09/24/19 21:27	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery:</i>	<i>115 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/24/19 21:27</i>	<i>NWTPH-Dx</i>	
UST-02-T2-SB (A9I0687-09)				Matrix: Soil		Batch: 9091236		
Diesel	574	---	25.0	mg/kg dry	1	09/24/19 21:47	NWTPH-Dx	F-19
Oil	483	---	50.0	mg/kg dry	1	09/24/19 21:47	NWTPH-Dx	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery:</i>	<i>118 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/24/19 21:47</i>	<i>NWTPH-Dx</i>	
UST-03-T2-SE (A9I0687-10)				Matrix: Soil		Batch: 9091236		
Diesel	238	---	25.0	mg/kg dry	1	09/24/19 22:07	NWTPH-Dx	F-19
Oil	257	---	50.0	mg/kg dry	1	09/24/19 22:07	NWTPH-Dx	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery:</i>	<i>110 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/24/19 22:07</i>	<i>NWTPH-Dx</i>	
UST-04-T1-NB (A9I0687-11)				Matrix: Soil		Batch: 9091236		
Diesel	376	---	25.0	mg/kg dry	1	09/24/19 22:27	NWTPH-Dx	F-20
Oil	ND	---	50.0	mg/kg dry	1	09/24/19 22:27	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery:</i>	<i>110 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/24/19 22:27</i>	<i>NWTPH-Dx</i>	
UST-05-T1-SB (A9I0687-12)				Matrix: Soil		Batch: 9091236		
Diesel	129	---	25.0	mg/kg dry	1	09/24/19 20:48	NWTPH-Dx	F-20
Oil	ND	---	50.0	mg/kg dry	1	09/24/19 20:48	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery:</i>	<i>103 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/24/19 20:48</i>	<i>NWTPH-Dx</i>	
UST-06-T1-SW (A9I0687-13)				Matrix: Soil		Batch: 9091236		
Diesel	746	---	25.0	mg/kg dry	1	09/24/19 21:07	NWTPH-Dx	F-19
Oil	117	---	50.0	mg/kg dry	1	09/24/19 21:07	NWTPH-Dx	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery:</i>	<i>107 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/24/19 21:07</i>	<i>NWTPH-Dx</i>	

Apex Laboratories

Lisa Domenighini, Client Services Manager

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601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-1 (A9I0687-01)				Matrix: Soil		Batch: 9091047		
Gasoline Range Organics	ND	---	5.72	mg/kg dry	50	09/23/19 16:48	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	106 %	Limits: 50-150 %	1	09/23/19 16:48	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			102 %	50-150 %	1	09/23/19 16:48	NWTPH-Gx (MS)	
GP04-12 (A9I0687-02)				Matrix: Soil		Batch: 9091047		
Gasoline Range Organics	67.6	---	5.49	mg/kg dry	50	09/23/19 17:42	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	116 %	Limits: 50-150 %	1	09/23/19 17:42	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			111 %	50-150 %	1	09/23/19 17:42	NWTPH-Gx (MS)	
GP03-2 (A9I0687-03)				Matrix: Soil		Batch: 9091047		
Gasoline Range Organics	ND	---	5.73	mg/kg dry	50	09/23/19 18:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	107 %	Limits: 50-150 %	1	09/23/19 18:09	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			102 %	50-150 %	1	09/23/19 18:09	NWTPH-Gx (MS)	
GP03-8 (A9I0687-04RE1)				Matrix: Soil		Batch: 9091213		
Gasoline Range Organics	324	---	12.9	mg/kg dry	100	09/24/19 12:14	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	115 %	Limits: 50-150 %	1	09/24/19 12:14	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			98 %	50-150 %	1	09/24/19 12:14	NWTPH-Gx (MS)	
GP-X (A9I0687-05RE1)				Matrix: Soil		Batch: 9091213		
Gasoline Range Organics	655	---	12.9	mg/kg dry	100	09/24/19 12:41	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	121 %	Limits: 50-150 %	1	09/24/19 12:41	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			107 %	50-150 %	1	09/24/19 12:41	NWTPH-Gx (MS)	
GP06-2 (A9I0687-06)				Matrix: Soil		Batch: 9091160		
Gasoline Range Organics	ND	---	5.56	mg/kg dry	50	09/23/19 18:50	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	115 %	Limits: 50-150 %	1	09/23/19 18:50	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			93 %	50-150 %	1	09/23/19 18:50	NWTPH-Gx (MS)	
GP06-6 (A9I0687-07)				Matrix: Soil		Batch: 9091108		
Gasoline Range Organics	ND	---	4.74	mg/kg dry	50	09/23/19 21:45	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	104 %	Limits: 50-150 %	1	09/23/19 21:45	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			109 %	50-150 %	1	09/23/19 21:45	NWTPH-Gx (MS)	
UST-01-T2-NB (A9I0687-08)				Matrix: Soil		Batch: 9091108		
Gasoline Range Organics	8020	---	104	mg/kg dry	1000	09/23/19 22:12	NWTPH-Gx (MS)	Q-42

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Lisa Domenighini, Client Services Manager

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A9I0687-08)				Matrix: Soil		Batch: 9091108		
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 109 %	Limits: 50-150 %	1	09/23/19 22:12	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		111 %	50-150 %	1	09/23/19 22:12	NWTPH-Gx (MS)		
UST-02-T2-SB (A9I0687-09RE1)				Matrix: Soil		Batch: 9091213		
Gasoline Range Organics	4900	---	106	mg/kg dry	1000	09/24/19 13:35	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 120 %	Limits: 50-150 %	1	09/24/19 13:35	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		99 %	50-150 %	1	09/24/19 13:35	NWTPH-Gx (MS)		
UST-03-T2-SE (A9I0687-10)				Matrix: Soil		Batch: 9091160		
Gasoline Range Organics	2360	---	108	mg/kg dry	1000	09/23/19 20:38	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 115 %	Limits: 50-150 %	1	09/23/19 20:38	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		99 %	50-150 %	1	09/23/19 20:38	NWTPH-Gx (MS)		
UST-04-T1-NB (A9I0687-11)				Matrix: Soil		Batch: 9091160		
Gasoline Range Organics	3280	---	104	mg/kg dry	1000	09/23/19 21:05	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 116 %	Limits: 50-150 %	1	09/23/19 21:05	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		105 %	50-150 %	1	09/23/19 21:05	NWTPH-Gx (MS)		
UST-05-T1-SB (A9I0687-12)				Matrix: Soil		Batch: 9091160		
Gasoline Range Organics	1560	---	106	mg/kg dry	1000	09/23/19 21:32	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %	1	09/23/19 21:32	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		101 %	50-150 %	1	09/23/19 21:32	NWTPH-Gx (MS)		
UST-06-T1-SW (A9I0687-13)				Matrix: Soil		Batch: 9091160		
Gasoline Range Organics	3240	---	109	mg/kg dry	1000	09/23/19 22:00	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 107 %	Limits: 50-150 %	1	09/23/19 22:00	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		102 %	50-150 %	1	09/23/19 22:00	NWTPH-Gx (MS)		

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-1 (A910687-01)				Matrix: Soil		Batch: 9091047		
Acetone	ND	---	1.14	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Acrylonitrile	ND	---	0.114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Benzene	ND	---	0.0114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Bromobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Bromochloromethane	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Bromodichloromethane	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Bromoform	ND	---	0.114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Bromomethane	ND	---	0.572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
2-Butanone (MEK)	ND	---	0.572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
n-Butylbenzene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
sec-Butylbenzene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
tert-Butylbenzene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Carbon disulfide	ND	---	0.572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Carbon tetrachloride	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Chlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Chloroethane	ND	---	0.572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Chloroform	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Chloromethane	ND	---	0.286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
2-Chlorotoluene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
4-Chlorotoluene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Dibromochloromethane	ND	---	0.114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Dibromomethane	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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EPA ID: OR01039

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601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-1 (A910687-01)				Matrix: Soil		Batch: 9091047		
Ethylbenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Hexachlorobutadiene	ND	---	0.114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
2-Hexanone	ND	---	0.572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Isopropylbenzene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Methylene chloride	ND	---	0.286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Naphthalene	ND	---	0.114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
n-Propylbenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Styrene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Toluene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Trichlorofluoromethane	ND	---	0.114	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Vinyl chloride	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
m,p-Xylene	ND	---	0.0572	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
o-Xylene	ND	---	0.0286	mg/kg dry	50	09/23/19 16:48	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	94 %	Limits:	80-120 %	1	09/23/19 16:48	5035A/8260C
Toluene-d8 (Surr)			99 %		80-120 %	1	09/23/19 16:48	5035A/8260C
4-Bromofluorobenzene (Surr)			103 %		80-120 %	1	09/23/19 16:48	5035A/8260C

GP04-12 (A910687-02)				Matrix: Soil		Batch: 9091047		
Acetone	ND	---	1.10	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Acrylonitrile	ND	---	0.330	mg/kg dry	50	09/23/19 17:42	5035A/8260C	R-02
Benzene	ND	---	0.0110	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Bromobenzene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Bromochloromethane	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Bromodichloromethane	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-12 (A910687-02)				Matrix: Soil		Batch: 9091047		
Bromoform	ND	---	0.110	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Bromomethane	ND	---	0.549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
2-Butanone (MEK)	ND	---	0.824	mg/kg dry	50	09/23/19 17:42	5035A/8260C	R-02
n-Butylbenzene	0.148	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
sec-Butylbenzene	0.0692	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
tert-Butylbenzene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Carbon disulfide	ND	---	0.549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Carbon tetrachloride	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Chlorobenzene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Chloroethane	ND	---	0.549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Chloroform	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Chloromethane	ND	---	0.275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
2-Chlorotoluene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
4-Chlorotoluene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Dibromochloromethane	ND	---	0.110	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Dibromomethane	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.110	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Ethylbenzene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Hexachlorobutadiene	ND	---	0.110	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
2-Hexanone	ND	---	0.549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Isopropylbenzene	0.0890	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Methylene chloride	ND	---	0.275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-12 (A910687-02)				Matrix: Soil		Batch: 9091047		
4-Methyl-2-pentanone (MiBK)	ND	---	0.549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Naphthalene	ND	---	0.110	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
n-Propylbenzene	0.245	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Styrene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Toluene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Trichlorofluoromethane	ND	---	0.110	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
Vinyl chloride	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
m,p-Xylene	ND	---	0.0549	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
o-Xylene	ND	---	0.0275	mg/kg dry	50	09/23/19 17:42	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/23/19 17:42</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 17:42</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 17:42</i>	<i>5035A/8260C</i>	

GP03-2 (A910687-03)				Matrix: Soil		Batch: 9091047		
Acetone	ND	---	1.15	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Acrylonitrile	ND	---	0.115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Benzene	ND	---	0.0115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Bromobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Bromochloromethane	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Bromodichloromethane	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Bromoform	ND	---	0.115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Bromomethane	ND	---	0.573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
2-Butanone (MEK)	ND	---	0.573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
n-Butylbenzene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
sec-Butylbenzene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
tert-Butylbenzene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP03-2 (A910687-03)				Matrix: Soil		Batch: 9091047		
Carbon disulfide	ND	---	0.573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Carbon tetrachloride	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Chlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Chloroethane	ND	---	0.573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Chloroform	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Chloromethane	ND	---	0.286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
2-Chlorotoluene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
4-Chlorotoluene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Dibromochloromethane	ND	---	0.115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Dibromomethane	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Ethylbenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Hexachlorobutadiene	ND	---	0.115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
2-Hexanone	ND	---	0.573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Isopropylbenzene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Methylene chloride	ND	---	0.286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Naphthalene	ND	---	0.115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
n-Propylbenzene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Styrene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP03-2 (A910687-03)				Matrix: Soil		Batch: 9091047		
1,1,2,2-Tetrachloroethane	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Toluene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Trichlorofluoromethane	ND	---	0.115	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
Vinyl chloride	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
m,p-Xylene	ND	---	0.0573	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
o-Xylene	ND	---	0.0286	mg/kg dry	50	09/23/19 18:09	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	95 %	<i>Limits:</i>	80-120 %	1	09/23/19 18:09	5035A/8260C
<i>Toluene-d8 (Surr)</i>			101 %		80-120 %	1	09/23/19 18:09	5035A/8260C
<i>4-Bromofluorobenzene (Surr)</i>			105 %		80-120 %	1	09/23/19 18:09	5035A/8260C
GP03-8 (A910687-04RE1)				Matrix: Soil		Batch: 9091213		
Acetone	ND	---	2.59	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Acrylonitrile	ND	---	0.906	mg/kg dry	100	09/24/19 12:14	5035A/8260C	R-02
Benzene	0.0774	---	0.0259	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Bromobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Bromochloromethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Bromodichloromethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Bromoform	ND	---	0.259	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Bromomethane	ND	---	1.29	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
2-Butanone (MEK)	ND	---	1.94	mg/kg dry	100	09/24/19 12:14	5035A/8260C	R-02
n-Butylbenzene	0.391	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	M-02
sec-Butylbenzene	0.162	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
tert-Butylbenzene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Carbon disulfide	ND	---	1.29	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Carbon tetrachloride	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Chlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Chloroethane	ND	---	1.29	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Chloroform	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Chloromethane	ND	---	0.647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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EPA ID: OR01039

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP03-8 (A910687-04RE1)				Matrix: Soil		Batch: 9091213		
2-Chlorotoluene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
4-Chlorotoluene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Dibromochloromethane	ND	---	0.259	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Dibromomethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.259	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,3-Dichloropropane	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
2,2-Dichloropropane	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,1-Dichloropropene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Ethylbenzene	1.60	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Hexachlorobutadiene	ND	---	0.259	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
2-Hexanone	ND	---	1.29	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Isopropylbenzene	0.446	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
4-Isopropyltoluene	0.131	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	M-02
Methylene chloride	ND	---	0.647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	1.29	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Naphthalene	1.33	---	0.259	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
n-Propylbenzene	1.38	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Styrene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Toluene	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP03-8 (A910687-04RE1)				Matrix: Soil		Batch: 9091213		
1,1,2-Trichloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Trichlorofluoromethane	ND	---	0.259	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,2,4-Trimethylbenzene	1.36	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
1,3,5-Trimethylbenzene	2.84	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
Vinyl chloride	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
m,p-Xylene	0.720	---	0.129	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
o-Xylene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:14	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 111 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/24/19 12:14</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/24/19 12:14</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/24/19 12:14</i>	<i>5035A/8260C</i>	

GP-X (A910687-05RE1)				Matrix: Soil		Batch: 9091213		
Acetone	ND	---	2.59	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Acrylonitrile	ND	---	3.24	mg/kg dry	100	09/24/19 12:41	5035A/8260C	R-02
Benzene	0.203	---	0.0259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Bromobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Bromochloromethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Bromodichloromethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Bromoform	ND	---	0.259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Bromomethane	ND	---	1.29	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
2-Butanone (MEK)	ND	---	4.53	mg/kg dry	100	09/24/19 12:41	5035A/8260C	R-02
n-Butylbenzene	0.646	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	M-02
sec-Butylbenzene	0.263	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
tert-Butylbenzene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Carbon disulfide	ND	---	1.29	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Carbon tetrachloride	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Chlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Chloroethane	ND	---	1.29	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Chloroform	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Chloromethane	ND	---	0.647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
2-Chlorotoluene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
4-Chlorotoluene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Dibromochloromethane	ND	---	0.259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Dibromomethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-X (A910687-05RE1)				Matrix: Soil		Batch: 9091213		
1,2-Dichlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,3-Dichloropropane	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
2,2-Dichloropropane	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,1-Dichloropropene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Ethylbenzene	3.06	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Hexachlorobutadiene	ND	---	0.259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
2-Hexanone	ND	---	1.29	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Isopropylbenzene	0.819	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
4-Isopropyltoluene	0.228	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	M-02
Methylene chloride	ND	---	0.647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	1.29	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Naphthalene	2.25	---	0.259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
n-Propylbenzene	2.41	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Styrene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Toluene	ND	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
Trichlorofluoromethane	ND	---	0.259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.259	mg/kg dry	100	09/24/19 12:41	5035A/8260C	R-02
1,2,4-Trimethylbenzene	2.87	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
1,3,5-Trimethylbenzene	5.03	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-X (A910687-05RE1)				Matrix: Soil		Batch: 9091213		
Vinyl chloride	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
m,p-Xylene	1.61	---	0.129	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
o-Xylene	ND	---	0.0647	mg/kg dry	100	09/24/19 12:41	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>113 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>09/24/19 12:41</i>	<i>5035A/8260C</i>
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/24/19 12:41</i>	<i>5035A/8260C</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/24/19 12:41</i>	<i>5035A/8260C</i>
GP06-2 (A910687-06)				Matrix: Soil		Batch: 9091160		
Acetone	ND	---	1.11	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Acrylonitrile	ND	---	0.111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Benzene	ND	---	0.0111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Bromobenzene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Bromochloromethane	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Bromodichloromethane	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Bromoform	ND	---	0.111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Bromomethane	ND	---	0.556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
2-Butanone (MEK)	ND	---	0.556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
n-Butylbenzene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
sec-Butylbenzene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
tert-Butylbenzene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Carbon disulfide	ND	---	0.556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Carbon tetrachloride	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Chlorobenzene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Chloroethane	ND	---	0.556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Chloroform	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Chloromethane	ND	---	0.278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
2-Chlorotoluene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
4-Chlorotoluene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Dibromochloromethane	ND	---	0.111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Dibromomethane	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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EPA ID: OR01039

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP06-2 (A910687-06)				Matrix: Soil		Batch: 9091160		
1,1-Dichloroethene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Ethylbenzene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Hexachlorobutadiene	ND	---	0.111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
2-Hexanone	ND	---	0.556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Isopropylbenzene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Methylene chloride	ND	---	0.278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
4-Methyl-2-pentanone (MIBK)	ND	---	0.556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Naphthalene	ND	---	0.111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
n-Propylbenzene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Styrene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Toluene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Trichlorofluoromethane	ND	---	0.111	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Vinyl chloride	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
m,p-Xylene	ND	---	0.0556	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
o-Xylene	ND	---	0.0278	mg/kg dry	50	09/23/19 18:50	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	110 %	Limits:	80-120 %	1	09/23/19 18:50	5035A/8260C
Toluene-d8 (Surr)			93 %		80-120 %	1	09/23/19 18:50	5035A/8260C

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP06-2 (A9I0687-06)				Matrix: Soil		Batch: 9091160		
Surrogate: 4-Bromofluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %	1	09/23/19 18:50	5035A/8260C	
GP06-6 (A9I0687-07)				Matrix: Soil		Batch: 9091108		
Acetone	ND	---	0.947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Acrylonitrile	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Benzene	ND	---	0.00947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Bromobenzene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Bromochloromethane	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Bromodichloromethane	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Bromoform	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Bromomethane	ND	---	0.474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
2-Butanone (MEK)	ND	---	0.474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
n-Butylbenzene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
sec-Butylbenzene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
tert-Butylbenzene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Carbon disulfide	ND	---	0.474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Carbon tetrachloride	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Chlorobenzene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Chloroethane	ND	---	0.474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Chloroform	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Chloromethane	ND	---	0.237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
2-Chlorotoluene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
4-Chlorotoluene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Dibromochloromethane	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Dibromomethane	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP06-6 (A910687-07)				Matrix: Soil		Batch: 9091108		
1,1-Dichloropropene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Ethylbenzene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Hexachlorobutadiene	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
2-Hexanone	ND	---	0.474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Isopropylbenzene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Methylene chloride	ND	---	0.237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Naphthalene	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
n-Propylbenzene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Styrene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Toluene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Trichlorofluoromethane	ND	---	0.0947	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Vinyl chloride	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
m,p-Xylene	ND	---	0.0474	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
o-Xylene	ND	---	0.0237	mg/kg dry	50	09/23/19 21:45	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	99 %	Limits: 80-120 %	1	09/23/19 21:45	5035A/8260C	
Toluene-d8 (Surr)			98 %	80-120 %	1	09/23/19 21:45	5035A/8260C	
4-Bromofluorobenzene (Surr)			100 %	80-120 %	1	09/23/19 21:45	5035A/8260C	

UST-01-T2-NB (A910687-08)				Matrix: Soil		Batch: 9091108		
Acetone	ND	---	20.7	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Acrylonitrile	ND	---	10.4	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	R-02
Benzene	0.724	---	0.207	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42

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Lisa Domenighini, Client Services Manager

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A910687-08)				Matrix: Soil		Batch: 9091108		
Bromobenzene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Bromochloromethane	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Bromodichloromethane	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Bromoform	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Bromomethane	ND	---	10.4	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
2-Butanone (MEK)	ND	---	20.7	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	R-02
n-Butylbenzene	11.2	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
sec-Butylbenzene	4.93	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
tert-Butylbenzene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Carbon disulfide	ND	---	10.4	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Carbon tetrachloride	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Chlorobenzene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Chloroethane	ND	---	10.4	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Chloroform	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Chloromethane	ND	---	5.18	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
2-Chlorotoluene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
4-Chlorotoluene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Dibromochloromethane	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.18	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Dibromomethane	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Dichlorodifluoromethane	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,1-Dichloroethane	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,1-Dichloroethene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,2-Dichloropropane	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,3-Dichloropropane	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
2,2-Dichloropropane	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,1-Dichloropropene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Ethylbenzene	87.3	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
Hexachlorobutadiene	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
2-Hexanone	ND	---	10.4	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A910687-08)				Matrix: Soil		Batch: 9091108		
Isopropylbenzene	13.0	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
4-Isopropyltoluene	3.74	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	M-02, Q-42
Methylene chloride	ND	---	5.18	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	31.1	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	R-02
Methyl tert-butyl ether (MTBE)	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Naphthalene	20.8	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
n-Propylbenzene	52.9	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
Styrene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	R-02
Tetrachloroethene (PCE)	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Toluene	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
1,2,3-Trichlorobenzene	ND	---	5.18	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	5.18	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
Trichlorofluoromethane	ND	---	2.07	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,2,3-Trichloropropane	ND	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
1,3,5-Trimethylbenzene	11.8	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
Vinyl chloride	ND	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	
m,p-Xylene	137	---	1.04	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
o-Xylene	1.40	---	0.518	mg/kg dry	1000	09/23/19 22:12	5035A/8260C	Q-42
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	102 %	Limits:	80-120 %	1	09/23/19 22:12	5035A/8260C
Toluene-d8 (Surr)			98 %		80-120 %	1	09/23/19 22:12	5035A/8260C
4-Bromofluorobenzene (Surr)			98 %		80-120 %	1	09/23/19 22:12	5035A/8260C

UST-01-T2-NB (A910687-08RE1)				Matrix: Soil		Batch: 9091213		
1,2,4-Trimethylbenzene	219	---	10.4	mg/kg dry	10000	09/24/19 15:23	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	112 %	Limits:	80-120 %	1	09/24/19 15:23	5035A/8260C
Toluene-d8 (Surr)			94 %		80-120 %	1	09/24/19 15:23	5035A/8260C
4-Bromofluorobenzene (Surr)			101 %		80-120 %	1	09/24/19 15:23	5035A/8260C

UST-02-T2-SB (A910687-09RE1)				Matrix: Soil		Batch: 9091213		
Acetone	ND	---	21.2	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Acrylonitrile	ND	---	15.9	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	R-02
Benzene	0.849	---	0.212	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Bromobenzene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-02-T2-SB (A910687-09RE1)				Matrix: Soil		Batch: 9091213		
Bromochloromethane	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Bromodichloromethane	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Bromoform	ND	---	2.12	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Bromomethane	ND	---	10.6	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
2-Butanone (MEK)	ND	---	26.5	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	R-02
n-Butylbenzene	3.16	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	M-02
sec-Butylbenzene	1.59	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
tert-Butylbenzene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Carbon disulfide	ND	---	10.6	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Carbon tetrachloride	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Chlorobenzene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Chloroethane	ND	---	10.6	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Chloroform	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Chloromethane	ND	---	5.29	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
2-Chlorotoluene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
4-Chlorotoluene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Dibromochloromethane	ND	---	2.12	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.29	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Dibromomethane	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Dichlorodifluoromethane	ND	---	2.12	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,1-Dichloroethane	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,1-Dichloroethene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2-Dichloropropane	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,3-Dichloropropane	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
2,2-Dichloropropane	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,1-Dichloropropene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Ethylbenzene	38.5	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Hexachlorobutadiene	ND	---	2.12	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
2-Hexanone	ND	---	10.6	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Isopropylbenzene	4.46	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-02-T2-SB (A910687-09RE1)				Matrix: Soil		Batch: 9091213		
4-Isopropyltoluene	1.30	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	M-02
Methylene chloride	ND	---	5.29	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.6	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Naphthalene	12.3	---	2.12	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
n-Propylbenzene	13.2	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Styrene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Toluene	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	5.29	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	5.29	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Trichlorofluoromethane	ND	---	2.12	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2,3-Trichloropropane	ND	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,2,4-Trimethylbenzene	101	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
1,3,5-Trimethylbenzene	31.4	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
Vinyl chloride	ND	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
m,p-Xylene	182	---	1.06	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
o-Xylene	0.976	---	0.529	mg/kg dry	1000	09/24/19 13:35	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 111 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/24/19 13:35</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/24/19 13:35</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/24/19 13:35</i>	<i>5035A/8260C</i>	

UST-03-T2-SE (A910687-10)**Matrix: Soil****Batch: 9091160**

Acetone	ND	---	21.6	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	R-02
Acrylonitrile	ND	---	3.25	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Benzene	ND	---	0.216	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Bromobenzene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Bromochloromethane	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Bromodichloromethane	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Bromoform	ND	---	2.16	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Bromomethane	ND	---	10.8	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
2-Butanone (MEK)	ND	---	10.8	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
n-Butylbenzene	2.51	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-03-T2-SE (A910687-10)				Matrix: Soil		Batch: 9091160		
sec-Butylbenzene	1.18	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
tert-Butylbenzene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Carbon disulfide	ND	---	10.8	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Carbon tetrachloride	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Chlorobenzene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Chloroethane	ND	---	10.8	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Chloroform	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Chloromethane	ND	---	5.41	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
2-Chlorotoluene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
4-Chlorotoluene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Dibromochloromethane	ND	---	2.16	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.41	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Dibromomethane	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Dichlorodifluoromethane	ND	---	2.16	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,1-Dichloroethane	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,1-Dichloroethene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2-Dichloropropane	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,3-Dichloropropane	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
2,2-Dichloropropane	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,1-Dichloropropene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Ethylbenzene	13.0	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Hexachlorobutadiene	ND	---	2.16	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
2-Hexanone	ND	---	10.8	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Isopropylbenzene	2.33	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
4-Isopropyltoluene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Methylene chloride	ND	---	5.41	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.8	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Naphthalene	8.16	---	2.16	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
n-Propylbenzene	6.98	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-03-T2-SE (A910687-10)				Matrix: Soil		Batch: 9091160		
Styrene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Toluene	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	5.41	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	5.41	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Trichlorofluoromethane	ND	---	2.16	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2,3-Trichloropropane	ND	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,2,4-Trimethylbenzene	55.4	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
1,3,5-Trimethylbenzene	4.37	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
Vinyl chloride	ND	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
m,p-Xylene	29.3	---	1.08	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
o-Xylene	3.08	---	0.541	mg/kg dry	1000	09/23/19 20:38	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 111 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/23/19 20:38</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 20:38</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 20:38</i>	<i>5035A/8260C</i>	

UST-04-T1-NB (A910687-11)				Matrix: Soil		Batch: 9091160		
Acetone	ND	---	20.8	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Acrylonitrile	ND	---	4.15	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	R-02
Benzene	0.619	---	0.208	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Bromobenzene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Bromochloromethane	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Bromodichloromethane	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Bromoform	ND	---	2.08	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Bromomethane	ND	---	10.4	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
2-Butanone (MEK)	ND	---	15.6	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	R-02
n-Butylbenzene	3.92	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
sec-Butylbenzene	2.03	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
tert-Butylbenzene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Carbon disulfide	ND	---	10.4	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Carbon tetrachloride	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Chlorobenzene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Chloroethane	ND	---	10.4	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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EPA ID: OR01039

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601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-04-T1-NB (A910687-11)				Matrix: Soil		Batch: 9091160		
Chloroform	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Chloromethane	ND	---	5.19	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
2-Chlorotoluene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
4-Chlorotoluene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Dibromochloromethane	ND	---	2.08	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.19	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Dibromomethane	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Dichlorodifluoromethane	ND	---	2.08	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,1-Dichloroethane	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,1-Dichloroethene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2-Dichloropropane	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,3-Dichloropropane	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
2,2-Dichloropropane	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,1-Dichloropropene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Ethylbenzene	33.5	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Hexachlorobutadiene	ND	---	2.08	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
2-Hexanone	ND	---	10.4	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Isopropylbenzene	5.48	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
4-Isopropyltoluene	1.60	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	M-02
Methylene chloride	ND	---	5.19	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.4	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Naphthalene	10.8	---	2.08	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
n-Propylbenzene	18.6	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Styrene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Toluene	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	5.19	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-04-T1-NB (A910687-11)				Matrix: Soil		Batch: 9091160		
1,2,4-Trichlorobenzene	ND	---	5.19	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Trichlorofluoromethane	ND	---	2.08	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2,3-Trichloropropane	ND	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,2,4-Trimethylbenzene	118	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
1,3,5-Trimethylbenzene	4.46	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
Vinyl chloride	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
m,p-Xylene	63.3	---	1.04	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
o-Xylene	ND	---	0.519	mg/kg dry	1000	09/23/19 21:05	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 110 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/23/19 21:05</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 21:05</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/23/19 21:05</i>	<i>5035A/8260C</i>	

UST-05-T1-SB (A910687-12)				Matrix: Soil		Batch: 9091160		
Acetone	ND	---	21.2	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Acrylonitrile	ND	---	2.12	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Benzene	ND	---	0.212	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Bromobenzene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Bromochloromethane	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Bromodichloromethane	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Bromoform	ND	---	2.12	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Bromomethane	ND	---	10.6	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
2-Butanone (MEK)	ND	---	10.6	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
n-Butylbenzene	4.68	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
sec-Butylbenzene	2.36	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
tert-Butylbenzene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Carbon disulfide	ND	---	10.6	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Carbon tetrachloride	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Chlorobenzene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Chloroethane	ND	---	10.6	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Chloroform	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Chloromethane	ND	---	5.31	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
2-Chlorotoluene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
4-Chlorotoluene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Dibromochloromethane	ND	---	2.12	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.31	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-05-T1-SB (A910687-12)				Matrix: Soil		Batch: 9091160		
1,2-Dibromoethane (EDB)	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Dibromomethane	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Dichlorodifluoromethane	ND	---	2.12	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,1-Dichloroethane	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,1-Dichloroethene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,2-Dichloropropane	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,3-Dichloropropane	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
2,2-Dichloropropane	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,1-Dichloropropene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Ethylbenzene	3.60	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Hexachlorobutadiene	ND	---	2.12	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
2-Hexanone	ND	---	10.6	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Isopropylbenzene	2.10	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
4-Isopropyltoluene	1.69	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Methylene chloride	ND	---	5.31	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
4-Methyl-2-pentanone (MIBK)	ND	---	10.6	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Naphthalene	ND	---	2.12	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
n-Propylbenzene	10.0	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Styrene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Toluene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	5.31	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	5.31	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Trichlorofluoromethane	ND	---	2.12	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,2,3-Trichloropropane	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-05-T1-SB (A9I0687-12)				Matrix: Soil		Batch: 9091160		
1,2,4-Trimethylbenzene	58.0	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Vinyl chloride	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
m,p-Xylene	4.63	---	1.06	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
o-Xylene	ND	---	0.531	mg/kg dry	1000	09/23/19 21:32	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	110 %	Limits:	80-120 %	1	09/23/19 21:32	5035A/8260C
Toluene-d8 (Surr)			95 %		80-120 %	1	09/23/19 21:32	5035A/8260C
4-Bromofluorobenzene (Surr)			101 %		80-120 %	1	09/23/19 21:32	5035A/8260C

UST-06-T1-SW (A9I0687-13)				Matrix: Soil		Batch: 9091160		
Acetone	ND	---	21.9	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Acrylonitrile	ND	---	5.47	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	R-02
Benzene	ND	---	0.219	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Bromobenzene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Bromochloromethane	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Bromodichloromethane	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Bromoform	ND	---	2.19	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Bromomethane	ND	---	10.9	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
2-Butanone (MEK)	ND	---	16.4	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	R-02
n-Butylbenzene	4.16	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
sec-Butylbenzene	2.09	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
tert-Butylbenzene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Carbon disulfide	ND	---	10.9	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Carbon tetrachloride	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Chlorobenzene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Chloroethane	ND	---	10.9	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Chloroform	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Chloromethane	ND	---	5.47	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
2-Chlorotoluene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
4-Chlorotoluene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Dibromochloromethane	ND	---	2.19	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.47	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Dibromomethane	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Dichlorodifluoromethane	ND	---	2.19	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-06-T1-SW (A910687-13)				Matrix: Soil	Batch: 9091160			
1,1-Dichloroethane	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,1-Dichloroethene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2-Dichloropropane	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,3-Dichloropropane	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
2,2-Dichloropropane	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,1-Dichloropropene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Ethylbenzene	36.6	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Hexachlorobutadiene	ND	---	2.19	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
2-Hexanone	ND	---	10.9	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Isopropylbenzene	5.30	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
4-Isopropyltoluene	1.32	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	M-02
Methylene chloride	ND	---	5.47	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
4-Methyl-2-pentanone (MIBK)	ND	---	10.9	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Naphthalene	13.3	---	2.19	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
n-Propylbenzene	18.5	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Styrene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	2.19	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	R-02
Tetrachloroethene (PCE)	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Toluene	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	5.47	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	5.47	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Trichlorofluoromethane	ND	---	2.19	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2,3-Trichloropropane	ND	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,2,4-Trimethylbenzene	122	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
1,3,5-Trimethylbenzene	14.9	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
Vinyl chloride	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
m,p-Xylene	96.0	---	1.09	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	
o-Xylene	ND	---	0.547	mg/kg dry	1000	09/23/19 22:00	5035A/8260C	

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-06-T1-SW (A910687-13)				Matrix: Soil		Batch: 9091160		
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	110 %	Limits:	80-120 %	1	09/23/19 22:00	5035A/8260C
Toluene-d8 (Surr)			95 %		80-120 %	1	09/23/19 22:00	5035A/8260C
4-Bromofluorobenzene (Surr)			101 %		80-120 %	1	09/23/19 22:00	5035A/8260C

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Polychlorinated Biphenyls by EPA 8082A**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A910687-08)				Matrix: Soil		Batch: 9091156		C-07
Aroclor 1016	ND	---	0.0106	mg/kg dry	1	09/25/19 11:37	EPA 8082A	
Aroclor 1221	ND	---	0.0106	mg/kg dry	1	09/25/19 11:37	EPA 8082A	
Aroclor 1232	ND	---	0.0106	mg/kg dry	1	09/25/19 11:37	EPA 8082A	
Aroclor 1242	ND	---	0.0106	mg/kg dry	1	09/25/19 11:37	EPA 8082A	
Aroclor 1248	ND	---	0.0106	mg/kg dry	1	09/25/19 11:37	EPA 8082A	
Aroclor 1254	ND	---	0.0106	mg/kg dry	1	09/25/19 11:37	EPA 8082A	
Aroclor 1260	ND	---	0.0106	mg/kg dry	1	09/25/19 11:37	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)		Recovery: 97 %		Limits: 60-125 %	1	09/25/19 11:37	EPA 8082A	
UST-02-T2-SB (A910687-09)				Matrix: Soil		Batch: 9091156		C-07
Aroclor 1016	ND	---	0.0116	mg/kg dry	1	09/24/19 11:14	EPA 8082A	
Aroclor 1221	ND	---	0.0116	mg/kg dry	1	09/24/19 11:14	EPA 8082A	
Aroclor 1232	ND	---	0.0116	mg/kg dry	1	09/24/19 11:14	EPA 8082A	
Aroclor 1242	ND	---	0.0116	mg/kg dry	1	09/24/19 11:14	EPA 8082A	
Aroclor 1248	ND	---	0.0116	mg/kg dry	1	09/24/19 11:14	EPA 8082A	
Aroclor 1254	ND	---	0.0116	mg/kg dry	1	09/24/19 11:14	EPA 8082A	
Aroclor 1260	ND	---	0.0116	mg/kg dry	1	09/24/19 11:14	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)		Recovery: 95 %		Limits: 60-125 %	1	09/24/19 11:14	EPA 8082A	
UST-03-T2-SE (A910687-10)				Matrix: Soil		Batch: 9091156		C-07
Aroclor 1016	ND	---	0.0113	mg/kg dry	1	09/24/19 11:49	EPA 8082A	
Aroclor 1221	ND	---	0.0113	mg/kg dry	1	09/24/19 11:49	EPA 8082A	
Aroclor 1232	ND	---	0.0113	mg/kg dry	1	09/24/19 11:49	EPA 8082A	
Aroclor 1242	ND	---	0.0113	mg/kg dry	1	09/24/19 11:49	EPA 8082A	
Aroclor 1248	ND	---	0.0113	mg/kg dry	1	09/24/19 11:49	EPA 8082A	
Aroclor 1254	ND	---	0.0113	mg/kg dry	1	09/24/19 11:49	EPA 8082A	
Aroclor 1260	ND	---	0.0113	mg/kg dry	1	09/24/19 11:49	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)		Recovery: 98 %		Limits: 60-125 %	1	09/24/19 11:49	EPA 8082A	
UST-04-T1-NB (A910687-11)				Matrix: Soil		Batch: 9091156		C-07
Aroclor 1016	ND	---	0.0114	mg/kg dry	1	09/24/19 12:25	EPA 8082A	
Aroclor 1221	ND	---	0.0114	mg/kg dry	1	09/24/19 12:25	EPA 8082A	
Aroclor 1232	ND	---	0.0114	mg/kg dry	1	09/24/19 12:25	EPA 8082A	
Aroclor 1242	ND	---	0.0114	mg/kg dry	1	09/24/19 12:25	EPA 8082A	
Aroclor 1248	ND	---	0.0114	mg/kg dry	1	09/24/19 12:25	EPA 8082A	
Aroclor 1254	ND	---	0.0114	mg/kg dry	1	09/24/19 12:25	EPA 8082A	
Aroclor 1260	ND	---	0.0114	mg/kg dry	1	09/24/19 12:25	EPA 8082A	

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Lisa Domenighini, Client Services Manager

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EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Polychlorinated Biphenyls by EPA 8082A**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-04-T1-NB (A910687-11)				Matrix: Soil		Batch: 9091156		C-07
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 107 %</i>	<i>Limits: 60-125 %</i>	<i>1</i>		<i>09/24/19 12:25</i>	<i>EPA 8082A</i>	
UST-05-T1-SB (A910687-12)				Matrix: Soil		Batch: 9091156		C-07
Aroclor 1016	ND	---	0.0108	mg/kg dry	1	09/24/19 13:00	EPA 8082A	
Aroclor 1221	ND	---	0.0108	mg/kg dry	1	09/24/19 13:00	EPA 8082A	
Aroclor 1232	ND	---	0.0108	mg/kg dry	1	09/24/19 13:00	EPA 8082A	
Aroclor 1242	ND	---	0.0108	mg/kg dry	1	09/24/19 13:00	EPA 8082A	
Aroclor 1248	ND	---	0.0108	mg/kg dry	1	09/24/19 13:00	EPA 8082A	
Aroclor 1254	ND	---	0.0108	mg/kg dry	1	09/24/19 13:00	EPA 8082A	
Aroclor 1260	ND	---	0.0108	mg/kg dry	1	09/24/19 13:00	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 106 %</i>	<i>Limits: 60-125 %</i>	<i>1</i>		<i>09/24/19 13:00</i>	<i>EPA 8082A</i>	
UST-06-T1-SW (A910687-13)				Matrix: Soil		Batch: 9091156		C-07
Aroclor 1016	ND	---	0.0110	mg/kg dry	1	09/24/19 13:36	EPA 8082A	
Aroclor 1221	ND	---	0.0110	mg/kg dry	1	09/24/19 13:36	EPA 8082A	
Aroclor 1232	ND	---	0.0110	mg/kg dry	1	09/24/19 13:36	EPA 8082A	
Aroclor 1242	ND	---	0.0110	mg/kg dry	1	09/24/19 13:36	EPA 8082A	
Aroclor 1248	ND	---	0.0110	mg/kg dry	1	09/24/19 13:36	EPA 8082A	
Aroclor 1254	ND	---	0.0110	mg/kg dry	1	09/24/19 13:36	EPA 8082A	
Aroclor 1260	ND	---	0.0110	mg/kg dry	1	09/24/19 13:36	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 98 %</i>	<i>Limits: 60-125 %</i>	<i>1</i>		<i>09/24/19 13:36</i>	<i>EPA 8082A</i>	

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-1 (A9I0687-01)				Matrix: Soil		Batch: 9091322		
Acenaphthene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Acenaphthylene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Anthracene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Benz(a)anthracene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	0.0229	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Chrysene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Fluoranthene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Fluorene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
1-Methylnaphthalene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
2-Methylnaphthalene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Naphthalene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Phenanthrene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
Pyrene	ND	---	0.0102	mg/kg dry	1	09/27/19 11:32	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 72 %</i>		<i>Limits: 44-120 %</i>	<i>1</i>	<i>09/27/19 11:32</i>	<i>EPA 8270D (SIM)</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>	<i>1</i>	<i>09/27/19 11:32</i>	<i>EPA 8270D (SIM)</i>	
GP03-8 (A9I0687-04RE1)				Matrix: Soil		Batch: 9091438		
Acenaphthene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Acenaphthylene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Anthracene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Benz(a)anthracene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Chrysene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Fluoranthene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Fluorene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
1-Methylnaphthalene	0.136	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	Q-42

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP03-8 (A910687-04RE1)				Matrix: Soil		Batch: 9091438		
2-Methylnaphthalene	0.343	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	Q-42
Naphthalene	0.314	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	Q-42
Phenanthrene	0.0126	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Pyrene	ND	---	0.0122	mg/kg dry	1	10/02/19 18:05	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 69 %		Limits: 44-120 %	1	10/02/19 18:05	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		74 %		54-127 %	1	10/02/19 18:05	EPA 8270D (SIM)	
GP-X (A910687-05)				Matrix: Soil		Batch: 9091322		
Acenaphthene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Acenaphthylene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Anthracene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Benz(a)anthracene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Chrysene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Fluoranthene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Fluorene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
1-Methylnaphthalene	0.197	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
2-Methylnaphthalene	0.453	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Naphthalene	0.432	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Phenanthrene	0.0123	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Pyrene	ND	---	0.0119	mg/kg dry	1	09/27/19 12:22	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 60 %		Limits: 44-120 %	1	09/27/19 12:22	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		62 %		54-127 %	1	09/27/19 12:22	EPA 8270D (SIM)	
UST-01-T2-NB (A910687-08)				Matrix: Soil		Batch: 9091201		
Acenaphthene	ND	---	0.0553	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0184	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	R-02
Anthracene	ND	---	0.0141	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	R-02
Benz(a)anthracene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A910687-08)				Matrix: Soil		Batch: 9091201		
Benzo(g,h,i)perylene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Chrysene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0412	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	R-02
Fluoranthene	0.0119	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Fluorene	0.169	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
1-Methylnaphthalene	3.11	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Phenanthrene	0.239	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Pyrene	0.0185	---	0.0108	mg/kg dry	1	09/24/19 17:37	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 75 %		Limits: 44-120 %	1	09/24/19 17:37	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		90 %		54-127 %	1	09/24/19 17:37	EPA 8270D (SIM)	
UST-01-T2-NB (A910687-08RE1)				Matrix: Soil		Batch: 9091201		
2-Methylnaphthalene	5.76	---	0.217	mg/kg dry	20	09/25/19 11:27	EPA 8270D (SIM)	
Naphthalene	6.66	---	0.217	mg/kg dry	20	09/25/19 11:27	EPA 8270D (SIM)	
UST-02-T2-SB (A910687-09)				Matrix: Soil		Batch: 9091201		
Acenaphthene	ND	---	0.0586	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0176	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	R-02
Anthracene	ND	---	0.0164	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	R-02
Benz(a)anthracene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Chrysene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0387	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	R-02
Fluoranthene	0.0118	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Fluorene	0.153	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
1-Methylnaphthalene	3.78	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Phenanthrene	0.248	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Pyrene	0.0192	---	0.0117	mg/kg dry	1	09/24/19 18:03	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 77 %		Limits: 44-120 %	1	09/24/19 18:03	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		89 %		54-127 %	1	09/24/19 18:03	EPA 8270D (SIM)	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-02-T2-SB (A9I0687-09RE1)				Matrix: Soil		Batch: 9091201		
2-Methylnaphthalene	7.40	---	0.234	mg/kg dry	20	09/25/19 11:53	EPA 8270D (SIM)	
Naphthalene	7.68	---	0.234	mg/kg dry	20	09/25/19 11:53	EPA 8270D (SIM)	
UST-03-T2-SE (A9I0687-10)				Matrix: Soil		Batch: 9091201		
Acenaphthene	ND	---	0.0587	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0188	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	R-02
Anthracene	ND	---	0.0223	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	R-02
Benz(a)anthracene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Chrysene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0387	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	R-02
Fluoranthene	0.0158	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Fluorene	0.146	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
1-Methylnaphthalene	3.23	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Phenanthrene	0.258	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Pyrene	0.0232	---	0.0117	mg/kg dry	1	09/24/19 18:28	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 79 %		Limits: 44-120 %	1	09/24/19 18:28	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		92 %		54-127 %	1	09/24/19 18:28	EPA 8270D (SIM)	
UST-03-T2-SE (A9I0687-10RE1)				Matrix: Soil		Batch: 9091201		
2-Methylnaphthalene	5.97	---	0.235	mg/kg dry	20	09/25/19 12:18	EPA 8270D (SIM)	
Naphthalene	5.24	---	0.235	mg/kg dry	20	09/25/19 12:18	EPA 8270D (SIM)	
UST-04-T1-NB (A9I0687-11)				Matrix: Soil		Batch: 9091201		
Acenaphthene	ND	---	0.0981	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0287	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	R-02
Anthracene	ND	---	0.0239	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	R-02
Benz(a)anthracene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Chrysene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-04-T1-NB (A9I0687-11)				Matrix: Soil		Batch: 9091201		
Dibenz(a,h)anthracene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	R-02
Dibenzofuran	ND	---	0.0610	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Fluoranthene	0.0207	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Fluorene	0.292	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Phenanthrene	0.426	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Pyrene	0.0315	---	0.0120	mg/kg dry	1	09/24/19 18:54	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 74 %		Limits: 44-120 %	1	09/24/19 18:54	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		87 %		54-127 %	1	09/24/19 18:54	EPA 8270D (SIM)	
UST-04-T1-NB (A9I0687-11RE1)				Matrix: Soil		Batch: 9091201		
1-Methylnaphthalene	5.03	---	0.239	mg/kg dry	20	09/25/19 12:44	EPA 8270D (SIM)	
2-Methylnaphthalene	9.15	---	0.239	mg/kg dry	20	09/25/19 12:44	EPA 8270D (SIM)	
Naphthalene	10.3	---	0.239	mg/kg dry	20	09/25/19 12:44	EPA 8270D (SIM)	
UST-05-T1-SB (A9I0687-12)				Matrix: Soil		Batch: 9091201		
Acenaphthene	ND	---	0.0200	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Anthracene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Benz(a)anthracene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Chrysene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Fluoranthene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Fluorene	0.0781	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
1-Methylnaphthalene	0.874	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
2-Methylnaphthalene	1.72	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Naphthalene	0.276	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Phenanthrene	0.108	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Pyrene	ND	---	0.0111	mg/kg dry	1	09/24/19 19:19	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 71 %		Limits: 44-120 %	1	09/24/19 19:19	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		83 %		54-127 %	1	09/24/19 19:19	EPA 8270D (SIM)	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-06-T1-SW (A910687-13)				Matrix: Soil		Batch: 9091201		
Acenaphthene	ND	---	0.159	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0464	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	R-02
Anthracene	ND	---	0.0464	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	R-02
Benz(a)anthracene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Chrysene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.109	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	R-02
Fluoranthene	0.0253	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Fluorene	0.448	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Phenanthrene	0.750	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
Pyrene	0.0401	---	0.0116	mg/kg dry	1	09/24/19 19:45	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery:</i>	76 %	<i>Limits:</i>	44-120 %	1	09/24/19 19:45	EPA 8270D (SIM)
<i>p-Terphenyl-d14 (Surr)</i>			91 %		54-127 %	1	09/24/19 19:45	EPA 8270D (SIM)

UST-06-T1-SW (A910687-13RE1)**Matrix: Soil****Batch: 9091201**

1-Methylnaphthalene	5.48	---	0.232	mg/kg dry	20	09/25/19 13:09	EPA 8270D (SIM)
2-Methylnaphthalene	9.53	---	0.232	mg/kg dry	20	09/25/19 13:09	EPA 8270D (SIM)
Naphthalene	9.89	---	0.232	mg/kg dry	20	09/25/19 13:09	EPA 8270D (SIM)

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020A (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-1 (A9I0687-01) Matrix: Soil								
Batch: 9091186								
Arsenic	3.49	---	1.12	mg/kg dry	10	09/23/19 20:49	EPA 6020A	
Barium	119	---	1.12	mg/kg dry	10	09/23/19 20:49	EPA 6020A	B
Cadmium	ND	---	0.224	mg/kg dry	10	09/23/19 20:49	EPA 6020A	
Chromium	41.3	---	1.12	mg/kg dry	10	09/23/19 20:49	EPA 6020A	
Lead	322	---	0.224	mg/kg dry	10	09/23/19 20:49	EPA 6020A	
Selenium	ND	---	1.12	mg/kg dry	10	09/23/19 20:49	EPA 6020A	
Silver	ND	---	0.224	mg/kg dry	10	09/23/19 20:49	EPA 6020A	
GP04-1 (A9I0687-01RE1) Matrix: Soil								
Batch: 9091186								
Mercury	1.58	---	0.0897	mg/kg dry	10	09/24/19 11:11	EPA 6020A	
GP04-12 (A9I0687-02) Matrix: Soil								
Batch: 9091186								
Arsenic	11.0	---	1.27	mg/kg dry	10	09/23/19 20:54	EPA 6020A	
Barium	171	---	1.27	mg/kg dry	10	09/23/19 20:54	EPA 6020A	B
Cadmium	ND	---	0.254	mg/kg dry	10	09/23/19 20:54	EPA 6020A	
Chromium	60.6	---	1.27	mg/kg dry	10	09/23/19 20:54	EPA 6020A	
Lead	38.0	---	0.254	mg/kg dry	10	09/23/19 20:54	EPA 6020A	
Selenium	ND	---	1.27	mg/kg dry	10	09/23/19 20:54	EPA 6020A	
Silver	ND	---	0.254	mg/kg dry	10	09/23/19 20:54	EPA 6020A	
GP04-12 (A9I0687-02RE1) Matrix: Soil								
Batch: 9091186								
Mercury	0.155	---	0.102	mg/kg dry	10	09/24/19 11:16	EPA 6020A	
GP03-2 (A9I0687-03) Matrix: Soil								
Batch: 9091186								
Arsenic	4.19	---	1.10	mg/kg dry	10	09/23/19 20:58	EPA 6020A	
Barium	97.3	---	1.10	mg/kg dry	10	09/23/19 20:58	EPA 6020A	B
Cadmium	ND	---	0.219	mg/kg dry	10	09/23/19 20:58	EPA 6020A	
Chromium	52.5	---	1.10	mg/kg dry	10	09/23/19 20:58	EPA 6020A	
Lead	2.30	---	0.219	mg/kg dry	10	09/23/19 20:58	EPA 6020A	
Selenium	ND	---	1.10	mg/kg dry	10	09/23/19 20:58	EPA 6020A	
Silver	ND	---	0.219	mg/kg dry	10	09/23/19 20:58	EPA 6020A	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP03-2 (A9I0687-03RE1)				Matrix: Soil				
Batch: 9091186								
Mercury	ND	---	0.0876	mg/kg dry	10	09/24/19 11:20	EPA 6020A	
GP03-8 (A9I0687-04)				Matrix: Soil				
Batch: 9091186								
Arsenic	7.77	---	1.28	mg/kg dry	10	09/23/19 21:17	EPA 6020A	B
Barium	130	---	1.28	mg/kg dry	10	09/23/19 21:17	EPA 6020A	
Cadmium	ND	---	0.256	mg/kg dry	10	09/23/19 21:17	EPA 6020A	
Chromium	64.2	---	1.28	mg/kg dry	10	09/23/19 21:17	EPA 6020A	
Selenium	ND	---	1.28	mg/kg dry	10	09/23/19 21:17	EPA 6020A	
Silver	ND	---	0.256	mg/kg dry	10	09/23/19 21:17	EPA 6020A	
GP03-8 (A9I0687-04RE1)				Matrix: Soil				
Batch: 9091186								
Lead	5.57	---	0.256	mg/kg dry	10	09/24/19 11:25	EPA 6020A	
Mercury	0.147	---	0.102	mg/kg dry	10	09/24/19 11:25	EPA 6020A	
GP-X (A9I0687-05)				Matrix: Soil				
Batch: 9091186								
Arsenic	5.34	---	1.20	mg/kg dry	10	09/23/19 21:22	EPA 6020A	B
Barium	142	---	1.20	mg/kg dry	10	09/23/19 21:22	EPA 6020A	
Cadmium	ND	---	0.240	mg/kg dry	10	09/23/19 21:22	EPA 6020A	
Chromium	63.6	---	1.20	mg/kg dry	10	09/23/19 21:22	EPA 6020A	
Selenium	ND	---	1.20	mg/kg dry	10	09/23/19 21:22	EPA 6020A	
Silver	ND	---	0.240	mg/kg dry	10	09/23/19 21:22	EPA 6020A	
GP-X (A9I0687-05RE1)				Matrix: Soil				
Batch: 9091186								
Lead	5.09	---	0.240	mg/kg dry	10	09/24/19 11:33	EPA 6020A	
Mercury	0.146	---	0.0959	mg/kg dry	10	09/24/19 11:33	EPA 6020A	
GP06-2 (A9I0687-06)				Matrix: Soil				
Batch: 9091186								
Arsenic	3.30	---	1.27	mg/kg dry	10	09/23/19 21:26	EPA 6020A	B
Barium	126	---	1.27	mg/kg dry	10	09/23/19 21:26	EPA 6020A	
Cadmium	ND	---	0.253	mg/kg dry	10	09/23/19 21:26	EPA 6020A	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP06-2 (A9I0687-06)				Matrix: Soil				
Chromium	29.7	---	1.27	mg/kg dry	10	09/23/19 21:26	EPA 6020A	
Selenium	ND	---	1.27	mg/kg dry	10	09/23/19 21:26	EPA 6020A	
Silver	ND	---	0.253	mg/kg dry	10	09/23/19 21:26	EPA 6020A	
GP06-2 (A9I0687-06RE1)				Matrix: Soil				
Batch: 9091186								
Lead	28.2	---	0.253	mg/kg dry	10	09/24/19 11:38	EPA 6020A	
Mercury	ND	---	0.101	mg/kg dry	10	09/24/19 11:38	EPA 6020A	
GP06-6 (A9I0687-07)				Matrix: Soil				
Batch: 9091186								
Arsenic	5.52	---	1.21	mg/kg dry	10	09/23/19 21:31	EPA 6020A	B
Barium	95.3	---	1.21	mg/kg dry	10	09/23/19 21:31	EPA 6020A	
Cadmium	ND	---	0.242	mg/kg dry	10	09/23/19 21:31	EPA 6020A	
Chromium	30.9	---	1.21	mg/kg dry	10	09/23/19 21:31	EPA 6020A	
Selenium	ND	---	1.21	mg/kg dry	10	09/23/19 21:31	EPA 6020A	
Silver	ND	---	0.242	mg/kg dry	10	09/23/19 21:31	EPA 6020A	
GP06-6 (A9I0687-07RE1)				Matrix: Soil				
Batch: 9091186								
Lead	1.87	---	0.242	mg/kg dry	10	09/24/19 11:42	EPA 6020A	
Mercury	ND	---	0.0969	mg/kg dry	10	09/24/19 11:42	EPA 6020A	
UST-01-T2-NB (A9I0687-08)				Matrix: Soil				
Batch: 9091186								
Cadmium	ND	---	0.241	mg/kg dry	10	09/23/19 21:35	EPA 6020A	
Chromium	37.0	---	1.20	mg/kg dry	10	09/23/19 21:35	EPA 6020A	
UST-01-T2-NB (A9I0687-08RE1)				Matrix: Soil				
Batch: 9091186								
Lead	5.79	---	0.241	mg/kg dry	10	09/24/19 11:47	EPA 6020A	
UST-02-T2-SB (A9I0687-09)				Matrix: Soil				
Batch: 9091186								
Cadmium	ND	---	0.263	mg/kg dry	10	09/23/19 21:40	EPA 6020A	
Chromium	27.2	---	1.31	mg/kg dry	10	09/23/19 21:40	EPA 6020A	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-02-T2-SB (A9I0687-09RE1)				Matrix: Soil				
Batch: 9091186								
Lead	16.8	---	0.263	mg/kg dry	10	09/24/19 12:01	EPA 6020A	
UST-03-T2-SE (A9I0687-10)				Matrix: Soil				
Batch: 9091186								
Cadmium	ND	---	0.247	mg/kg dry	10	09/23/19 21:45	EPA 6020A	
Chromium	25.2	---	1.23	mg/kg dry	10	09/23/19 21:45	EPA 6020A	
UST-03-T2-SE (A9I0687-10RE1)				Matrix: Soil				
Batch: 9091186								
Lead	9.80	---	0.247	mg/kg dry	10	09/24/19 12:05	EPA 6020A	
UST-04-T1-NB (A9I0687-11)				Matrix: Soil				
Batch: 9091186								
Cadmium	ND	---	0.237	mg/kg dry	10	09/23/19 21:49	EPA 6020A	
Chromium	36.3	---	1.19	mg/kg dry	10	09/23/19 21:49	EPA 6020A	
UST-04-T1-NB (A9I0687-11RE1)				Matrix: Soil				
Batch: 9091186								
Lead	12.1	---	0.237	mg/kg dry	10	09/24/19 12:10	EPA 6020A	
UST-05-T1-SB (A9I0687-12)				Matrix: Soil				
Batch: 9091186								
Cadmium	ND	---	0.238	mg/kg dry	10	09/23/19 21:54	EPA 6020A	
Chromium	29.8	---	1.19	mg/kg dry	10	09/23/19 21:54	EPA 6020A	
UST-05-T1-SB (A9I0687-12RE1)				Matrix: Soil				
Batch: 9091186								
Lead	4.38	---	0.238	mg/kg dry	10	09/24/19 12:15	EPA 6020A	
UST-06-T1-SW (A9I0687-13)				Matrix: Soil				
Batch: 9091186								
Cadmium	ND	---	0.251	mg/kg dry	10	09/23/19 21:59	EPA 6020A	
Chromium	28.9	---	1.26	mg/kg dry	10	09/23/19 21:59	EPA 6020A	
UST-06-T1-SW (A9I0687-13RE1)				Matrix: Soil				

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EPA ID: OR01039

Stantec Portland

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020A (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-06-T1-SW (A9I0687-13RE1)				Matrix: Soil				
Batch: 9091186								
Lead	12.9	---	0.251	mg/kg dry	10	09/24/19 12:19	EPA 6020A	Q-42

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****TCLP Metals by EPA 6020A (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A9I0687-08) Matrix: Soil								
Batch: 9091266								
Cadmium	ND	---	0.100	mg/L	10	09/25/19 12:10	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	09/25/19 12:10	1311/6020A	
Lead	ND	---	0.0500	mg/L	10	09/25/19 12:10	1311/6020A	
UST-02-T2-SB (A9I0687-09) Matrix: Soil								
Batch: 9091266								
Cadmium	ND	---	0.100	mg/L	10	09/25/19 12:15	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	09/25/19 12:15	1311/6020A	
Lead	ND	---	0.0500	mg/L	10	09/25/19 12:15	1311/6020A	
UST-03-T2-SE (A9I0687-10) Matrix: Soil								
Batch: 9091266								
Cadmium	ND	---	0.100	mg/L	10	09/25/19 12:20	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	09/25/19 12:20	1311/6020A	
Lead	ND	---	0.0500	mg/L	10	09/25/19 12:20	1311/6020A	
UST-04-T1-NB (A9I0687-11) Matrix: Soil								
Batch: 9091266								
Cadmium	ND	---	0.100	mg/L	10	09/25/19 12:24	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	09/25/19 12:24	1311/6020A	
Lead	ND	---	0.0500	mg/L	10	09/25/19 12:24	1311/6020A	
UST-05-T1-SB (A9I0687-12) Matrix: Soil								
Batch: 9091266								
Cadmium	ND	---	0.100	mg/L	10	09/25/19 12:29	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	09/25/19 12:29	1311/6020A	
Lead	ND	---	0.0500	mg/L	10	09/25/19 12:29	1311/6020A	
UST-06-T1-SW (A9I0687-13) Matrix: Soil								
Batch: 9091266								
Cadmium	ND	---	0.100	mg/L	10	09/25/19 12:34	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	09/25/19 12:34	1311/6020A	
Lead	ND	---	0.0500	mg/L	10	09/25/19 12:34	1311/6020A	

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP04-1 (A9I0687-01)				Matrix: Soil		Batch: 9091154		
% Solids	93.7	---	1.00	% by Weight	1	09/24/19 08:11	EPA 8000C	
GP04-12 (A9I0687-02)				Matrix: Soil		Batch: 9091204		
% Solids	81.9	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
GP03-2 (A9I0687-03)				Matrix: Soil		Batch: 9091204		
% Solids	88.8	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
GP03-8 (A9I0687-04)				Matrix: Soil		Batch: 9091204		
% Solids	81.0	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
GP-X (A9I0687-05)				Matrix: Soil		Batch: 9091204		
% Solids	81.5	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
GP06-2 (A9I0687-06)				Matrix: Soil		Batch: 9091204		
% Solids	82.8	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
GP06-6 (A9I0687-07)				Matrix: Soil		Batch: 9091204		
% Solids	89.7	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
UST-01-T2-NB (A9I0687-08)				Matrix: Soil		Batch: 9091204		
% Solids	87.9	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
UST-02-T2-SB (A9I0687-09)				Matrix: Soil		Batch: 9091204		
% Solids	82.2	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
UST-03-T2-SE (A9I0687-10)				Matrix: Soil		Batch: 9091204		
% Solids	84.5	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
UST-04-T1-NB (A9I0687-11)				Matrix: Soil		Batch: 9091204		
% Solids	83.1	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
UST-05-T1-SB (A9I0687-12)				Matrix: Soil		Batch: 9091204		
% Solids	88.3	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
UST-06-T1-SW (A9I0687-13)				Matrix: Soil		Batch: 9091154		

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-06-T1-SW (A9I0687-13)				Matrix: Soil		Batch: 9091154		
% Solids	84.1	---	1.00	% by Weight	1	09/24/19 08:11	EPA 8000C	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****ANALYTICAL SAMPLE RESULTS****TCLP Extraction by EPA 1311**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
UST-01-T2-NB (A9I0687-08)				Matrix: Soil		Batch: 9091234		
TCLP Extraction	PREP	---		N/A	1	09/24/19 16:30	EPA 1311	
UST-02-T2-SB (A9I0687-09)				Matrix: Soil		Batch: 9091234		
TCLP Extraction	PREP	---		N/A	1	09/24/19 16:30	EPA 1311	
UST-03-T2-SE (A9I0687-10)				Matrix: Soil		Batch: 9091234		
TCLP Extraction	PREP	---		N/A	1	09/24/19 16:30	EPA 1311	
UST-04-T1-NB (A9I0687-11)				Matrix: Soil		Batch: 9091234		
TCLP Extraction	PREP	---		N/A	1	09/24/19 16:30	EPA 1311	
UST-05-T1-SB (A9I0687-12)				Matrix: Soil		Batch: 9091234		
TCLP Extraction	PREP	---		N/A	1	09/24/19 16:30	EPA 1311	
UST-06-T1-SW (A9I0687-13)				Matrix: Soil		Batch: 9091234		
TCLP Extraction	PREP	---		N/A	1	09/24/19 16:30	EPA 1311	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091236 - EPA 3546 (Fuels)						Soil						
Blank (9091236-BLK1)		Prepared: 09/24/19 12:57 Analyzed: 09/24/19 20:43										
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	---	36.4	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
LCS (9091236-BS1)		Prepared: 09/24/19 12:57 Analyzed: 09/24/19 21:05										
NWTPH-Dx												
Diesel	117	---	25.0	mg/kg wet	1	125	---	93	76 - 115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 111 %		Limits: 50-150 %		Dilution: 1x						
Batch 9091259 - EPA 3546 (Fuels)						Soil						
Blank (9091259-BLK1)		Prepared: 09/25/19 07:08 Analyzed: 09/25/19 09:25										
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 110 %		Limits: 50-150 %		Dilution: 1x						
LCS (9091259-BS1)		Prepared: 09/25/19 07:08 Analyzed: 09/25/19 09:45										
NWTPH-Dx												
Diesel	122	---	25.0	mg/kg wet	1	125	---	98	76 - 115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 111 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (9091259-DUP1)		Prepared: 09/25/19 07:08 Analyzed: 09/25/19 10:45										
QC Source Sample: GP04-1 (A9I0687-01RE1)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	506	---	50.0	mg/kg dry	1	---	600	---	---	17	30%	
Surr: o-Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A						Soil						
Blank (9091047-BLK1)		Prepared: 09/23/19 10:00 Analyzed: 09/23/19 12:08										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
LCS (9091047-BS2)		Prepared: 09/23/19 10:00 Analyzed: 09/23/19 11:41										
NWTPH-Gx (MS)												
Gasoline Range Organics	25.6	---	5.00	mg/kg wet	50	25.0	---	102	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 101 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						
Duplicate (9091047-DUP2)		Prepared: 09/17/19 13:20 Analyzed: 09/23/19 17:15										
QC Source Sample: GP04-1 (A910687-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.44	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		102 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 9091108 - EPA 5035A						Soil							
Blank (9091108-BLK1)		Prepared: 09/23/19 10:13 Analyzed: 09/23/19 11:34											
NWTPH-Gx (MS)													
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---		
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x							
1,4-Difluorobenzene (Sur)		109 %		50-150 %		"							
LCS (9091108-BS2)		Prepared: 09/23/19 10:13 Analyzed: 09/23/19 11:07											
NWTPH-Gx (MS)													
Gasoline Range Organics	23.9	---	5.00	mg/kg wet	50	25.0	---	96	80 - 120%	---	---		
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x							
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"							
Duplicate (9091108-DUP1)		Prepared: 09/19/19 11:00 Analyzed: 09/23/19 22:39											T-02
QC Source Sample: UST-01-T2-NB (A910687-08)													
NWTPH-Gx (MS)													
Gasoline Range Organics	1550	---	117	mg/kg dry	1000	---	8020	---	---	135	30%	Q-04	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x							
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"							

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091160 - EPA 5035A						Soil						
Blank (9091160-BLK1)		Prepared: 09/23/19 12:00 Analyzed: 09/23/19 14:18										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 108 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		95 %		50-150 %		"						
LCS (9091160-BS2)		Prepared: 09/23/19 12:00 Analyzed: 09/23/19 13:51										
NWTPH-Gx (MS)												
Gasoline Range Organics	25.0	---	5.00	mg/kg wet	50	25.0	---	100	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 119 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		99 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091213 - EPA 5035A						Soil						
Blank (9091213-BLK1)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 11:46										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 109 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		93 %		50-150 %		"						
LCS (9091213-BS2)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 11:19										
NWTPH-Gx (MS)												
Gasoline Range Organics	25.2	---	5.00	mg/kg wet	50	25.0	---	101	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 114 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		98 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A						Soil						
Blank (9091047-BLK1)		Prepared: 09/23/19 10:00 Analyzed: 09/23/19 12:08										
5035A/8260C												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A						Soil						
Blank (9091047-BLK1)		Prepared: 09/23/19 10:00 Analyzed: 09/23/19 12:08										
1,2-Dichloropropane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 94 %		Limits: 80-120 %		Dilution: 1x						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A						Soil						
Blank (9091047-BLK1)		Prepared: 09/23/19 10:00 Analyzed: 09/23/19 12:08										
Surr: Toluene-d8 (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		104 %		80-120 %		"						
LCS (9091047-BS1)		Prepared: 09/23/19 10:00 Analyzed: 09/23/19 11:13										
5035A/8260C												
Acetone	2.02	---	1.00	mg/kg wet	50	2.00	---	101	80 - 120%	---	---	
Acrylonitrile	0.924	---	0.100	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
Benzene	0.894	---	0.0100	mg/kg wet	50	1.00	---	89	80 - 120%	---	---	
Bromobenzene	1.06	---	0.0250	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
Bromochloromethane	0.938	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Bromodichloromethane	1.10	---	0.0500	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
Bromoform	0.991	---	0.100	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
Bromomethane	0.859	---	0.500	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
2-Butanone (MEK)	1.83	---	0.500	mg/kg wet	50	2.00	---	92	80 - 120%	---	---	
n-Butylbenzene	1.10	---	0.0500	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
sec-Butylbenzene	1.11	---	0.0500	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
tert-Butylbenzene	1.14	---	0.0500	mg/kg wet	50	1.00	---	114	80 - 120%	---	---	
Carbon disulfide	0.894	---	0.500	mg/kg wet	50	1.00	---	89	80 - 120%	---	---	
Carbon tetrachloride	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Chlorobenzene	0.982	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Chloroethane	1.11	---	0.500	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
Chloroform	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Chloromethane	0.902	---	0.250	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
2-Chlorotoluene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
4-Chlorotoluene	1.11	---	0.0500	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
Dibromochloromethane	1.03	---	0.100	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	0.854	---	0.250	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.09	---	0.0500	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Dibromomethane	0.988	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,2-Dichlorobenzene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,3-Dichlorobenzene	1.08	---	0.0250	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
1,4-Dichlorobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Dichlorodifluoromethane	1.10	---	0.100	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
1,1-Dichloroethane	0.906	---	0.0250	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A						Soil						
LCS (9091047-BS1)						Prepared: 09/23/19 10:00 Analyzed: 09/23/19 11:13						
1,2-Dichloroethane (EDC)	1.09	---	0.0250	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
1,1-Dichloroethene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
cis-1,2-Dichloroethene	0.932	---	0.0250	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
trans-1,2-Dichloroethene	0.918	---	0.0250	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
1,2-Dichloropropane	0.870	---	0.0250	mg/kg wet	50	1.00	---	87	80 - 120%	---	---	
1,3-Dichloropropane	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
2,2-Dichloropropane	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
1,1-Dichloropropene	0.932	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
cis-1,3-Dichloropropene	0.956	---	0.0500	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
trans-1,3-Dichloropropene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Ethylbenzene	0.997	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Hexachlorobutadiene	1.11	---	0.100	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
2-Hexanone	2.04	---	0.500	mg/kg wet	50	2.00	---	102	80 - 120%	---	---	
Isopropylbenzene	1.05	---	0.0500	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
4-Isopropyltoluene	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
Methylene chloride	0.780	---	0.250	mg/kg wet	50	1.00	---	78	80 - 120%	---	---	Q-55
4-Methyl-2-pentanone (MiBK)	2.01	---	0.500	mg/kg wet	50	2.00	---	101	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.950	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
Naphthalene	0.874	---	0.100	mg/kg wet	50	1.00	---	87	80 - 120%	---	---	
n-Propylbenzene	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
Styrene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	0.973	---	0.0500	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Tetrachloroethene (PCE)	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
Toluene	0.957	---	0.0500	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
1,2,3-Trichlorobenzene	1.06	---	0.250	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
1,2,4-Trichlorobenzene	1.04	---	0.250	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,1,1-Trichloroethane	0.994	---	0.0250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,1,2-Trichloroethane	1.04	---	0.0250	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Trichloroethene (TCE)	0.919	---	0.0250	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
Trichlorofluoromethane	1.17	---	0.100	mg/kg wet	50	1.00	---	117	80 - 120%	---	---	
1,2,3-Trichloropropane	1.14	---	0.0500	mg/kg wet	50	1.00	---	114	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A						Soil						
LCS (9091047-BS1)		Prepared: 09/23/19 10:00		Analyzed: 09/23/19 11:13								
Vinyl chloride	0.866	---	0.0250	mg/kg wet	50	1.00	---	87	80 - 120%	---	---	
m,p-Xylene	2.04	---	0.0500	mg/kg wet	50	2.00	---	102	80 - 120%	---	---	
o-Xylene	0.977	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 91 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		101 %		80-120 %		"						
Duplicate (9091047-DUP2)		Prepared: 09/17/19 13:20		Analyzed: 09/23/19 17:15								
QC Source Sample: GP04-1 (A910687-01)												
5035A/8260C												
Acetone	ND	---	1.09	mg/kg dry	50	---	ND	---	---	---	30%	Q-05
Acrylonitrile	ND	---	0.109	mg/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	0.0109	mg/kg dry	50	---	0.00743	---	---	***	30%	
Bromobenzene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	0.109	mg/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.544	mg/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	0.544	mg/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	0.544	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.544	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.272	mg/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.109	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.272	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A							Soil					
Duplicate (9091047-DUP2)		Prepared: 09/17/19 13:20 Analyzed: 09/23/19 17:15										
QC Source Sample: GP04-1 (A910687-01)												
1,2-Dichlorobenzene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.109	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	0.109	mg/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	0.544	mg/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.272	mg/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	0.544	mg/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.109	mg/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	0.272	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.272	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091047 - EPA 5035A						Soil						
Duplicate (9091047-DUP2)		Prepared: 09/17/19 13:20		Analyzed: 09/23/19 17:15								
QC Source Sample: GP04-1 (A910687-01)												
1,1,2-Trichloroethane	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.109	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.0544	mg/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.0272	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		103 %		80-120 %		"						

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091108 - EPA 5035A						Soil						
Blank (9091108-BLK1)		Prepared: 09/23/19 10:13 Analyzed: 09/23/19 11:34										
5035A/8260C												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091108 - EPA 5035A						Soil						
Blank (9091108-BLK1)		Prepared: 09/23/19 10:13 Analyzed: 09/23/19 11:34										
1,2-Dichloropropane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 99 %

Limits: 80-120 %

Dilution: 1x

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091108 - EPA 5035A						Soil						
Blank (9091108-BLK1)		Prepared: 09/23/19 10:13 Analyzed: 09/23/19 11:34										
Surr: Toluene-d8 (Surr)		Recovery: 100 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
LCS (9091108-BS1)		Prepared: 09/23/19 10:13 Analyzed: 09/23/19 10:40										
5035A/8260C												
Acetone	2.02	---	1.00	mg/kg wet	50	2.00	---	101	80 - 120%	---	---	
Acrylonitrile	1.09	---	0.100	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Benzene	1.03	---	0.0100	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Bromobenzene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Bromochloromethane	1.17	---	0.0500	mg/kg wet	50	1.00	---	117	80 - 120%	---	---	
Bromodichloromethane	1.20	---	0.0500	mg/kg wet	50	1.00	---	120	80 - 120%	---	---	
Bromoform	0.981	---	0.100	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Bromomethane	1.03	---	0.500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
2-Butanone (MEK)	2.18	---	0.500	mg/kg wet	50	2.00	---	109	80 - 120%	---	---	
n-Butylbenzene	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
sec-Butylbenzene	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
tert-Butylbenzene	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Carbon disulfide	1.07	---	0.500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
Carbon tetrachloride	1.11	---	0.100	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
Chlorobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Chloroethane	0.848	---	0.500	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
Chloroform	1.06	---	0.0500	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
Chloromethane	1.11	---	0.250	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
2-Chlorotoluene	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
4-Chlorotoluene	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
Dibromochloromethane	1.08	---	0.100	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	0.853	---	0.250	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	0.999	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Dibromomethane	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
1,2-Dichlorobenzene	0.958	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
1,3-Dichlorobenzene	1.04	---	0.0250	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,4-Dichlorobenzene	1.00	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Dichlorodifluoromethane	0.919	---	0.100	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
1,1-Dichloroethane	1.12	---	0.0250	mg/kg wet	50	1.00	---	112	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091108 - EPA 5035A						Soil						
LCS (9091108-BS1)		Prepared: 09/23/19 10:13 Analyzed: 09/23/19 10:40										
1,2-Dichloroethane (EDC)	1.09	---	0.0250	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
1,1-Dichloroethene	1.15	---	0.0250	mg/kg wet	50	1.00	---	115	80 - 120%	---	---	
cis-1,2-Dichloroethene	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
trans-1,2-Dichloroethene	1.11	---	0.0250	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
1,2-Dichloropropane	1.14	---	0.100	mg/kg wet	50	1.00	---	114	80 - 120%	---	---	
1,3-Dichloropropane	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
2,2-Dichloropropane	1.19	---	0.0500	mg/kg wet	50	1.00	---	119	80 - 120%	---	---	
1,1-Dichloropropene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
cis-1,3-Dichloropropene	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
trans-1,3-Dichloropropene	1.20	---	0.0500	mg/kg wet	50	1.00	---	120	80 - 120%	---	---	
Ethylbenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Hexachlorobutadiene	0.834	---	0.100	mg/kg wet	50	1.00	---	83	80 - 120%	---	---	
2-Hexanone	1.98	---	0.500	mg/kg wet	50	2.00	---	99	80 - 120%	---	---	
Isopropylbenzene	0.951	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
4-Isopropyltoluene	0.981	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Methylene chloride	0.968	---	0.250	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	2.06	---	0.500	mg/kg wet	50	2.00	---	103	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.897	---	0.0500	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
Naphthalene	0.847	---	0.100	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
n-Propylbenzene	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
Styrene	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	1.06	---	0.0250	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	1.20	---	0.0500	mg/kg wet	50	1.00	---	120	80 - 120%	---	---	
Tetrachloroethene (PCE)	0.980	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Toluene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,2,3-Trichlorobenzene	0.868	---	0.250	mg/kg wet	50	1.00	---	87	80 - 120%	---	---	
1,2,4-Trichlorobenzene	0.803	---	0.250	mg/kg wet	50	1.00	---	80	80 - 120%	---	---	
1,1,1-Trichloroethane	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,1,2-Trichloroethane	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
Trichloroethene (TCE)	0.903	---	0.0250	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
Trichlorofluoromethane	1.07	---	0.100	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
1,2,3-Trichloropropane	1.09	---	0.0500	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.06	---	0.0500	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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503-718-2323

EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 9091108 - EPA 5035A						Soil							
LCS (9091108-BS1)		Prepared: 09/23/19 10:13		Analyzed: 09/23/19 10:40									
Vinyl chloride	1.09	---	0.0250	mg/kg wet	50	1.00	---	109	80 - 120%	---	---		
m,p-Xylene	2.01	---	0.0500	mg/kg wet	50	2.00	---	101	80 - 120%	---	---		
o-Xylene	0.886	---	0.0250	mg/kg wet	50	1.00	---	89	80 - 120%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		98 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		95 %		80-120 %		"							
Duplicate (9091108-DUP1)		Prepared: 09/19/19 11:00		Analyzed: 09/23/19 22:39									T-02
QC Source Sample: UST-01-T2-NB (A910687-08)													
5035A/8260C													
Acetone	ND	---	23.4	mg/kg dry	1000	---	ND	---	---	---	30%		
Acrylonitrile	ND	---	12.9	mg/kg dry	1000	---	ND	---	---	---	30%		
Benzene	ND	---	0.234	mg/kg dry	1000	---	0.724	---	---	***	30%	Q-04	
Bromobenzene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%		
Bromochloromethane	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		
Bromodichloromethane	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		
Bromoform	ND	---	2.34	mg/kg dry	1000	---	ND	---	---	---	30%		
Bromomethane	ND	---	11.7	mg/kg dry	1000	---	ND	---	---	---	30%		
2-Butanone (MEK)	ND	---	11.7	mg/kg dry	1000	---	ND	---	---	---	30%		
n-Butylbenzene	2.76	---	1.17	mg/kg dry	1000	---	11.2	---	---	121	30%	Q-04	
sec-Butylbenzene	ND	---	1.17	mg/kg dry	1000	---	4.93	---	---	***	30%	Q-04	
tert-Butylbenzene	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		
Carbon disulfide	ND	---	11.7	mg/kg dry	1000	---	ND	---	---	---	30%		
Carbon tetrachloride	ND	---	2.34	mg/kg dry	1000	---	ND	---	---	---	30%		
Chlorobenzene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%		
Chloroethane	ND	---	11.7	mg/kg dry	1000	---	ND	---	---	---	30%		
Chloroform	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		
Chloromethane	ND	---	5.86	mg/kg dry	1000	---	ND	---	---	---	30%		
2-Chlorotoluene	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		
4-Chlorotoluene	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		
Dibromochloromethane	ND	---	2.34	mg/kg dry	1000	---	ND	---	---	---	30%		
1,2-Dibromo-3-chloropropane	ND	---	5.86	mg/kg dry	1000	---	ND	---	---	---	30%		
1,2-Dibromoethane (EDB)	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		
Dibromomethane	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%		

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Lisa Domenighini, Client Services Manager

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091108 - EPA 5035A						Soil						
Duplicate (9091108-DUP1)		Prepared: 09/19/19 11:00 Analyzed: 09/23/19 22:39					T-02					
QC Source Sample: UST-01-T2-NB (A910687-08)												
1,2-Dichlorobenzene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	2.34	mg/kg dry	1000	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	2.34	mg/kg dry	1000	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
Ethylbenzene	17.0	---	0.586	mg/kg dry	1000	---	87.3	---	---	135	30%	Q-04
Hexachlorobutadiene	ND	---	2.34	mg/kg dry	1000	---	ND	---	---	---	30%	
2-Hexanone	ND	---	11.7	mg/kg dry	1000	---	ND	---	---	---	30%	
Isopropylbenzene	2.44	---	1.17	mg/kg dry	1000	---	13.0	---	---	137	30%	Q-04
4-Isopropyltoluene	ND	---	1.17	mg/kg dry	1000	---	3.74	---	---	***	30%	Q-04
Methylene chloride	ND	---	5.98	mg/kg dry	1000	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	11.7	mg/kg dry	1000	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
Naphthalene	4.83	---	2.34	mg/kg dry	1000	---	20.8	---	---	125	30%	Q-04
n-Propylbenzene	10.6	---	0.586	mg/kg dry	1000	---	52.9	---	---	133	30%	Q-04
Styrene	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
Toluene	ND	---	1.17	mg/kg dry	1000	---	0.987	---	---	***	30%	Q-04
1,2,3-Trichlorobenzene	ND	---	5.86	mg/kg dry	1000	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	5.86	mg/kg dry	1000	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091108 - EPA 5035A							Soil					
Duplicate (9091108-DUP1)			Prepared: 09/19/19 11:00		Analyzed: 09/23/19 22:39		T-02					
QC Source Sample: UST-01-T2-NB (A910687-08)												
1,1,2-Trichloroethane	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	2.34	mg/kg dry	1000	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.17	mg/kg dry	1000	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	66.9	---	1.17	mg/kg dry	1000	---	321	---	---	131	30%	Q-04
1,3,5-Trimethylbenzene	3.85	---	1.17	mg/kg dry	1000	---	11.8	---	---	101	30%	Q-04
Vinyl chloride	ND	---	0.586	mg/kg dry	1000	---	ND	---	---	---	30%	
m,p-Xylene	26.8	---	1.17	mg/kg dry	1000	---	137	---	---	134	30%	Q-04
o-Xylene	ND	---	0.586	mg/kg dry	1000	---	1.40	---	---	***	30%	Q-04
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091160 - EPA 5035A						Soil						
Blank (9091160-BLK1)		Prepared: 09/23/19 12:00 Analyzed: 09/23/19 14:18										
5035A/8260C												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091160 - EPA 5035A						Soil						
Blank (9091160-BLK1)		Prepared: 09/23/19 12:00 Analyzed: 09/23/19 14:18										
1,2-Dichloropropane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 111 %		Limits: 80-120 %		Dilution: 1x						

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 111 %

Limits: 80-120 %

Dilution: 1x

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091160 - EPA 5035A						Soil						
Blank (9091160-BLK1)		Prepared: 09/23/19 12:00 Analyzed: 09/23/19 14:18										
Surr: Toluene-d8 (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						
LCS (9091160-BS1)		Prepared: 09/23/19 12:00 Analyzed: 09/23/19 13:24										
5035A/8260C												
Acetone	2.16	---	1.00	mg/kg wet	50	2.00	---	108	80 - 120%	---	---	Q-56
Acrylonitrile	1.02	---	0.100	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Benzene	1.03	---	0.0100	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Bromobenzene	0.977	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Bromochloromethane	1.06	---	0.0500	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	Q-56
Bromodichloromethane	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Bromoform	1.08	---	0.100	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
Bromomethane	1.38	---	0.500	mg/kg wet	50	1.00	---	138	80 - 120%	---	---	
2-Butanone (MEK)	2.21	---	0.500	mg/kg wet	50	2.00	---	111	80 - 120%	---	---	Q-56
n-Butylbenzene	0.889	---	0.0500	mg/kg wet	50	1.00	---	89	80 - 120%	---	---	
sec-Butylbenzene	0.854	---	0.0500	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
tert-Butylbenzene	0.850	---	0.0500	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
Carbon disulfide	0.841	---	0.500	mg/kg wet	50	1.00	---	84	80 - 120%	---	---	Q-56
Carbon tetrachloride	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Chlorobenzene	0.957	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Chloroethane	1.70	---	0.500	mg/kg wet	50	1.00	---	170	80 - 120%	---	---	
Chloroform	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	E-05, Q-56
Chloromethane	1.03	---	0.250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
2-Chlorotoluene	0.943	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
4-Chlorotoluene	0.902	---	0.0500	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
Dibromochloromethane	1.06	---	0.100	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	E-05, Q-56
1,2-Dibromo-3-chloropropane	0.914	---	0.250	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	0.993	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
Dibromomethane	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
1,2-Dichlorobenzene	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	E-05, Q-56
1,3-Dichlorobenzene	0.993	---	0.0250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,4-Dichlorobenzene	0.973	---	0.0250	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Dichlorodifluoromethane	1.25	---	0.100	mg/kg wet	50	1.00	---	125	80 - 120%	---	---	
1,1-Dichloroethane	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091160 - EPA 5035A							Soil					
LCS (9091160-BS1)		Prepared: 09/23/19 12:00 Analyzed: 09/23/19 13:24										
1,2-Dichloroethane (EDC)	1.08	---	0.0250	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
1,1-Dichloroethene	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
cis-1,2-Dichloroethene	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
trans-1,2-Dichloroethene	1.06	---	0.0250	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
1,2-Dichloropropane	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,3-Dichloropropane	0.991	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
2,2-Dichloropropane	0.980	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
1,1-Dichloropropene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
cis-1,3-Dichloropropene	0.896	---	0.0500	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
trans-1,3-Dichloropropene	0.904	---	0.0500	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
Ethylbenzene	0.912	---	0.0250	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
Hexachlorobutadiene	0.928	---	0.100	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
2-Hexanone	1.92	---	0.500	mg/kg wet	50	2.00	---	96	80 - 120%	---	---	
Isopropylbenzene	0.927	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
4-Isopropyltoluene	0.870	---	0.0500	mg/kg wet	50	1.00	---	87	80 - 120%	---	---	
Methylene chloride	1.01	---	0.250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	1.95	---	0.500	mg/kg wet	50	2.00	---	97	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.992	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
Naphthalene	0.944	---	0.100	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
n-Propylbenzene	0.892	---	0.0250	mg/kg wet	50	1.00	---	89	80 - 120%	---	---	
Styrene	0.946	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	0.982	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	0.951	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
Tetrachloroethene (PCE)	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Toluene	0.915	---	0.0500	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
1,2,3-Trichlorobenzene	0.949	---	0.250	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
1,2,4-Trichlorobenzene	0.961	---	0.250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
1,1,1-Trichloroethane	0.985	---	0.0250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,1,2-Trichloroethane	0.968	---	0.0250	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Trichloroethene (TCE)	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
Trichlorofluoromethane	1.62	---	0.100	mg/kg wet	50	1.00	---	162	80 - 120%	---	---	Q-56
1,2,3-Trichloropropane	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,2,4-Trimethylbenzene	0.860	---	0.0500	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
1,3,5-Trimethylbenzene	0.832	---	0.0500	mg/kg wet	50	1.00	---	83	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091160 - EPA 5035A							Soil					
LCS (9091160-BS1)		Prepared: 09/23/19 12:00		Analyzed: 09/23/19 13:24								
Vinyl chloride	1.18	---	0.0250	mg/kg wet	50	1.00	---	118	80 - 120%	---	---	
m,p-Xylene	1.90	---	0.0500	mg/kg wet	50	2.00	---	95	80 - 120%	---	---	
o-Xylene	0.913	---	0.0250	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 108 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		95 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091213 - EPA 5035A						Soil						
Blank (9091213-BLK1)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 11:46										
5035A/8260C												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091213 - EPA 5035A						Soil						
Blank (9091213-BLK1)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 11:46										
1,2-Dichloropropane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 110 %		Limits: 80-120 %		Dilution: 1x						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091213 - EPA 5035A						Soil						
Blank (9091213-BLK1)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 11:46										
Surr: Toluene-d8 (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
LCS (9091213-BS1)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 10:52										
5035A/8260C												
Acetone	1.64	---	1.00	mg/kg wet	50	2.00	---	82	80 - 120%	---	---	
Acrylonitrile	0.855	---	0.100	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
Benzene	1.05	---	0.0100	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
Bromobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Bromochloromethane	0.981	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Bromodichloromethane	1.10	---	0.0500	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
Bromoform	1.09	---	0.100	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Bromomethane	1.17	---	0.500	mg/kg wet	50	1.00	---	117	80 - 120%	---	---	
2-Butanone (MEK)	1.83	---	0.500	mg/kg wet	50	2.00	---	92	80 - 120%	---	---	
n-Butylbenzene	0.971	---	0.0500	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
sec-Butylbenzene	0.901	---	0.0500	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
tert-Butylbenzene	0.882	---	0.0500	mg/kg wet	50	1.00	---	88	80 - 120%	---	---	
Carbon disulfide	0.807	---	0.500	mg/kg wet	50	1.00	---	81	80 - 120%	---	---	
Carbon tetrachloride	1.09	---	0.0500	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Chlorobenzene	0.966	---	0.0250	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Chloroethane	2.83	---	0.500	mg/kg wet	50	1.00	---	283	80 - 120%	---	---	Q-56
Chloroform	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Chloromethane	1.02	---	0.250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
2-Chlorotoluene	0.977	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
4-Chlorotoluene	0.942	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Dibromochloromethane	1.10	---	0.100	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	0.797	---	0.250	mg/kg wet	50	1.00	---	80	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	0.982	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Dibromomethane	1.11	---	0.0500	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
1,2-Dichlorobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,3-Dichlorobenzene	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,4-Dichlorobenzene	0.991	---	0.0250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
Dichlorodifluoromethane	1.26	---	0.100	mg/kg wet	50	1.00	---	126	80 - 120%	---	---	E-05, Q-56
1,1-Dichloroethane	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091213 - EPA 5035A						Soil						
LCS (9091213-BS1)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 10:52										
1,2-Dichloroethane (EDC)	1.08	---	0.0250	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
1,1-Dichloroethene	0.996	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
cis-1,2-Dichloroethene	1.09	---	0.0250	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
trans-1,2-Dichloroethene	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
1,2-Dichloropropane	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
1,3-Dichloropropane	0.988	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
2,2-Dichloropropane	1.14	---	0.0500	mg/kg wet	50	1.00	---	114	80 - 120%	---	---	
1,1-Dichloropropene	1.06	---	0.0500	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
cis-1,3-Dichloropropene	0.944	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
trans-1,3-Dichloropropene	0.942	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Ethylbenzene	0.908	---	0.0250	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
Hexachlorobutadiene	0.970	---	0.100	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
2-Hexanone	1.60	---	0.500	mg/kg wet	50	2.00	---	80	80 - 120%	---	---	
Isopropylbenzene	0.933	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
4-Isopropyltoluene	0.939	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Methylene chloride	0.973	---	0.250	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	1.73	---	0.500	mg/kg wet	50	2.00	---	87	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Naphthalene	0.859	---	0.100	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
n-Propylbenzene	0.929	---	0.0250	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
Styrene	0.951	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	0.921	---	0.0500	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
Tetrachloroethene (PCE)	0.997	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Toluene	0.905	---	0.0500	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
1,2,3-Trichlorobenzene	0.884	---	0.250	mg/kg wet	50	1.00	---	88	80 - 120%	---	---	
1,2,4-Trichlorobenzene	0.944	---	0.250	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
1,1,1-Trichloroethane	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,1,2-Trichloroethane	0.962	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Trichloroethene (TCE)	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
Trichlorofluoromethane	2.45	---	0.100	mg/kg wet	50	1.00	---	245	80 - 120%	---	---	Q-56
1,2,3-Trichloropropane	0.951	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
1,2,4-Trimethylbenzene	0.930	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
1,3,5-Trimethylbenzene	0.880	---	0.0500	mg/kg wet	50	1.00	---	88	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091213 - EPA 5035A							Soil					
LCS (9091213-BS1)		Prepared: 09/24/19 10:25 Analyzed: 09/24/19 10:52										
Vinyl chloride	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
m,p-Xylene	1.87	---	0.0500	mg/kg wet	50	2.00	---	94	80 - 120%	---	---	
o-Xylene	0.906	---	0.0250	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 111 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		93 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polychlorinated Biphenyls by EPA 8082A**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091156 - EPA 3546						Soil						
Blank (9091156-BLK1)		Prepared: 09/23/19 08:53		Analyzed: 09/24/19 08:37		C-07						
EPA 8082A												
Aroclor 1016	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 97 %		Limits: 60-125 %		Dilution: 1x						
LCS (9091156-BS1)		Prepared: 09/23/19 08:53		Analyzed: 09/24/19 08:55		C-07						
EPA 8082A												
Aroclor 1016	0.184	---	0.0100	mg/kg wet	1	0.250	---	73	47 - 134%	---	---	
Aroclor 1260	0.219	---	0.0100	mg/kg wet	1	0.250	---	88	53 - 140%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 103 %		Limits: 60-125 %		Dilution: 1x						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091201 - EPA 3546						Soil						
Blank (9091201-BLK1)		Prepared: 09/24/19 06:55 Analyzed: 09/24/19 10:49										
EPA 8270D (SIM)												
Acenaphthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 78 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		95 %		54-127 %		"						

LCS (9091201-BS1)

Prepared: 09/24/19 06:55 Analyzed: 09/24/19 11:15

EPA 8270D (SIM)

Acenaphthene	0.630	---	0.0100	mg/kg wet	1	0.800	---	79	40 - 122%	---	---
Acenaphthylene	0.616	---	0.0100	mg/kg wet	1	0.800	---	77	32 - 132%	---	---
Anthracene	0.644	---	0.0100	mg/kg wet	1	0.800	---	81	47 - 123%	---	---
Benz(a)anthracene	0.584	---	0.0100	mg/kg wet	1	0.800	---	73	49 - 126%	---	---
Benzo(a)pyrene	0.651	---	0.0100	mg/kg wet	1	0.800	---	81	45 - 129%	---	---
Benzo(b)fluoranthene	0.641	---	0.0100	mg/kg wet	1	0.800	---	80	45 - 132%	---	---
Benzo(k)fluoranthene	0.682	---	0.0100	mg/kg wet	1	0.800	---	85	47 - 132%	---	---
Benzo(g,h,i)perylene	0.583	---	0.0100	mg/kg wet	1	0.800	---	73	43 - 134%	---	---
Chrysene	0.640	---	0.0100	mg/kg wet	1	0.800	---	80	50 - 124%	---	---

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091201 - EPA 3546						Soil						
LCS (9091201-BS1)		Prepared: 09/24/19 06:55 Analyzed: 09/24/19 11:15										
Dibenz(a,h)anthracene	0.603	---	0.0100	mg/kg wet	1	0.800	---	75	45 - 134%	---	---	
Dibenzofuran	0.633	---	0.0100	mg/kg wet	1	0.800	---	79	44 - 120%	---	---	
Fluoranthene	0.622	---	0.0100	mg/kg wet	1	0.800	---	78	50 - 127%	---	---	
Fluorene	0.641	---	0.0100	mg/kg wet	1	0.800	---	80	43 - 125%	---	---	
Indeno(1,2,3-cd)pyrene	0.586	---	0.0100	mg/kg wet	1	0.800	---	73	45 - 133%	---	---	
1-Methylnaphthalene	0.671	---	0.0100	mg/kg wet	1	0.800	---	84	40 - 120%	---	---	
2-Methylnaphthalene	0.646	---	0.0100	mg/kg wet	1	0.800	---	81	38 - 122%	---	---	
Naphthalene	0.619	---	0.0100	mg/kg wet	1	0.800	---	77	35 - 123%	---	---	
Phenanthrene	0.596	---	0.0100	mg/kg wet	1	0.800	---	74	50 - 121%	---	---	
Pyrene	0.610	---	0.0100	mg/kg wet	1	0.800	---	76	47 - 127%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			Recovery: 81 %	Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)			87 %	54-127 %		"						

Matrix Spike (9091201-MS1) Prepared: 09/24/19 06:55 Analyzed: 09/24/19 20:10

QC Source Sample: UST-06-T1-SW (A910687-13)**EPA 8270D (SIM)**

Acenaphthene	0.768	---	0.0116	mg/kg dry	1	0.927	ND	66	40 - 122%	---	---	
Acenaphthylene	0.671	---	0.0116	mg/kg dry	1	0.927	ND	67	32 - 132%	---	---	
Anthracene	0.747	---	0.0116	mg/kg dry	1	0.927	ND	76	47 - 123%	---	---	
Benz(a)anthracene	0.640	---	0.0116	mg/kg dry	1	0.927	ND	68	49 - 126%	---	---	
Benzo(a)pyrene	0.716	---	0.0116	mg/kg dry	1	0.927	ND	77	45 - 129%	---	---	
Benzo(b)fluoranthene	0.676	---	0.0116	mg/kg dry	1	0.927	ND	73	45 - 132%	---	---	
Benzo(k)fluoranthene	0.741	---	0.0116	mg/kg dry	1	0.927	ND	80	47 - 132%	---	---	
Benzo(g,h,i)perylene	0.600	---	0.0116	mg/kg dry	1	0.927	ND	65	43 - 134%	---	---	
Chrysene	0.712	---	0.0116	mg/kg dry	1	0.927	ND	76	50 - 124%	---	---	
Dibenz(a,h)anthracene	0.623	---	0.0116	mg/kg dry	1	0.927	ND	67	45 - 134%	---	---	
Dibenzofuran	0.760	---	0.0116	mg/kg dry	1	0.927	ND	70	44 - 120%	---	---	
Fluoranthene	0.794	---	0.0116	mg/kg dry	1	0.927	0.0253	83	50 - 127%	---	---	
Fluorene	1.04	---	0.0116	mg/kg dry	1	0.927	0.448	63	43 - 125%	---	---	
Indeno(1,2,3-cd)pyrene	0.600	---	0.0116	mg/kg dry	1	0.927	ND	65	45 - 133%	---	---	
1-Methylnaphthalene	4.89	---	0.0116	mg/kg dry	1	0.927	5.68	-85	40 - 120%	---	---	E, Q-03
2-Methylnaphthalene	8.35	---	0.0116	mg/kg dry	1	0.927	10.7	-252	38 - 122%	---	---	Q-03, E
Naphthalene	8.27	---	0.0116	mg/kg dry	1	0.927	10.6	-247	35 - 123%	---	---	Q-03, E
Phenanthrene	1.32	---	0.0116	mg/kg dry	1	0.927	0.750	62	50 - 121%	---	---	

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091201 - EPA 3546							Soil					
Matrix Spike (9091201-MS1)		Prepared: 09/24/19 06:55 Analyzed: 09/24/19 20:10										
QC Source Sample: UST-06-T1-SW (A910687-13)												
Pyrene	0.815	---	0.0116	mg/kg dry	1	0.927	0.0401	84	47 - 127%	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 72 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		86 %		54-127 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091322 - EPA 3546						Soil						
Blank (9091322-BLK1)		Prepared: 09/26/19 10:01		Analyzed: 09/26/19 14:11								
EPA 8270D (SIM)												
Acenaphthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 80 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		96 %		54-127 %		"						

LCS (9091322-BS1)

Prepared: 09/26/19 10:01 Analyzed: 09/26/19 14:36

EPA 8270D (SIM)												
Acenaphthene	0.652	---	0.0100	mg/kg wet	1	0.800	---	82	40 - 122%	---	---	
Acenaphthylene	0.650	---	0.0100	mg/kg wet	1	0.800	---	81	32 - 132%	---	---	
Anthracene	0.678	---	0.0100	mg/kg wet	1	0.800	---	85	47 - 123%	---	---	
Benz(a)anthracene	0.595	---	0.0100	mg/kg wet	1	0.800	---	74	49 - 126%	---	---	
Benzo(a)pyrene	0.649	---	0.0100	mg/kg wet	1	0.800	---	81	45 - 129%	---	---	
Benzo(b)fluoranthene	0.631	---	0.0100	mg/kg wet	1	0.800	---	79	45 - 132%	---	---	
Benzo(k)fluoranthene	0.703	---	0.0100	mg/kg wet	1	0.800	---	88	47 - 132%	---	---	
Benzo(g,h,i)perylene	0.625	---	0.0100	mg/kg wet	1	0.800	---	78	43 - 134%	---	---	
Chrysene	0.671	---	0.0100	mg/kg wet	1	0.800	---	84	50 - 124%	---	---	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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503-718-2323

EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091322 - EPA 3546						Soil						
LCS (9091322-BS1)		Prepared: 09/26/19 10:01		Analyzed: 09/26/19 14:36								
Dibenz(a,h)anthracene	0.668	---	0.0100	mg/kg wet	1	0.800	---	83	45 - 134%	---	---	
Dibenzofuran	0.671	---	0.0100	mg/kg wet	1	0.800	---	84	44 - 120%	---	---	
Fluoranthene	0.628	---	0.0100	mg/kg wet	1	0.800	---	78	50 - 127%	---	---	
Fluorene	0.662	---	0.0100	mg/kg wet	1	0.800	---	83	43 - 125%	---	---	
Indeno(1,2,3-cd)pyrene	0.610	---	0.0100	mg/kg wet	1	0.800	---	76	45 - 133%	---	---	
1-Methylnaphthalene	0.669	---	0.0100	mg/kg wet	1	0.800	---	84	40 - 120%	---	---	
2-Methylnaphthalene	0.648	---	0.0100	mg/kg wet	1	0.800	---	81	38 - 122%	---	---	
Naphthalene	0.668	---	0.0100	mg/kg wet	1	0.800	---	83	35 - 123%	---	---	
Phenanthrene	0.631	---	0.0100	mg/kg wet	1	0.800	---	79	50 - 121%	---	---	
Pyrene	0.614	---	0.0100	mg/kg wet	1	0.800	---	77	47 - 127%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			Recovery: 97 %		Limits: 44-120 %		Dilution: 1x					
p-Terphenyl-d14 (Surr)			102 %		54-127 %		"					

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Stantec Portland

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091438 - EPA 3546						Soil						
Blank (9091438-BLK1)		Prepared: 09/30/19 10:02 Analyzed: 10/02/19 16:49										
EPA 8270D (SIM)												
Acenaphthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 81 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		87 %		54-127 %		"						

LCS (9091438-BS1)

Prepared: 09/30/19 10:02 Analyzed: 10/02/19 17:14

EPA 8270D (SIM)												
Acenaphthene	0.639	---	0.0100	mg/kg wet	1	0.800	---	80	40 - 122%	---	---	
Acenaphthylene	0.635	---	0.0100	mg/kg wet	1	0.800	---	79	32 - 132%	---	---	
Anthracene	0.646	---	0.0100	mg/kg wet	1	0.800	---	81	47 - 123%	---	---	
Benz(a)anthracene	0.667	---	0.0100	mg/kg wet	1	0.800	---	83	49 - 126%	---	---	
Benzo(a)pyrene	0.670	---	0.0100	mg/kg wet	1	0.800	---	84	45 - 129%	---	---	
Benzo(b)fluoranthene	0.669	---	0.0100	mg/kg wet	1	0.800	---	84	45 - 132%	---	---	
Benzo(k)fluoranthene	0.671	---	0.0100	mg/kg wet	1	0.800	---	84	47 - 132%	---	---	
Benzo(g,h,i)perylene	0.675	---	0.0100	mg/kg wet	1	0.800	---	84	43 - 134%	---	---	
Chrysene	0.680	---	0.0100	mg/kg wet	1	0.800	---	85	50 - 124%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091438 - EPA 3546						Soil						
LCS (9091438-BS1)		Prepared: 09/30/19 10:02 Analyzed: 10/02/19 17:14										
Dibenz(a,h)anthracene	0.672	---	0.0100	mg/kg wet	1	0.800	---	84	45 - 134%	---	---	
Dibenzofuran	0.639	---	0.0100	mg/kg wet	1	0.800	---	80	44 - 120%	---	---	
Fluoranthene	0.650	---	0.0100	mg/kg wet	1	0.800	---	81	50 - 127%	---	---	
Fluorene	0.652	---	0.0100	mg/kg wet	1	0.800	---	81	43 - 125%	---	---	
Indeno(1,2,3-cd)pyrene	0.668	---	0.0100	mg/kg wet	1	0.800	---	84	45 - 133%	---	---	
1-Methylnaphthalene	0.598	---	0.0100	mg/kg wet	1	0.800	---	75	40 - 120%	---	---	
2-Methylnaphthalene	0.603	---	0.0100	mg/kg wet	1	0.800	---	75	38 - 122%	---	---	
Naphthalene	0.586	---	0.0100	mg/kg wet	1	0.800	---	73	35 - 123%	---	---	
Phenanthrene	0.649	---	0.0100	mg/kg wet	1	0.800	---	81	50 - 121%	---	---	
Pyrene	0.664	---	0.0100	mg/kg wet	1	0.800	---	83	47 - 127%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			Recovery: 75 %		Limits: 44-120 %		Dilution: 1x					
p-Terphenyl-d14 (Surr)			84 %		54-127 %		"					

Duplicate (9091438-DUP1) Prepared: 09/30/19 10:02 Analyzed: 10/02/19 18:30**QC Source Sample: GP03-8 (A910687-04RE1)****EPA 8270D (SIM)**

Acenaphthene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	---	0.0122	mg/kg dry	1	---	0.00730	---	---	***	30%	Q-05
Chrysene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Dibenzofuran	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Fluorene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
1-Methylnaphthalene	0.268	---	0.0122	mg/kg dry	1	---	0.136	---	---	65	30%	Q-17
2-Methylnaphthalene	0.679	---	0.0122	mg/kg dry	1	---	0.343	---	---	66	30%	Q-17
Naphthalene	0.491	---	0.0122	mg/kg dry	1	---	0.314	---	---	44	30%	Q-17
Phenanthrene	0.0206	---	0.0122	mg/kg dry	1	---	0.0126	---	---	48	30%	Q-05

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091438 - EPA 3546							Soil					
Duplicate (9091438-DUP1)		Prepared: 09/30/19 10:02 Analyzed: 10/02/19 18:30										
QC Source Sample: GP03-8 (A910687-04RE1)												
Pyrene	ND	---	0.0122	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 70 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		73 %		54-127 %		"						

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091186 - EPA 3051A												
Soil												
Blank (9091186-BLK1)												
Prepared: 09/23/19 14:33 Analyzed: 09/23/19 20:40												
EPA 6020A												
Arsenic	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	2.34	---	0.962	mg/kg wet	10	---	---	---	---	---	---	B
Cadmium	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Blank (9091186-BLK2)												
Prepared: 09/23/19 14:33 Analyzed: 09/24/19 11:02												
EPA 6020A												
Mercury	ND	---	0.0769	mg/kg wet	10	---	---	---	---	---	---	Q-16
LCS (9091186-BS1)												
Prepared: 09/23/19 14:33 Analyzed: 09/23/19 20:44												
EPA 6020A												
Arsenic	47.5	---	1.00	mg/kg wet	10	50.0	---	95	80 - 120%	---	---	
Barium	48.2	---	1.00	mg/kg wet	10	50.0	---	96	80 - 120%	---	---	B
Cadmium	47.0	---	0.200	mg/kg wet	10	50.0	---	94	80 - 120%	---	---	
Chromium	52.3	---	1.00	mg/kg wet	10	50.0	---	105	80 - 120%	---	---	
Lead	46.9	---	0.200	mg/kg wet	10	50.0	---	94	80 - 120%	---	---	
Selenium	23.8	---	1.00	mg/kg wet	10	25.0	---	95	80 - 120%	---	---	
Silver	25.4	---	0.200	mg/kg wet	10	25.0	---	102	80 - 120%	---	---	
LCS (9091186-BS2)												
Prepared: 09/23/19 14:33 Analyzed: 09/24/19 11:06												
EPA 6020A												
Mercury	0.891	---	0.0800	mg/kg wet	10	1.00	---	89	80 - 120%	---	---	Q-16
Duplicate (9091186-DUP1)												
Prepared: 09/23/19 14:33 Analyzed: 09/23/19 22:13												
QC Source Sample: UST-06-T1-SW (A910687-13)												
EPA 6020A												
Arsenic	2.09	---	1.29	mg/kg dry	10	---	2.78	---	---	28	40%	
Barium	82.5	---	1.29	mg/kg dry	10	---	82.0	---	---	0.7	40%	B
Cadmium	ND	---	0.257	mg/kg dry	10	---	ND	---	---	---	40%	
Chromium	27.4	---	1.29	mg/kg dry	10	---	28.9	---	---	5	40%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091186 - EPA 3051A												
Soil												
Duplicate (9091186-DUP1) Prepared: 09/23/19 14:33 Analyzed: 09/23/19 22:13												
QC Source Sample: UST-06-T1-SW (A910687-13)												
Selenium	ND	---	1.29	mg/kg dry	10	---	ND	---	---	---	40%	
Silver	ND	---	0.257	mg/kg dry	10	---	ND	---	---	---	40%	
Duplicate (9091186-DUP2) Prepared: 09/23/19 14:33 Analyzed: 09/24/19 12:25												
QC Source Sample: UST-06-T1-SW (A910687-13RE1)												
EPA 6020A												
Lead	7.34	---	0.257	mg/kg dry	10	---	12.9	---	---	55	40%	Q-04, Q-16
Mercury	ND	---	0.103	mg/kg dry	10	---	ND	---	---	---	40%	Q-16
Matrix Spike (9091186-MS1) Prepared: 09/23/19 14:33 Analyzed: 09/23/19 22:17												
QC Source Sample: UST-06-T1-SW (A910687-13)												
EPA 6020A												
Arsenic	56.4	---	1.15	mg/kg dry	10	57.4	2.78	94	75 - 125%	---	---	
Barium	142	---	1.15	mg/kg dry	10	57.4	82.0	105	75 - 125%	---	---	B
Cadmium	53.0	---	0.229	mg/kg dry	10	57.4	ND	92	75 - 125%	---	---	
Chromium	90.8	---	1.15	mg/kg dry	10	57.4	28.9	108	75 - 125%	---	---	
Selenium	27.0	---	1.15	mg/kg dry	10	28.7	ND	94	75 - 125%	---	---	
Silver	29.3	---	0.229	mg/kg dry	10	28.7	ND	102	75 - 125%	---	---	
Matrix Spike (9091186-MS2) Prepared: 09/23/19 14:33 Analyzed: 09/24/19 12:30												
QC Source Sample: UST-06-T1-SW (A910687-13RE1)												
EPA 6020A												
Lead	59.8	---	0.229	mg/kg dry	10	57.4	12.9	82	75 - 125%	---	---	Q-16
Mercury	1.07	---	0.0918	mg/kg dry	10	1.15	ND	93	75 - 125%	---	---	Q-16

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****QUALITY CONTROL (QC) SAMPLE RESULTS****TCLP Metals by EPA 6020A (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091266 - EPA 1311/3015							Solid					
Blank (9091266-BLK1)		Prepared: 09/25/19 09:26		Analyzed: 09/25/19 12:01								
1311/6020A												
Cadmium	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
Chromium	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
Lead	ND	---	0.0500	mg/L	10	---	---	---	---	---	---	TCLP
LCS (9091266-BS1)		Prepared: 09/25/19 09:26		Analyzed: 09/25/19 12:06								
1311/6020A												
Cadmium	0.996	---	0.100	mg/L	10	1.00	---	100	80 - 120%	---	---	TCLP
Chromium	4.86	---	0.100	mg/L	10	5.00	---	97	80 - 120%	---	---	TCLP
Lead	4.81	---	0.0500	mg/L	10	5.00	---	96	80 - 120%	---	---	TCLP
Matrix Spike (9091266-MS1)		Prepared: 09/25/19 09:26		Analyzed: 09/25/19 12:52								
QC Source Sample: UST-06-T1-SW (A910687-13)												
1311/6020A												
Cadmium	0.997	---	0.100	mg/L	10	1.00	ND	100	50 - 150%	---	---	
Chromium	4.90	---	0.100	mg/L	10	5.00	ND	98	50 - 150%	---	---	
Lead	4.79	---	0.0500	mg/L	10	5.00	ND	96	50 - 150%	---	---	

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091154 - Total Solids (Dry Weight)							Soil					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Lisa Domenighini, Client Services Manager

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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091204 - Total Solids (Dry Weight)							Soil					
Duplicate (9091204-DUP2)		Prepared: 09/24/19 08:14 Analyzed: 09/25/19 07:46										
QC Source Sample: GP-X (A910687-05)												
EPA 8000C												
% Solids	81.7	---	1.00	% by Weight	1	---	81.5	---	---	0.3	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3546 (Fuels)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091236							
A9I0687-02	Soil	NWTPH-Dx	09/17/19 13:45	09/24/19 12:57	10.61g/5mL	10g/5mL	0.94
A9I0687-03	Soil	NWTPH-Dx	09/18/19 09:30	09/24/19 12:57	10.37g/5mL	10g/5mL	0.96
A9I0687-04	Soil	NWTPH-Dx	09/18/19 10:00	09/24/19 12:57	10.8g/5mL	10g/5mL	0.93
A9I0687-05	Soil	NWTPH-Dx	09/18/19 10:15	09/24/19 12:57	10.09g/5mL	10g/5mL	0.99
A9I0687-06	Soil	NWTPH-Dx	09/18/19 16:00	09/24/19 12:57	10.36g/5mL	10g/5mL	0.97
A9I0687-07	Soil	NWTPH-Dx	09/18/19 16:15	09/24/19 12:57	10.5g/5mL	10g/5mL	0.95
A9I0687-08	Soil	NWTPH-Dx	09/19/19 11:00	09/24/19 12:57	10.19g/5mL	10g/5mL	0.98
A9I0687-09	Soil	NWTPH-Dx	09/19/19 11:05	09/24/19 12:57	10.35g/5mL	10g/5mL	0.97
A9I0687-10	Soil	NWTPH-Dx	09/19/19 12:30	09/24/19 12:57	10.67g/5mL	10g/5mL	0.94
A9I0687-11	Soil	NWTPH-Dx	09/19/19 12:45	09/24/19 12:57	10.58g/5mL	10g/5mL	0.95
A9I0687-12	Soil	NWTPH-Dx	09/19/19 13:00	09/24/19 12:57	10.48g/5mL	10g/5mL	0.95
A9I0687-13	Soil	NWTPH-Dx	09/19/19 13:15	09/24/19 12:57	10.91g/5mL	10g/5mL	0.92
Batch: 9091259							
A9I0687-01RE1	Soil	NWTPH-Dx	09/17/19 13:20	09/25/19 07:08	10.24g/5mL	10g/5mL	0.98

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091047							
A9I0687-01	Soil	NWTPH-Gx (MS)	09/17/19 13:20	09/17/19 13:20	4.96g/5mL	5g/5mL	1.01
A9I0687-02	Soil	NWTPH-Gx (MS)	09/17/19 13:45	09/17/19 13:45	6.95g/5mL	5g/5mL	0.72
A9I0687-03	Soil	NWTPH-Gx (MS)	09/18/19 09:30	09/18/19 09:30	5.52g/5mL	5g/5mL	0.91
Batch: 9091108							
A9I0687-07	Soil	NWTPH-Gx (MS)	09/18/19 16:15	09/18/19 16:15	6.69g/5mL	5g/5mL	0.75
A9I0687-08	Soil	NWTPH-Gx (MS)	09/19/19 11:00	09/19/19 11:00	6.33g/5mL	5g/5mL	0.79
Batch: 9091160							
A9I0687-06	Soil	NWTPH-Gx (MS)	09/18/19 16:00	09/18/19 16:00	6.68g/5mL	5g/5mL	0.75
A9I0687-10	Soil	NWTPH-Gx (MS)	09/19/19 12:30	09/19/19 12:30	6.58g/5mL	5g/5mL	0.76
A9I0687-11	Soil	NWTPH-Gx (MS)	09/19/19 12:45	09/19/19 12:45	7.21g/5mL	5g/5mL	0.69
A9I0687-12	Soil	NWTPH-Gx (MS)	09/19/19 13:00	09/19/19 13:00	6.09g/5mL	5g/5mL	0.82
A9I0687-13	Soil	NWTPH-Gx (MS)	09/19/19 13:15	09/19/19 13:15	6.56g/5mL	5g/5mL	0.76
Batch: 9091213							
A9I0687-04RE1	Soil	NWTPH-Gx (MS)	09/18/19 10:00	09/18/19 10:00	5.82g/5mL	5g/5mL	0.86
A9I0687-05RE1	Soil	NWTPH-Gx (MS)	09/18/19 10:15	09/18/19 10:15	5.75g/5mL	5g/5mL	0.87

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601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****SAMPLE PREPARATION INFORMATION****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx****Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A910687-09RE1	Soil	NWTPH-Gx (MS)	09/19/19 11:05	09/19/19 11:05	7.21g/5mL	5g/5mL	0.69

Volatile Organic Compounds by EPA 5035A/8260C**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091047							
A910687-01	Soil	5035A/8260C	09/17/19 13:20	09/17/19 13:20	4.96g/5mL	5g/5mL	1.01
A910687-02	Soil	5035A/8260C	09/17/19 13:45	09/17/19 13:45	6.95g/5mL	5g/5mL	0.72
A910687-03	Soil	5035A/8260C	09/18/19 09:30	09/18/19 09:30	5.52g/5mL	5g/5mL	0.91
Batch: 9091108							
A910687-07	Soil	5035A/8260C	09/18/19 16:15	09/18/19 16:15	6.69g/5mL	5g/5mL	0.75
A910687-08	Soil	5035A/8260C	09/19/19 11:00	09/19/19 11:00	6.33g/5mL	5g/5mL	0.79
Batch: 9091160							
A910687-06	Soil	5035A/8260C	09/18/19 16:00	09/18/19 16:00	6.68g/5mL	5g/5mL	0.75
A910687-10	Soil	5035A/8260C	09/19/19 12:30	09/19/19 12:30	6.58g/5mL	5g/5mL	0.76
A910687-11	Soil	5035A/8260C	09/19/19 12:45	09/19/19 12:45	7.21g/5mL	5g/5mL	0.69
A910687-12	Soil	5035A/8260C	09/19/19 13:00	09/19/19 13:00	6.09g/5mL	5g/5mL	0.82
A910687-13	Soil	5035A/8260C	09/19/19 13:15	09/19/19 13:15	6.56g/5mL	5g/5mL	0.76
Batch: 9091213							
A910687-04RE1	Soil	5035A/8260C	09/18/19 10:00	09/18/19 10:00	5.82g/5mL	5g/5mL	0.86
A910687-05RE1	Soil	5035A/8260C	09/18/19 10:15	09/18/19 10:15	5.75g/5mL	5g/5mL	0.87
A910687-08RE1	Soil	5035A/8260C	09/19/19 11:00	09/19/19 11:00	6.33g/5mL	5g/5mL	0.79
A910687-09RE1	Soil	5035A/8260C	09/19/19 11:05	09/19/19 11:05	7.21g/5mL	5g/5mL	0.69

Polychlorinated Biphenyls by EPA 8082A**Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091156							
A910687-08	Soil	EPA 8082A	09/19/19 11:00	09/23/19 15:18	10.76g/5mL	10g/5mL	0.93
A910687-09	Soil	EPA 8082A	09/19/19 11:05	09/23/19 15:18	10.49g/5mL	10g/5mL	0.95
A910687-10	Soil	EPA 8082A	09/19/19 12:30	09/23/19 15:18	10.45g/5mL	10g/5mL	0.96
A910687-11	Soil	EPA 8082A	09/19/19 12:45	09/23/19 15:18	10.53g/5mL	10g/5mL	0.95
A910687-12	Soil	EPA 8082A	09/19/19 13:00	09/23/19 15:18	10.49g/5mL	10g/5mL	0.95
A910687-13	Soil	EPA 8082A	09/19/19 13:15	09/23/19 15:18	10.83g/5mL	10g/5mL	0.92

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****SAMPLE PREPARATION INFORMATION****Polychlorinated Biphenyls by EPA 8082A****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM****Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091201							
A9I0687-08	Soil	EPA 8270D (SIM)	09/19/19 11:00	09/24/19 06:55	10.5g/5mL	10g/5mL	0.95
A9I0687-08RE1	Soil	EPA 8270D (SIM)	09/19/19 11:00	09/24/19 06:55	10.5g/5mL	10g/5mL	0.95
A9I0687-09	Soil	EPA 8270D (SIM)	09/19/19 11:05	09/24/19 06:55	10.37g/5mL	10g/5mL	0.96
A9I0687-09RE1	Soil	EPA 8270D (SIM)	09/19/19 11:05	09/24/19 06:55	10.37g/5mL	10g/5mL	0.96
A9I0687-10	Soil	EPA 8270D (SIM)	09/19/19 12:30	09/24/19 06:55	10.08g/5mL	10g/5mL	0.99
A9I0687-10RE1	Soil	EPA 8270D (SIM)	09/19/19 12:30	09/24/19 06:55	10.08g/5mL	10g/5mL	0.99
A9I0687-11	Soil	EPA 8270D (SIM)	09/19/19 12:45	09/24/19 06:55	10.06g/5mL	10g/5mL	0.99
A9I0687-11RE1	Soil	EPA 8270D (SIM)	09/19/19 12:45	09/24/19 06:55	10.06g/5mL	10g/5mL	0.99
A9I0687-12	Soil	EPA 8270D (SIM)	09/19/19 13:00	09/24/19 06:55	10.17g/5mL	10g/5mL	0.98
A9I0687-13	Soil	EPA 8270D (SIM)	09/19/19 13:15	09/24/19 06:55	10.25g/5mL	10g/5mL	0.98
A9I0687-13RE1	Soil	EPA 8270D (SIM)	09/19/19 13:15	09/24/19 06:55	10.25g/5mL	10g/5mL	0.98
Batch: 9091322							
A9I0687-01	Soil	EPA 8270D (SIM)	09/17/19 13:20	09/26/19 15:43	10.44g/5mL	10g/5mL	0.96
A9I0687-05	Soil	EPA 8270D (SIM)	09/18/19 10:15	09/26/19 15:43	10.34g/5mL	10g/5mL	0.97
Batch: 9091438							
A9I0687-04RE1	Soil	EPA 8270D (SIM)	09/18/19 10:00	09/30/19 10:02	10.13g/5mL	10g/5mL	0.99

Total Metals by EPA 6020A (ICPMS)**Prep: EPA 3051A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091186							
A9I0687-01	Soil	EPA 6020A	09/17/19 13:20	09/23/19 14:33	0.476g/50mL	0.5g/50mL	1.05
A9I0687-01RE1	Soil	EPA 6020A	09/17/19 13:20	09/23/19 14:33	0.476g/50mL	0.5g/50mL	1.05
A9I0687-02	Soil	EPA 6020A	09/17/19 13:45	09/23/19 14:33	0.48g/50mL	0.5g/50mL	1.04
A9I0687-02RE1	Soil	EPA 6020A	09/17/19 13:45	09/23/19 14:33	0.48g/50mL	0.5g/50mL	1.04
A9I0687-03	Soil	EPA 6020A	09/18/19 09:30	09/23/19 14:33	0.514g/50mL	0.5g/50mL	0.97
A9I0687-03RE1	Soil	EPA 6020A	09/18/19 09:30	09/23/19 14:33	0.514g/50mL	0.5g/50mL	0.97
A9I0687-04	Soil	EPA 6020A	09/18/19 10:00	09/23/19 14:33	0.482g/50mL	0.5g/50mL	1.04
A9I0687-04RE1	Soil	EPA 6020A	09/18/19 10:00	09/23/19 14:33	0.482g/50mL	0.5g/50mL	1.04
A9I0687-05	Soil	EPA 6020A	09/18/19 10:15	09/23/19 14:33	0.512g/50mL	0.5g/50mL	0.98
A9I0687-05RE1	Soil	EPA 6020A	09/18/19 10:15	09/23/19 14:33	0.512g/50mL	0.5g/50mL	0.98
A9I0687-06	Soil	EPA 6020A	09/18/19 16:00	09/23/19 14:33	0.477g/50mL	0.5g/50mL	1.05

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0687 - 10 14 19 1008****SAMPLE PREPARATION INFORMATION****Total Metals by EPA 6020A (ICPMS)****Prep: EPA 3051A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A9I0687-06RE1	Soil	EPA 6020A	09/18/19 16:00	09/23/19 14:33	0.477g/50mL	0.5g/50mL	1.05
A9I0687-07	Soil	EPA 6020A	09/18/19 16:15	09/23/19 14:33	0.46g/50mL	0.5g/50mL	1.09
A9I0687-07RE1	Soil	EPA 6020A	09/18/19 16:15	09/23/19 14:33	0.46g/50mL	0.5g/50mL	1.09
A9I0687-08	Soil	EPA 6020A	09/19/19 11:00	09/23/19 14:33	0.473g/50mL	0.5g/50mL	1.06
A9I0687-08RE1	Soil	EPA 6020A	09/19/19 11:00	09/23/19 14:33	0.473g/50mL	0.5g/50mL	1.06
A9I0687-09	Soil	EPA 6020A	09/19/19 11:05	09/23/19 14:33	0.463g/50mL	0.5g/50mL	1.08
A9I0687-09RE1	Soil	EPA 6020A	09/19/19 11:05	09/23/19 14:33	0.463g/50mL	0.5g/50mL	1.08
A9I0687-10	Soil	EPA 6020A	09/19/19 12:30	09/23/19 14:33	0.479g/50mL	0.5g/50mL	1.04
A9I0687-10RE1	Soil	EPA 6020A	09/19/19 12:30	09/23/19 14:33	0.479g/50mL	0.5g/50mL	1.04
A9I0687-11	Soil	EPA 6020A	09/19/19 12:45	09/23/19 14:33	0.507g/50mL	0.5g/50mL	0.99
A9I0687-11RE1	Soil	EPA 6020A	09/19/19 12:45	09/23/19 14:33	0.507g/50mL	0.5g/50mL	0.99
A9I0687-12	Soil	EPA 6020A	09/19/19 13:00	09/23/19 14:33	0.475g/50mL	0.5g/50mL	1.05
A9I0687-12RE1	Soil	EPA 6020A	09/19/19 13:00	09/23/19 14:33	0.475g/50mL	0.5g/50mL	1.05
A9I0687-13	Soil	EPA 6020A	09/19/19 13:15	09/23/19 14:33	0.473g/50mL	0.5g/50mL	1.06
A9I0687-13RE1	Soil	EPA 6020A	09/19/19 13:15	09/23/19 14:33	0.473g/50mL	0.5g/50mL	1.06

TCLP Metals by EPA 6020A (ICPMS)**Prep: EPA 1311/3015**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091266							
A9I0687-08	Soil	1311/6020A	09/19/19 11:00	09/25/19 09:26	10mL/50mL	10mL/50mL	1.00
A9I0687-09	Soil	1311/6020A	09/19/19 11:05	09/25/19 09:26	10mL/50mL	10mL/50mL	1.00
A9I0687-10	Soil	1311/6020A	09/19/19 12:30	09/25/19 09:26	10mL/50mL	10mL/50mL	1.00
A9I0687-11	Soil	1311/6020A	09/19/19 12:45	09/25/19 09:26	10mL/50mL	10mL/50mL	1.00
A9I0687-12	Soil	1311/6020A	09/19/19 13:00	09/25/19 09:26	10mL/50mL	10mL/50mL	1.00
A9I0687-13	Soil	1311/6020A	09/19/19 13:15	09/25/19 09:26	10mL/50mL	10mL/50mL	1.00

Percent Dry Weight**Prep: Total Solids (Dry Weight)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091154							
A9I0687-01	Soil	EPA 8000C	09/17/19 13:20	09/23/19 19:37			NA
A9I0687-13	Soil	EPA 8000C	09/19/19 13:15	09/23/19 19:37			NA
Batch: 9091204							
A9I0687-02	Soil	EPA 8000C	09/17/19 13:45	09/24/19 08:14			NA

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910687 - 10 14 19 1008****SAMPLE PREPARATION INFORMATION****Percent Dry Weight****Prep: Total Solids (Dry Weight)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A910687-03	Soil	EPA 8000C	09/18/19 09:30	09/24/19 08:14			NA
A910687-04	Soil	EPA 8000C	09/18/19 10:00	09/24/19 08:14			NA
A910687-05	Soil	EPA 8000C	09/18/19 10:15	09/24/19 08:14			NA
A910687-06	Soil	EPA 8000C	09/18/19 16:00	09/24/19 08:14			NA
A910687-07	Soil	EPA 8000C	09/18/19 16:15	09/24/19 08:14			NA
A910687-08	Soil	EPA 8000C	09/19/19 11:00	09/24/19 08:14			NA
A910687-09	Soil	EPA 8000C	09/19/19 11:05	09/24/19 08:14			NA
A910687-10	Soil	EPA 8000C	09/19/19 12:30	09/24/19 08:14			NA
A910687-11	Soil	EPA 8000C	09/19/19 12:45	09/24/19 08:14			NA
A910687-12	Soil	EPA 8000C	09/19/19 13:00	09/24/19 08:14			NA

TCLP Extraction by EPA 1311**Prep: EPA 1311 (TCLP)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091234							
A910687-08	Soil	EPA 1311	09/19/19 11:00	09/24/19 16:30	100g/2000mL	100g/2000mL	NA
A910687-09	Soil	EPA 1311	09/19/19 11:05	09/24/19 16:30	100g/2000mL	100g/2000mL	NA
A910687-10	Soil	EPA 1311	09/19/19 12:30	09/24/19 16:30	100.1g/2002mL	100g/2000mL	NA
A910687-11	Soil	EPA 1311	09/19/19 12:45	09/24/19 16:30	100.1g/2002mL	100g/2000mL	NA
A910687-12	Soil	EPA 1311	09/19/19 13:00	09/24/19 16:30	100g/2000mL	100g/2000mL	NA
A910687-13	Soil	EPA 1311	09/19/19 13:15	09/24/19 16:30	100g/2000mL	100g/2000mL	NA

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

B	Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
C-07	Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
E	Estimated Value. The result is above the calibration range of the instrument.
E-05	Estimated Result. Initial Calibration Verification (ICV) failed high. No affect on non-detect results.
F-16	Results for oil are estimated due to overlap from the reported diesel result.
F-19	Results are Estimated due to the presence of multiple fuel products.
F-20	Result for Diesel is Estimated due to overlap from Gasoline Range Organics or other VOCs.
M-02	Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
Q-03	Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
Q-04	Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
Q-05	Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
Q-16	Reanalysis of an original Batch QC sample.
Q-17	RPD between original and duplicate sample is outside of established control limits.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
Q-55	Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260C, however there is adequate sensitivity to ensure detection at the reporting level.
Q-56	Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260C
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
T-02	This Batch QC sample was analyzed outside of the method specified 12 hour tune window. Results are estimated.
TCLP	This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 9091234.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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



Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0687 - 10 14 19 1008

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported.
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Lisa Domenighini, Client Services Manager



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Project: **Lampson**

Project Number: **185750581**

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Report ID:

A9I0687 - 10 14 19 1008

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910687 - 10 14 19 1008

LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

Lisa Domenighini, Client Services Manager

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503-718-2323

EPA ID: OR01039

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Project: Lampson

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Report ID:

A910687 - 10 14 19 1008

APEX LABS				CHAIN OF CUSTODY			
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323				Lab # <u>A910687</u> COC <u>1</u> of <u>2</u>			
Company: <u>STANTEC</u>		Project Mgr: <u>Len Farr</u>		Project Name: <u>Lampson</u>		Project #: <u>185750581</u>	
Address: <u>225 NE Hilbert Dr, Grants Pass, OR 97526</u>		Phone: <u>541-944-8793</u>		Email: <u>clara.hutchins@stantec.com</u>		PO #	
Sampled by: <u>Dana Hutchins</u>		Site Location: <u>225 NE Hilbert Dr, Grants Pass, OR 97526</u>		ANALYSIS REQUEST			
Site Location: <u>(OR) WA CA</u>		AK ID					
SAMPLE ID		LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	
GP04-1		9-17-19	130	5	7		
GP04-12		9-17-19	1345	5	7		
GP03-2		9-18-19	0838	5	7		
GP03-8		9-18-19	1000	5	7		
GP-X		9-18-19	1418	5	7		
GP06-2		9-18-19	1600	5	7		
GP06-6		9-18-19	1615	5	7		
U5T-01-T2-10B		9-18-19	1400	5	7		
U5T-02-T2-5B		9-18-19	1405	5	7		
U5T-03-T2-5E		9-19-19	1236	5	7		
Normal Turn Around Time (TAT) = 10 Business Days							
TAT Requested (circle)							
1 Day 2 Day <u>5 Day</u> 4 DAY 5 DAY Other:							
SAMPLES ARE HELD FOR 30 DAYS							
RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature: <u>Dana Hutchins</u>		Signature: <u>[Signature]</u>		Signature:		Signature:	
Date: <u>9-19-19</u>		Date: <u>9/20/19</u>		Date:		Date:	
Printed Name: <u>Dana Hutchins</u>		Printed Name: <u>Amisha Kapp</u>		Printed Name:		Printed Name:	
Company: <u>STANTEC</u>		Company: <u>Apex Labs</u>		Company:		Company:	

Apex Laboratories

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Dana A Domenighini

Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: Lampson

Project Number: 185750581

Project Manager: Len Farr

Report ID:

A910687 - 10 14 19 1008

APEX LABS COOLER RECEIPT FORM

Client: Stantec

Element WO#: A9 10687

Project/Project #: Lampson #185750581

Delivery Info:

Date/time received: 9/20/19 @ 1110 By: AKK

Delivered by: Apex Client ESS FedEx ☒ UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/20/19 @ 1110 By: AKK

Chain of Custody included? Yes ☒ No

Custody seals? Yes ☒ No

Signed/dated by client? Yes ☒ No

Signed/dated by Apex? Yes ☒ No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.2</u>	<u>3.4</u>					
Received on ice? (Y/N)	<u>Y</u>	<u>Y</u>					
Temp. blanks? (Y/N)	<u>N</u>	<u>N</u>					
Ice type: (Gel/Real/Other)	<u>Real</u>	<u>Real</u>					
Condition:	<u>Melty</u>	<u>Melty</u>					

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

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

Out of temperature samples form initiated? Yes/No/NA

Samples Inspection: Date/time inspected: 9/20/19 @ 1455 By: AKK

All samples intact? Yes No ☒ Comments: GP04-12 12-8oz jars received broken, subsampled into another 8oz jar in lab.

Bottle labels/COCs agree? Yes No ☒ Comments: GP04-12 1/2 are agree

COC/container discrepancies form initiated? Yes ☒ No NA ☒ ack 9/20/19

Containers/volumes received appropriate for analysis? Yes ☒ No Comments: GP04-1 1/4 VOA's received w/o MeOH. GP04-2 1/4 VOA's received w/ limited MeOH.

Do VOA vials have visible headspace? Yes No NA ☒

Comments:

Water samples: pH checked: Yes No NA ☒ pH appropriate? Yes No NA ☒

Comments:

Additional information: GP04-6 1/4 VOA's received w/o MeOH. UST-03-T2-SE 1/4 VOA's received empty.

Labeled by: AKK

Witness: AKK

Cooler Inspected by: AKK

Tracking #: 789929848390

See Project Contact Form: Y

Apex Laboratories

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Lisa Domenighini

Lisa Domenighini, Client Services Manager

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Page 104 of 121



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Apex Laboratories
Lisa Domenighini
6700 SW Sandburg St
Tigard, OR 97223

RE: A9I0687
Work Order Number: 1909460

October 11, 2019

Attention Lisa Domenighini:

Fremont Analytical, Inc. received 2 sample(s) on 9/27/2019 for the analyses presented in the following report.

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

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brianna Barnes".

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

Original

www.fremontanalytical.com

Page 1 of 17

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Date: 10/11/2019

CLIENT: Apex Laboratories
Project: A9I0687
Work Order: 1909460

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1909460-001	UST-02-T2-SB	09/19/2019 11:05 AM	09/27/2019 9:25 AM
1909460-002	UST-06-T1-SW	09/19/2019 1:15 PM	09/27/2019 9:25 AM

CLIENT: Apex Laboratories**Project:** A9I0687

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1909460
Date Reported: 10/11/2019

Client: Apex Laboratories

Collection Date: 9/19/2019 11:05:00 AM

Project: A9I0687

Lab ID: 1909460-001

Matrix: Soil

Client Sample ID: UST-02-T2-SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 26004		Analyst: DW
Aliphatic Hydrocarbon (C8-C10)	342	22.3		mg/Kg-dry	1	10/10/2019 11:08:00 PM
Aliphatic Hydrocarbon (C10-C12)	192	11.1		mg/Kg-dry	1	10/10/2019 11:08:00 PM
Aliphatic Hydrocarbon (C12-C16)	69.7	11.1		mg/Kg-dry	1	10/10/2019 11:08:00 PM
Aliphatic Hydrocarbon (C16-C21)	16.2	11.1		mg/Kg-dry	1	10/10/2019 11:08:00 PM
Aliphatic Hydrocarbon (C21-C34)	33.3	11.1	*	mg/Kg-dry	1	10/10/2019 11:08:00 PM
Aromatic Hydrocarbon (C8-C10)	184	11.1	*	mg/Kg-dry	1	10/11/2019 8:31:00 AM
Aromatic Hydrocarbon (C10-C12)	163	11.1		mg/Kg-dry	1	10/11/2019 8:31:00 AM
Aromatic Hydrocarbon (C12-C16)	74.6	11.1	*	mg/Kg-dry	1	10/11/2019 8:31:00 AM
Aromatic Hydrocarbon (C16-C21)	26.7	11.1	*	mg/Kg-dry	1	10/11/2019 8:31:00 AM
Aromatic Hydrocarbon (C21-C34)	ND	11.1		mg/Kg-dry	1	10/11/2019 8:31:00 AM
Surr: 1-Chlorooctadecane	58.3	60 - 140	S	%Rec	1	10/10/2019 11:08:00 PM
Surr: o-Terphenyl	91.2	60 - 140		%Rec	1	10/11/2019 8:31:00 AM

NOTES:

* - Flagged value is not within established control limits.
S - Outlying surrogate recovery(ies) observed.

Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 26072		Analyst: CR
Aliphatic Hydrocarbon (C5-C6)	175	71.5	DH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
Aliphatic Hydrocarbon (C6-C8)	327	102	DH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
Aliphatic Hydrocarbon (C8-C10)	96.5	57.2	DH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
Aliphatic Hydrocarbon (C10-C12)	71.6	61.3	DH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
Aromatic Hydrocarbon (C8-C10)	199	123	DH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
Aromatic Hydrocarbon (C10-C12)	200	24.5	DH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
Aromatic Hydrocarbon (C12-C13)	163	286	JDH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
Benzene	1.22	0.490	H	mg/Kg-dry	1	10/7/2019 11:01:40 PM
Toluene	10.6	0.572	H	mg/Kg-dry	1	10/7/2019 11:01:40 PM
Ethylbenzene	38.5	0.572	H	mg/Kg-dry	1	10/7/2019 11:01:40 PM
m,p-Xylene	76.0	53.1	DH	mg/Kg-dry	50	10/7/2019 8:58:55 PM
o-Xylene	8.49	0.490	H	mg/Kg-dry	1	10/7/2019 11:01:40 PM
Naphthalene	21.4	0.409	H	mg/Kg-dry	1	10/7/2019 11:01:40 PM
Methyl tert-butyl ether (MTBE)	ND	0.409	QH	mg/Kg-dry	1	10/7/2019 11:01:40 PM
Surr: 1,4-Difluorobenzene	113	65 - 140	H	%Rec	1	10/7/2019 11:01:40 PM
Surr: Bromofluorobenzene	127	65 - 140	H	%Rec	1	10/7/2019 11:01:40 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1909460
Date Reported: 10/11/2019

Client: Apex Laboratories

Collection Date: 9/19/2019 11:05:00 AM

Project: A9I0687

Lab ID: 1909460-001

Matrix: Soil

Client Sample ID: UST-02-T2-SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Sample Moisture (Percent Moisture)

Batch ID: R54300 Analyst: ZR

Percent Moisture	14.0	0.500		wt%	1	10/2/2019 9:47:58 AM
------------------	------	-------	--	-----	---	----------------------



Analytical Report

Work Order: 1909460
Date Reported: 10/11/2019

Client: Apex Laboratories

Collection Date: 9/19/2019 1:15:00 PM

Project: A9I0687

Lab ID: 1909460-002

Matrix: Soil

Client Sample ID: UST-06-T1-SW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 26004

Analyst: DW

Aliphatic Hydrocarbon (C8-C10)	104	22.3		mg/Kg-dry	1	10/10/2019 11:51:00 PM
Aliphatic Hydrocarbon (C10-C12)	73.1	11.1		mg/Kg-dry	1	10/10/2019 11:51:00 PM
Aliphatic Hydrocarbon (C12-C16)	163	11.1		mg/Kg-dry	1	10/10/2019 11:51:00 PM
Aliphatic Hydrocarbon (C16-C21)	134	11.1		mg/Kg-dry	1	10/10/2019 11:51:00 PM
Aliphatic Hydrocarbon (C21-C34)	ND	11.1		mg/Kg-dry	1	10/10/2019 11:51:00 PM
Aromatic Hydrocarbon (C8-C10)	93.5	11.1	*	mg/Kg-dry	1	10/11/2019 9:14:00 AM
Aromatic Hydrocarbon (C10-C12)	99.7	11.1		mg/Kg-dry	1	10/11/2019 9:14:00 AM
Aromatic Hydrocarbon (C12-C16)	71.9	11.1	*	mg/Kg-dry	1	10/11/2019 9:14:00 AM
Aromatic Hydrocarbon (C16-C21)	78.1	11.1	*	mg/Kg-dry	1	10/11/2019 9:14:00 AM
Aromatic Hydrocarbon (C21-C34)	ND	11.1		mg/Kg-dry	1	10/11/2019 9:14:00 AM
Surr: 1-Chlorooctadecane	95.9	60 - 140		%Rec	1	10/10/2019 11:51:00 PM
Surr: o-Terphenyl	95.3	60 - 140		%Rec	1	10/11/2019 9:14:00 AM

NOTES:

* - Flagged value is not within established control limits.

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 26072

Analyst: CR

Aliphatic Hydrocarbon (C5-C6)	127	77.0	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
Aliphatic Hydrocarbon (C6-C8)	387	110	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
Aliphatic Hydrocarbon (C8-C10)	163	61.6	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
Aliphatic Hydrocarbon (C10-C12)	109	66.0	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
Aromatic Hydrocarbon (C8-C10)	394	132	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
Aromatic Hydrocarbon (C10-C12)	373	26.4	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
Aromatic Hydrocarbon (C12-C13)	181	308	JDH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
Benzene	1.02	0.528	H	mg/Kg-dry	1	10/8/2019 12:23:21 AM
Toluene	9.93	0.616	H	mg/Kg-dry	1	10/8/2019 12:23:21 AM
Ethylbenzene	40.9	30.8	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
m,p-Xylene	122	57.2	DH	mg/Kg-dry	50	10/7/2019 9:39:47 PM
o-Xylene	5.00	0.528	H	mg/Kg-dry	1	10/8/2019 12:23:21 AM
Naphthalene	22.4	0.440	H	mg/Kg-dry	1	10/8/2019 12:23:21 AM
Methyl tert-butyl ether (MTBE)	ND	0.440	QH	mg/Kg-dry	1	10/8/2019 12:23:21 AM
Surr: 1,4-Difluorobenzene	116	65 - 140	H	%Rec	1	10/8/2019 12:23:21 AM
Surr: Bromofluorobenzene	128	65 - 140	H	%Rec	1	10/8/2019 12:23:21 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R54300

Analyst: ZR

Percent Moisture	15.2	0.500		wt%	1	10/2/2019 9:47:58 AM
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Original

Work Order: 1909460
CLIENT: Apex Laboratories
Project: A9I0687

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID	MB-26004	SampType:	MBLK			Units:	mg/Kg			Prep Date:	10/1/2019		RunNo:	54510	
Client ID:	MBLKS	Batch ID:	26004							Analysis Date:	10/10/2019		SeqNo:	1080586	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual		

Aliphatic Hydrocarbon (C8-C10)	ND	20.0									
Aliphatic Hydrocarbon (C10-C12)	ND	10.0									
Aliphatic Hydrocarbon (C12-C16)	ND	10.0									
Aliphatic Hydrocarbon (C16-C21)	ND	10.0									
Aliphatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: 1-Chlorooctadecane	110		100.0		110	60	140				

Sample ID	LCS-26004	SampType:	LCS	Units:	mg/Kg	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	LCSS	Batch ID:	26004			Analysis Date:	10/10/2019	SeqNo:	1080585		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (C8-C10)	175	20.0	250.0	0	70.0	70	130				
Aliphatic Hydrocarbon (C10-C12)	125	10.0	125.0	0	99.7	70	130				
Aliphatic Hydrocarbon (C12-C16)	161	10.0	125.0	0	129	70	130				
Aliphatic Hydrocarbon (C16-C21)	161	10.0	125.0	0	129	70	130				
Aliphatic Hydrocarbon (C21-C34)	203	10.0	125.0	0	162	70	130				S
Surr: 1-Chlorooctadecane	105		100.0		105	60	140				

NOTES:

S - Outlying spike recovery observed (high bias). Detections will be qualified with a *.

Sample ID	1909327-001ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	BATCH	Batch ID:	26004			Analysis Date:	10/10/2019	SeqNo:	1080584		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aliphatic Hydrocarbon (C8-C10)	ND	22.3						0		25	
Aliphatic Hydrocarbon (C10-C12)	15.0	11.2						15.39	2.60	25	
Aliphatic Hydrocarbon (C12-C16)	38.1	11.2						44.07	14.6	25	
Aliphatic Hydrocarbon (C16-C21)	36.7	11.2						38.56	5.03	25	
Aliphatic Hydrocarbon (C21-C34)	13.7	11.2						10.82	23.9	25	*
Surr: 1-Chlorooctadecane	107		111.6		95.8	60	140		0		

Work Order: 1909460
CLIENT: Apex Laboratories
Project: A9I0687

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID	1909327-001ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	BATCH	Batch ID:	26004			Analysis Date:	10/10/2019	SeqNo:	1080584		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

* - Flagged value is not within established control limits.

Sample ID 1909327-001AMS	SampType: MS			Units: mg/Kg-dry		Prep Date: 10/1/2019			RunNo: 54510		
Client ID: BATCH	Batch ID: 26004			Analysis Date: 10/10/2019					SeqNo: 1080587		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	136	22.9	286.4	8.739	44.5	70	130				S
Aliphatic Hydrocarbon (C10-C12)	133	11.5	143.2	15.39	82.5	70	130				
Aliphatic Hydrocarbon (C12-C16)	211	11.5	143.2	44.07	116	70	130				
Aliphatic Hydrocarbon (C16-C21)	210	11.5	143.2	38.56	120	70	130				
Aliphatic Hydrocarbon (C21-C34)	183	11.5	143.2	10.82	120	70	130				
Surr: 1-Chlorooctadecane	95.3		114.6		83.1	60	140				

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID 1909327-001AMSD	SampType: MSD			Units: mg/Kg-dry		Prep Date: 10/1/2019			RunNo: 54510		
Client ID: BATCH	Batch ID: 26004			Analysis Date: 10/10/2019					SeqNo: 1080640		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	127	21.5	269.2	8.739	44.1	70	130	136.3	6.71	30	S
Aliphatic Hydrocarbon (C10-C12)	157	10.8	134.6	15.39	105	70	130	133.5	16.1	30	
Aliphatic Hydrocarbon (C12-C16)	217	10.8	134.6	44.07	129	70	130	210.6	3.18	30	
Aliphatic Hydrocarbon (C16-C21)	199	10.8	134.6	38.56	119	70	130	210.4	5.57	30	
Aliphatic Hydrocarbon (C21-C34)	49.1	10.8	134.6	10.82	28.5	70	130	183.4	115	30	RS
Surr: 1-Chlorooctadecane	122		107.7		113	60	140		0		

NOTES:

S - Outlying spike recovery(ies) observed.



Date: 10/11/2019

Work Order: 1909460
CLIENT: Apex Laboratories
Project: A9I0687

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID	MB-26004	SampType:	MBLK		Units:	mg/Kg		Prep Date:	10/1/2019		RunNo:	54510	
Client ID:	MBLKS	Batch ID:	26004					Analysis Date:	10/11/2019		SeqNo:	1080650	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Aromatic Hydrocarbon (C8-C10)	ND	10.0											*
Aromatic Hydrocarbon (C10-C12)	ND	10.0											
Aromatic Hydrocarbon (C12-C16)	ND	10.0											
Aromatic Hydrocarbon (C16-C21)	ND	10.0											
Aromatic Hydrocarbon (C21-C34)	ND	10.0											
Surr: o-Terphenyl	106		100.0		106	60	140						

NOTES:

* - Flagged value is not within established control limits.

Sample ID	LCS-26004	SampType:	LCS	Units:	mg/Kg	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	LCSS	Batch ID:	26004			Analysis Date:	10/11/2019	SeqNo:	1080649		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	153	10.0	250.0	0	61.4	70	130				S
Aromatic Hydrocarbon (C10-C12)	135	10.0	125.0	0	108	70	130				
Aromatic Hydrocarbon (C12-C16)	172	10.0	125.0	0	137	70	130				S
Aromatic Hydrocarbon (C16-C21)	194	10.0	125.0	0	156	70	130				S
Aromatic Hydrocarbon (C21-C34)	105	10.0	125.0	0	84.0	70	130				
Surr: o-Terphenyl	152		100.0		152	60	140				S

NOTES:

S - Outlying spike recovery observed (high bias). Detections will be qualified with a *.

S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

S - Outlying surrogate recovery(ies) observed.

Sample ID	1909327-001ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	BATCH	Batch ID:	26004			Analysis Date:	10/11/2019	SeqNo:	1080648		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	11.2						0		25	*
Aromatic Hydrocarbon (C10-C12)	15.8	11.2						14.25	10.5	25	
Aromatic Hydrocarbon (C12-C16)	32.6	11.2						23.88	30.7	25	*
Aromatic Hydrocarbon (C16-C21)	44.4	11.2						34.58	25.0	25	*

Work Order: 1909460

CLIENT: Apex Laboratories

Project: A9I0687

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID	1909327-001ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	BATCH	Batch ID:	26004			Analysis Date:	10/11/2019	SeqNo:	1080648		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (C21-C34)	ND	11.2						0		25	
Surr: o-Terphenyl	108		111.6		96.7	60	140		0		

NOTES:

* - Flagged value is not within established control limits.

Sample ID	1909327-001AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	BATCH	Batch ID:	26004	Analysis Date:				10/11/2019	SeqNo:	1080651	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (C8-C10)	79.4	11.5	286.4	0	27.7	70	130				S
Aromatic Hydrocarbon (C10-C12)	101	11.5	143.2	14.25	60.8	70	130				S
Aromatic Hydrocarbon (C12-C16)	152	11.5	143.2	23.88	89.8	70	130				
Aromatic Hydrocarbon (C16-C21)	178	11.5	143.2	34.58	100	70	130				
Aromatic Hydrocarbon (C21-C34)	135	11.5	143.2	5.832	90.2	70	130				
Surr: o-Terphenyl	108		114.6		93.9	60	140				

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID	1909327-001AMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	10/1/2019	RunNo:	54510		
Client ID:	BATCH	Batch ID:	26004	Analysis Date:				10/11/2019	SeqNo:	1080652	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (C8-C10)	71.1	10.8	269.2	0	26.4	70	130	79.38	11.0	30	S
Aromatic Hydrocarbon (C10-C12)	108	10.8	134.6	14.25	69.6	70	130	101.3	6.31	30	S
Aromatic Hydrocarbon (C12-C16)	147	10.8	134.6	23.88	91.8	70	130	152.5	3.33	30	
Aromatic Hydrocarbon (C16-C21)	163	10.8	134.6	34.58	95.3	70	130	178.5	9.15	30	
Aromatic Hydrocarbon (C21-C34)	137	10.8	134.6	5.832	97.4	70	130	135.0	1.46	30	
Surr: o-Terphenyl	105		107.7		97.2	60	140		0		

NOTES:

S - Outlying spike recovery(ies) observed.



Date: 10/11/2019

Work Order: 1909460
CLIENT: Apex Laboratories
Project: A9I0687

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID	LCS-26072		SampType: LCS		Units: mg/Kg		Prep Date: 10/7/2019			RunNo: 54437		
Client ID:	LCSS		Batch ID: 26072					Analysis Date: 10/7/2019			SeqNo: 1078974	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aliphatic Hydrocarbon (C5-C6)	32.8	1.75	30.00	0	109	70	130					
Aliphatic Hydrocarbon (C6-C8)	10.5	2.50	10.00	0	105	70	130					
Aliphatic Hydrocarbon (C8-C10)	11.2	1.40	10.00	0	112	70	130					
Aliphatic Hydrocarbon (C10-C12)	11.0	1.50	10.00	0	110	70	130					
Aromatic Hydrocarbon (C8-C10)	43.9	3.00	40.00	0	110	70	130					
Aromatic Hydrocarbon (C10-C12)	11.8	0.600	10.00	0	118	70	130					
Aromatic Hydrocarbon (C12-C13)	11.3	7.00	10.00	0	113	70	130					
Benzene	10.8	0.600	10.00	0	108	70	130					
Toluene	10.8	0.700	10.00	0	108	70	130					
Ethylbenzene	11.0	0.700	10.00	0	110	70	130					
m,p-Xylene	22.1	1.30	20.00	0	111	70	130					
o-Xylene	10.9	0.600	10.00	0	109	70	130					
Naphthalene	10.2	0.500	10.00	0	102	70	130					
Methyl tert-butyl ether (MTBE)	21.5	0.500	10.00	0	215	70	130				S	
Surr: 1,4-Difluorobenzene	2.39		2.500		95.7	65	140					
Surr: Bromofluorobenzene	2.51		2.500		100	65	140					

NOTES:

S - Outlying spike recovery observed (high bias).

Sample ID	LCSD-26072	SampType:	LCSD	Units:	mg/Kg	Prep Date:	10/7/2019	RunNo:	54437		
Client ID:	LCSS02	Batch ID:	26072	Analysis Date:				10/7/2019	SeqNo:	1078976	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	31.0	1.75	30.00	0	103	70	130	32.83	5.74	20	
Aliphatic Hydrocarbon (C6-C8)	10.2	2.50	10.00	0	102	70	130	10.48	2.86	20	
Aliphatic Hydrocarbon (C8-C10)	11.0	1.40	10.00	0	110	70	130	11.18	1.55	20	
Aliphatic Hydrocarbon (C10-C12)	11.0	1.50	10.00	0	110	70	130	11.00	0.219	20	
Aromatic Hydrocarbon (C8-C10)	43.8	3.00	40.00	0	109	70	130	43.89	0.269	20	
Aromatic Hydrocarbon (C10-C12)	11.0	0.600	10.00	0	110	70	130	11.82	7.32	20	
Aromatic Hydrocarbon (C12-C13)	11.1	7.00	10.00	0	111	70	130	11.34	2.16	20	
Benzene	10.7	0.600	10.00	0	107	70	130	10.80	0.887	20	



Date: 10/11/2019

Work Order: 1909460
CLIENT: Apex Laboratories
Project: A9I0687

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID	LCSD-26072	SampType: LCSD	Units: mg/Kg			Prep Date: 10/7/2019			RunNo: 54437		
Client ID:	LCSS02	Batch ID: 26072	Analysis Date: 10/7/2019						SeqNo: 1078976		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	10.8	0.700	10.00	0	108	70	130	10.84	0.640	20	
Ethylbenzene	10.8	0.700	10.00	0	108	70	130	10.95	1.01	20	
m,p-Xylene	21.9	1.30	20.00	0	110	70	130	22.12	0.860	20	
o-Xylene	10.9	0.600	10.00	0	109	70	130	10.95	0.513	20	
Naphthalene	9.42	0.500	10.00	0	94.2	70	130	10.24	8.28	20	
Methyl tert-butyl ether (MTBE)	21.8	0.500	10.00	0	218	70	130	21.48	1.60	20	S
Surr: 1,4-Difluorobenzene	2.44		2.500		97.8	65	140		0		
Surr: Bromofluorobenzene	2.52		2.500		101	65	140		0		

NOTES:

S - Outlying spike recovery observed (high bias).

Sample ID	MB-26072	SampType: MBLK		Units: mg/Kg		Prep Date: 10/7/2019			RunNo: 54437		
Client ID:	MBLKS	Batch ID: 26072					Analysis Date: 10/7/2019			SeqNo: 1078978	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	1.75		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	2.50		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	1.40		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	1.50		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	3.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	0.600		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	7.00		0	0						
Benzene	ND	0.600		0	0						
Toluene	ND	0.700		0	0						
Ethylbenzene	ND	0.700		0	0						
m,p-Xylene	ND	1.30		0	0						
o-Xylene	ND	0.600		0	0						
Naphthalene	ND	0.500		0	0						
Methyl tert-butyl ether (MTBE)	ND	0.500		0	0						Q
Surr: 1,4-Difluorobenzene	2.37		2.500		95.0	65	140				
Surr: Bromofluorobenzene	2.50		2.500		99.8	65	140				



Date: 10/11/2019

Work Order: 1909460
 CLIENT: Apex Laboratories
 Project: A9I0687

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID	MB-26072	SampType:	MBLK	Units:	mg/Kg	Prep Date:	10/7/2019	RunNo:	54437		
Client ID:	MBLKS	Batch ID:	26072			Analysis Date:	10/7/2019	SeqNo:	1078978		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1909460-002BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	10/7/2019	RunNo:	54437		
Client ID:	UST-06-T1-SW	Batch ID:	26072			Analysis Date:	10/7/2019	SeqNo:	1078969		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	144	77.0		0	0			136.6	5.35	25	DH
Aliphatic Hydrocarbon (C6-C8)	366	110		0	0			380.0	3.87	25	DH
Aliphatic Hydrocarbon (C8-C10)	174	61.6		0	0			157.6	10.1	25	DH
Aliphatic Hydrocarbon (C10-C12)	117	66.0		0	0			194.5	49.8	25	DRH
Aromatic Hydrocarbon (C8-C10)	430	132		0	0			427.4	0.554	25	DH
Aromatic Hydrocarbon (C10-C12)	384	26.4		0	0			398.0	3.69	25	DH
Aromatic Hydrocarbon (C12-C13)	204	308		0	0			0		25	JDH
Benzene	ND	26.4		0	0			0		25	DH
Toluene	ND	30.8		0	0			0		25	DH
Ethylbenzene	45.8	30.8		0	0			51.58	11.8	25	DH
m,p-Xylene	134	57.2		0	0			117.2	13.6	25	DH
o-Xylene	ND	26.4		0	0			0		25	DH
Naphthalene	24.9	22.0		0	0			22.41	10.5	25	DH
Methyl tert-butyl ether (MTBE)	ND	22.0		0	0			0		25	DQH
Surr: 1,4-Difluorobenzene	113		110.0		103	65	140		0		DH
Surr: Bromofluorobenzene	115		110.0		105	65	140		0		DH

NOTES:

R - High RPD observed. The method is in control as indicated by the LCS.

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Date: 10/11/2019

Work Order: 1909460
CLIENT: Apex Laboratories
Project: A9I0687

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID	1909369-020ADUP			SampType:	DUP		Units:	wt%		Prep Date:	10/2/2019		RunNo:	54300	
Client ID:	BATCH			Batch ID:	R54300					Analysis Date:	10/2/2019		SeqNo:	1075540	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual		
Percent Moisture		10.6	0.500						11.20		5.55	20			

Sample ID	1909466-013ADUP	SampType:	DUP	Units:	wt%	Prep Date:	10/2/2019	RunNo:	54300		
Client ID:	BATCH	Batch ID:	R54300			Analysis Date:	10/2/2019	SeqNo:	1075560		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	11.7	0.500						11.79	1.16	20	

Client Name: **APEX**
 Logged by: **Clare Griggs**

Work Order Number: **1909460**
 Date Received: **9/27/2019 9:25:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? UPS

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

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

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	2.7
Sample	3.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT ORDER

Apex Laboratories

A9I0687

1909460
OB 9/26/19SENDING LABORATORY:

Apex Laboratories
6700 S.W. Sandburg Street
Tigard, OR 97223
Phone: (503) 718-2323
Fax: (503) 336-0745
Project Manager: Lisa Domenighini

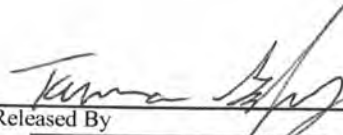
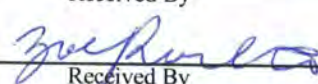
RECEIVING LABORATORY:

Fremont Analytical
3600 Fremont Avenue N.
Seattle, WA 98103
Phone: (206) 352-3790
Fax: (206) 352-7178

ID on Conts. read UST-02-T2-NB.			
Sample Name:	UST-02-T2-SB	Soil	Sampled: 09/19/19 11:05 (A9I0687-09)
Analysis	Due	Expires	Comments
NWTPH-EPH (Sub)	10/10/19 17:00	10/03/19 11:05	Added 9/26, Std TAT
NWTPH-VPH (Sub)	10/10/19 17:00	10/03/19 11:05	Added 9/26, Std TAT
Containers Supplied:			
(C)4 oz Glass Jar			
(F)40 mL VOA - 5035 (MeOH)			
(G)40 mL VOA - 5035 (MeOH)			

ID on Conts. read UST-06-T1-SW.			
Sample Name:	UST-06-T1-SW	Soil	Sampled: 09/19/19 13:15 (A9I0687-13)
Analysis	Due	Expires	Comments
NWTPH-EPH (Sub)	10/10/19 17:00	10/03/19 13:15	Added 9/26, Std TAT
NWTPH-VPH (Sub)	10/10/19 17:00	10/03/19 13:15	Added 9/26, Std TAT
Containers Supplied:			
(C)4 oz Glass Jar			
(F)40 mL VOA - 5035 (MeOH)			
(G)40 mL VOA - 5035 (MeOH)			

Std TAT

Released By	Date	Received By	Date
	9-26-19		9-27-19
Released By	Date	Received By	Date
UPS (Shipper)			



Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Wednesday, October 2, 2019

Len Farr

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

RE: A9I0735 - Lampson - 185750581

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

Enclosed are the results of analyses for work order A9I0735, which was received by the laboratory on 9/24/2019 at 10:15:00AM.

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

Please note: All samples will be disposed of within 30 days of final reporting, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.0 degC	Cooler #2	2.3 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0735 - 10 02 19 1625****ANALYTICAL REPORT FOR SAMPLES****SAMPLE INFORMATION**

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS-01-8	A9I0735-01	Soil	09/19/19 15:30	09/24/19 10:15
FS-02-8	A9I0735-02	Soil	09/19/19 16:00	09/24/19 10:15
FS-04-9	A9I0735-03	Soil	09/19/19 16:30	09/24/19 10:15
FS-03-9	A9I0735-04	Soil	09/19/19 17:00	09/24/19 10:15
GP-01-2	A9I0735-05	Soil	09/20/19 09:00	09/24/19 10:15
GP-01-5	A9I0735-06	Soil	09/20/19 09:15	09/24/19 10:15
GP-02-1	A9I0735-07	Soil	09/20/19 09:30	09/24/19 10:15
GP-02-12	A9I0735-08	Soil	09/20/19 10:00	09/24/19 10:15
GP-05-1	A9I0735-09	Soil	09/20/19 11:30	09/24/19 10:15
GP-05-8	A9I0735-10	Soil	09/20/19 12:00	09/24/19 10:15
Trip Blank	A9I0735-11	Water	09/19/19 00:00	09/24/19 10:15

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6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-01-8 (A9I0735-01)				Matrix: Soil	Batch: 9091331			
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 20:47	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 20:47	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 79 %		Limits: 50-150 %	1	09/26/19 20:47	NWTPH-Dx	
FS-02-8 (A9I0735-02)				Matrix: Soil	Batch: 9091331			
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 21:07	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 21:07	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 74 %		Limits: 50-150 %	1	09/26/19 21:07	NWTPH-Dx	
FS-04-9 (A9I0735-03)				Matrix: Soil	Batch: 9091331			
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 21:27	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 21:27	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 88 %		Limits: 50-150 %	1	09/26/19 21:27	NWTPH-Dx	
FS-03-9 (A9I0735-04)				Matrix: Soil	Batch: 9091331			
Diesel	28.2	---	25.0	mg/kg dry	1	09/26/19 21:47	NWTPH-Dx	F-20
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 21:47	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 84 %		Limits: 50-150 %	1	09/26/19 21:47	NWTPH-Dx	
GP-01-2 (A9I0735-05)				Matrix: Soil	Batch: 9091331			
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 22:07	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 22:07	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %	1	09/26/19 22:07	NWTPH-Dx	
GP-01-5 (A9I0735-06)				Matrix: Soil	Batch: 9091331			
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 22:27	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 22:27	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 85 %		Limits: 50-150 %	1	09/26/19 22:27	NWTPH-Dx	
GP-02-1 (A9I0735-07)				Matrix: Soil	Batch: 9091331			
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 18:27	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 18:27	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 93 %		Limits: 50-150 %	1	09/26/19 18:27	NWTPH-Dx	
GP-02-12 (A9I0735-08)				Matrix: Soil	Batch: 9091331			
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 18:47	NWTPH-Dx	

Apex Laboratories

Lisa Domenighini, Client Services Manager

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Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-02-12 (A9I0735-08)				Matrix: Soil		Batch: 9091331		
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 18:47	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 77 %		Limits: 50-150 %	1	09/26/19 18:47	NWTPH-Dx	
GP-05-1 (A9I0735-09)				Matrix: Soil		Batch: 9091331		
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 19:07	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 19:07	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 92 %		Limits: 50-150 %	1	09/26/19 19:07	NWTPH-Dx	
GP-05-8 (A9I0735-10)				Matrix: Soil		Batch: 9091331		
Diesel	ND	---	25.0	mg/kg dry	1	09/26/19 19:27	NWTPH-Dx	
Oil	ND	---	50.0	mg/kg dry	1	09/26/19 19:27	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)		Recovery: 85 %		Limits: 50-150 %	1	09/26/19 19:27	NWTPH-Dx	

Apex Laboratories

Lisa Domenighini, Client Services Manager

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EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-01-8 (A9I0735-01RE1)		Matrix: Soil		Batch: 9091211				
Gasoline Range Organics	112	---	7.14	mg/kg dry	50	09/25/19 18:19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	123 %	Limits: 50-150 %	1	09/25/19 18:19	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			115 %	50-150 %	1	09/25/19 18:19	NWTPH-Gx (MS)	
FS-02-8 (A9I0735-02RE1)		Matrix: Soil		Batch: 9091211				
Gasoline Range Organics	222	---	6.67	mg/kg dry	50	09/25/19 20:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	114 %	Limits: 50-150 %	1	09/25/19 20:07	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			124 %	50-150 %	1	09/25/19 20:07	NWTPH-Gx (MS)	
FS-04-9 (A9I0735-03)		Matrix: Soil		Batch: 9091209				
Gasoline Range Organics	ND	---	6.11	mg/kg dry	50	09/24/19 18:10	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	100 %	Limits: 50-150 %	1	09/24/19 18:10	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			111 %	50-150 %	1	09/24/19 18:10	NWTPH-Gx (MS)	
FS-03-9 (A9I0735-04RE1)		Matrix: Soil		Batch: 9091211				
Gasoline Range Organics	366	---	12.5	mg/kg dry	100	09/25/19 19:40	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	117 %	Limits: 50-150 %	1	09/25/19 19:40	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			112 %	50-150 %	1	09/25/19 19:40	NWTPH-Gx (MS)	
GP-01-2 (A9I0735-05)		Matrix: Soil		Batch: 9091209				
Gasoline Range Organics	ND	---	5.06	mg/kg dry	50	09/24/19 18:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	101 %	Limits: 50-150 %	1	09/24/19 18:37	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			111 %	50-150 %	1	09/24/19 18:37	NWTPH-Gx (MS)	
GP-01-5 (A9I0735-06RE1)		Matrix: Soil		Batch: 9091269				
Gasoline Range Organics	62.2	---	6.06	mg/kg dry	50	09/25/19 18:19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	110 %	Limits: 50-150 %	1	09/25/19 18:19	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			98 %	50-150 %	1	09/25/19 18:19	NWTPH-Gx (MS)	
GP-02-1 (A9I0735-07RE1)		Matrix: Soil		Batch: 9091269				
Gasoline Range Organics	30.7	---	5.46	mg/kg dry	50	09/25/19 17:52	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	111 %	Limits: 50-150 %	1	09/25/19 17:52	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			99 %	50-150 %	1	09/25/19 17:52	NWTPH-Gx (MS)	
GP-02-12 (A9I0735-08RE1)		Matrix: Soil		Batch: 9091211				
Gasoline Range Organics	99.4	---	4.60	mg/kg dry	50	09/25/19 18:46	NWTPH-Gx (MS)	

Apex Laboratories

Lisa Domenighini, Client Services Manager

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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-02-12 (A9I0735-08RE1)				Matrix: Soil		Batch: 9091211		
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 123 %	Limits: 50-150 %	1	09/25/19 18:46	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		110 %	50-150 %	1	09/25/19 18:46	NWTPH-Gx (MS)		
GP-05-1 (A9I0735-09)				Matrix: Soil		Batch: 9091209		
Gasoline Range Organics	ND	---	4.91	mg/kg dry	50	09/24/19 19:30	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 104 %	Limits: 50-150 %	1	09/24/19 19:30	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		112 %	50-150 %	1	09/24/19 19:30	NWTPH-Gx (MS)		
GP-05-8 (A9I0735-10RE1)				Matrix: Soil		Batch: 9091211		
Gasoline Range Organics	249	---	11.2	mg/kg dry	100	09/25/19 19:13	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery: 121 %	Limits: 50-150 %	1	09/25/19 19:13	NWTPH-Gx (MS)		
1,4-Difluorobenzene (Sur)		113 %	50-150 %	1	09/25/19 19:13	NWTPH-Gx (MS)		

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-01-8 (A9I0735-01RE1)				Matrix: Soil		Batch: 9091211		
Acetone	ND	---	1.43	mg/kg dry	50	09/25/19 18:19	5035A/8260C	R-02
Acrylonitrile	ND	---	0.571	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Benzene	ND	---	0.0143	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromobenzene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromochloromethane	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromodichloromethane	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromoform	ND	---	0.143	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromomethane	ND	---	0.714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2-Butanone (MEK)	ND	---	0.714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
n-Butylbenzene	0.224	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
sec-Butylbenzene	0.103	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
tert-Butylbenzene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Carbon disulfide	ND	---	0.714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Carbon tetrachloride	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chlorobenzene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chloroethane	ND	---	0.714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chloroform	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chloromethane	ND	---	0.357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2-Chlorotoluene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
4-Chlorotoluene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Dibromochloromethane	ND	---	0.143	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Dibromomethane	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.143	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-01-8 (A9I0735-01RE1)				Matrix: Soil		Batch: 9091211		
Ethylbenzene	0.192	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Hexachlorobutadiene	ND	---	0.143	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2-Hexanone	ND	---	0.714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Isopropylbenzene	0.246	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
4-Isopropyltoluene	0.0828	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Methylene chloride	ND	---	0.357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Naphthalene	ND	---	0.143	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
n-Propylbenzene	0.770	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Styrene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Toluene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Trichlorofluoromethane	ND	---	0.143	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Vinyl chloride	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
m,p-Xylene	ND	---	0.0714	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
o-Xylene	ND	---	0.0357	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	93 %	Limits:	80-120 %	1	09/25/19 18:19	5035A/8260C
Toluene-d8 (Surr)			97 %		80-120 %	1	09/25/19 18:19	5035A/8260C
4-Bromofluorobenzene (Surr)			104 %		80-120 %	1	09/25/19 18:19	5035A/8260C

FS-02-8 (A9I0735-02RE1)

Matrix: Soil

Batch: 9091211

Acetone	ND	---	1.33	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Acrylonitrile	ND	---	0.400	mg/kg dry	50	09/25/19 20:07	5035A/8260C	R-02
Benzene	ND	---	0.0133	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Bromobenzene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Bromochloromethane	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Bromodichloromethane	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-02-8 (A9I0735-02RE1)				Matrix: Soil		Batch: 9091211		
Bromoform	ND	---	0.133	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Bromomethane	ND	---	0.667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
2-Butanone (MEK)	ND	---	1.33	mg/kg dry	50	09/25/19 20:07	5035A/8260C	R-02
n-Butylbenzene	0.356	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
sec-Butylbenzene	0.161	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
tert-Butylbenzene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Carbon disulfide	ND	---	0.667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Carbon tetrachloride	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Chlorobenzene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Chloroethane	ND	---	0.667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Chloroform	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Chloromethane	ND	---	0.333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
2-Chlorotoluene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
4-Chlorotoluene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Dibromochloromethane	ND	---	0.133	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Dibromomethane	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.133	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Ethylbenzene	0.0540	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Hexachlorobutadiene	ND	---	0.133	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
2-Hexanone	ND	---	0.667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Isopropylbenzene	0.0973	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
4-Isopropyltoluene	0.116	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Methylene chloride	ND	---	0.333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-02-8 (A910735-02RE1)				Matrix: Soil		Batch: 9091211		
4-Methyl-2-pentanone (MiBK)	ND	---	1.00	mg/kg dry	50	09/25/19 20:07	5035A/8260C	R-02
Methyl tert-butyl ether (MTBE)	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Naphthalene	ND	---	0.133	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
n-Propylbenzene	0.415	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Styrene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Toluene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Trichlorofluoromethane	ND	---	0.133	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
Vinyl chloride	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
m,p-Xylene	ND	---	0.0667	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
o-Xylene	ND	---	0.0333	mg/kg dry	50	09/25/19 20:07	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 110 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/25/19 20:07</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 20:07</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 20:07</i>	<i>5035A/8260C</i>	

FS-04-9 (A910735-03)**Matrix: Soil****Batch: 9091209**

Acetone	ND	---	1.22	mg/kg dry	50	09/24/19 18:10	5035A/8260C
Acrylonitrile	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C
Benzene	ND	---	0.0122	mg/kg dry	50	09/24/19 18:10	5035A/8260C
Bromobenzene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C
Bromochloromethane	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C
Bromodichloromethane	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C
Bromoform	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C
Bromomethane	ND	---	0.611	mg/kg dry	50	09/24/19 18:10	5035A/8260C
2-Butanone (MEK)	ND	---	0.611	mg/kg dry	50	09/24/19 18:10	5035A/8260C
n-Butylbenzene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C
sec-Butylbenzene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C
tert-Butylbenzene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C

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Lisa Domenighini, Client Services Manager



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EPA ID: OR01039

Stantec Portland

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Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-04-9 (A9I0735-03)				Matrix: Soil		Batch: 9091209		
Carbon disulfide	ND	---	0.611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Carbon tetrachloride	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Chlorobenzene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Chloroethane	ND	---	0.611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Chloroform	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Chloromethane	ND	---	0.305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
2-Chlorotoluene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
4-Chlorotoluene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Dibromochloromethane	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Dibromomethane	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2-Dichloropropane	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Ethylbenzene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Hexachlorobutadiene	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
2-Hexanone	ND	---	0.611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Isopropylbenzene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Methylene chloride	ND	---	0.305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Naphthalene	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
n-Propylbenzene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Styrene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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EPA ID: OR01039

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Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-04-9 (A9I0735-03)				Matrix: Soil		Batch: 9091209		
1,1,2,2-Tetrachloroethane	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Toluene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Trichlorofluoromethane	ND	---	0.122	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
Vinyl chloride	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
m,p-Xylene	ND	---	0.0611	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
o-Xylene	ND	---	0.0305	mg/kg dry	50	09/24/19 18:10	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>100 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/24/19 18:10</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/24/19 18:10</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/24/19 18:10</i>	<i>5035A/8260C</i>	

FS-03-9 (A9I0735-04RE1)				Matrix: Soil		Batch: 9091211		
Acetone	ND	---	2.50	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Acrylonitrile	ND	---	0.751	mg/kg dry	100	09/25/19 19:40	5035A/8260C	R-02
Benzene	0.111	---	0.0250	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Bromobenzene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Bromochloromethane	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Bromodichloromethane	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Bromoform	ND	---	0.250	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Bromomethane	ND	---	1.25	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
2-Butanone (MEK)	ND	---	1.25	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
n-Butylbenzene	0.773	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	M-02
sec-Butylbenzene	0.367	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
tert-Butylbenzene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Carbon disulfide	ND	---	1.25	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Carbon tetrachloride	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Chlorobenzene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Chloroethane	ND	---	1.25	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Chloroform	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Chloromethane	ND	---	0.626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-03-9 (A9I0735-04RE1)				Matrix: Soil		Batch: 9091211		
2-Chlorotoluene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
4-Chlorotoluene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Dibromochloromethane	ND	---	0.250	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Dibromomethane	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.250	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,3-Dichloropropane	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
2,2-Dichloropropane	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,1-Dichloropropene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Ethylbenzene	3.03	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Hexachlorobutadiene	ND	---	0.250	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
2-Hexanone	ND	---	1.25	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Isopropylbenzene	0.906	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
4-Isopropyltoluene	0.259	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	M-02
Methylene chloride	ND	---	0.626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	1.25	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Naphthalene	0.392	---	0.250	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
n-Propylbenzene	3.02	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Styrene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Toluene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-03-9 (A910735-04RE1)				Matrix: Soil		Batch: 9091211		
1,1,2-Trichloroethane	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Trichlorofluoromethane	ND	---	0.250	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
1,3,5-Trimethylbenzene	2.40	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
Vinyl chloride	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
m,p-Xylene	ND	---	0.125	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
o-Xylene	ND	---	0.0626	mg/kg dry	100	09/25/19 19:40	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>101 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/25/19 19:40</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/25/19 19:40</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/25/19 19:40</i>	<i>5035A/8260C</i>	
GP-01-2 (A910735-05)				Matrix: Soil		Batch: 9091209		
Acetone	ND	---	1.01	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Acrylonitrile	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Benzene	0.0294	---	0.0101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Bromobenzene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Bromochloromethane	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Bromodichloromethane	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Bromoform	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Bromomethane	ND	---	0.506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
2-Butanone (MEK)	ND	---	0.506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
n-Butylbenzene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
sec-Butylbenzene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
tert-Butylbenzene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Carbon disulfide	ND	---	0.506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Carbon tetrachloride	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Chlorobenzene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Chloroethane	ND	---	0.506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Chloroform	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Chloromethane	ND	---	0.253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
2-Chlorotoluene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
4-Chlorotoluene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Dibromochloromethane	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Dibromomethane	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-01-2 (A910735-05)				Matrix: Soil		Batch: 9091209		
1,2-Dichlorobenzene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2-Dichloropropane	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Ethylbenzene	0.0474	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Hexachlorobutadiene	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
2-Hexanone	ND	---	0.506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Isopropylbenzene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Methylene chloride	ND	---	0.253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Naphthalene	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
n-Propylbenzene	0.0303	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Styrene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Toluene	0.129	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Trichlorofluoromethane	ND	---	0.101	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,2,4-Trimethylbenzene	0.117	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	

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6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

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9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-01-2 (A9I0735-05)				Matrix: Soil		Batch: 9091209		
Vinyl chloride	ND	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
m,p-Xylene	0.156	---	0.0506	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
o-Xylene	0.0567	---	0.0253	mg/kg dry	50	09/24/19 18:37	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %	1	09/24/19 18:37	5035A/8260C	
Toluene-d8 (Surr)		101 %		80-120 %	1	09/24/19 18:37	5035A/8260C	
4-Bromofluorobenzene (Surr)		96 %		80-120 %	1	09/24/19 18:37	5035A/8260C	
GP-01-5 (A9I0735-06RE1)				Matrix: Soil		Batch: 9091269		
Acetone	ND	---	1.21	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Acrylonitrile	ND	---	0.121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Benzene	0.0132	---	0.0121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromobenzene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromochloromethane	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromodichloromethane	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromoform	ND	---	0.121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Bromomethane	ND	---	0.606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2-Butanone (MEK)	ND	---	0.606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
n-Butylbenzene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
sec-Butylbenzene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
tert-Butylbenzene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Carbon disulfide	ND	---	0.606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Carbon tetrachloride	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chlorobenzene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chloroethane	ND	---	0.606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chloroform	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Chloromethane	ND	---	0.303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2-Chlorotoluene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
4-Chlorotoluene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Dibromochloromethane	ND	---	0.121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Dibromomethane	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-01-5 (A910735-06RE1)				Matrix: Soil		Batch: 9091269		
1,1-Dichloroethene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Ethylbenzene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Hexachlorobutadiene	ND	---	0.121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
2-Hexanone	ND	---	0.606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Isopropylbenzene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Methylene chloride	ND	---	0.303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Naphthalene	ND	---	0.121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
n-Propylbenzene	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Styrene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Toluene	0.0627	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Trichlorofluoromethane	ND	---	0.121	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
Vinyl chloride	ND	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
m,p-Xylene	0.0874	---	0.0606	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
o-Xylene	0.0327	---	0.0303	mg/kg dry	50	09/25/19 18:19	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 112 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/25/19 18:19</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 18:19</i>	<i>5035A/8260C</i>	

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-01-5 (A9I0735-06RE1)				Matrix: Soil		Batch: 9091269		
Surrogate: 4-Bromofluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %	1	09/25/19 18:19	5035A/8260C	
GP-02-1 (A9I0735-07RE1)				Matrix: Soil		Batch: 9091269		
Acetone	ND	---	1.09	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Acrylonitrile	ND	---	0.109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Benzene	ND	---	0.0109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Bromobenzene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Bromochloromethane	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Bromodichloromethane	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Bromoform	ND	---	0.109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Bromomethane	ND	---	0.546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
2-Butanone (MEK)	ND	---	0.546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
n-Butylbenzene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
sec-Butylbenzene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
tert-Butylbenzene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Carbon disulfide	ND	---	0.546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Carbon tetrachloride	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Chlorobenzene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Chloroethane	ND	---	0.546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Chloroform	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Chloromethane	ND	---	0.273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
2-Chlorotoluene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
4-Chlorotoluene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Dibromochloromethane	ND	---	0.109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Dibromomethane	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-02-1 (A9I0735-07RE1)				Matrix: Soil		Batch: 9091269		
1,1-Dichloropropene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Ethylbenzene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Hexachlorobutadiene	ND	---	0.109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
2-Hexanone	ND	---	0.546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Isopropylbenzene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Methylene chloride	ND	---	0.273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Naphthalene	ND	---	0.109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
n-Propylbenzene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Styrene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Toluene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Trichlorofluoromethane	ND	---	0.109	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,2,4-Trimethylbenzene	0.177	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
Vinyl chloride	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
m,p-Xylene	0.140	---	0.0546	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
o-Xylene	ND	---	0.0273	mg/kg dry	50	09/25/19 17:52	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>112 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/25/19 17:52</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/25/19 17:52</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/25/19 17:52</i>	<i>5035A/8260C</i>	

GP-02-12 (A9I0735-08RE1)

Matrix: Soil

Batch: 9091211

Acetone	ND	---	0.919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Acrylonitrile	ND	---	0.230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	R-02
Benzene	0.0432	---	0.00919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-02-12 (A9I0735-08RE1)				Matrix: Soil		Batch: 9091211		
Bromobenzene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Bromochloromethane	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Bromodichloromethane	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Bromoform	ND	---	0.0919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Bromomethane	ND	---	0.460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
2-Butanone (MEK)	ND	---	0.460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
n-Butylbenzene	0.0694	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	M-02
sec-Butylbenzene	0.0473	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
tert-Butylbenzene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Carbon disulfide	ND	---	0.460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Carbon tetrachloride	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Chlorobenzene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Chloroethane	ND	---	0.460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Chloroform	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Chloromethane	ND	---	0.230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
2-Chlorotoluene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
4-Chlorotoluene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Dibromochloromethane	ND	---	0.0919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Dibromomethane	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.0919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Ethylbenzene	1.33	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Hexachlorobutadiene	ND	---	0.0919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
2-Hexanone	ND	---	0.460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	

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Lisa Domenighini, Client Services Manager



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6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-02-12 (A9I0735-08RE1)				Matrix: Soil		Batch: 9091211		
Isopropylbenzene	0.175	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Methylene chloride	ND	---	0.230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Naphthalene	0.0942	---	0.0919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
n-Propylbenzene	0.438	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Styrene	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Toluene	0.413	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Trichlorofluoromethane	ND	---	0.0919	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,2,4-Trimethylbenzene	2.00	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
1,3,5-Trimethylbenzene	0.593	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
Vinyl chloride	ND	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
m,p-Xylene	4.62	---	0.0460	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
o-Xylene	1.07	---	0.0230	mg/kg dry	50	09/25/19 18:46	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/25/19 18:46</i>	<i>5035A/8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 18:46</i>	<i>5035A/8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 18:46</i>	<i>5035A/8260C</i>	

GP-05-1 (A9I0735-09)

Matrix: Soil

Batch: 9091209

Acetone	ND	---	0.982	mg/kg dry	50	09/24/19 19:30	5035A/8260C
Acrylonitrile	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C
Benzene	ND	---	0.00982	mg/kg dry	50	09/24/19 19:30	5035A/8260C
Bromobenzene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C
Bromochloromethane	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C
Bromodichloromethane	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C
Bromoform	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C
Bromomethane	ND	---	0.491	mg/kg dry	50	09/24/19 19:30	5035A/8260C
2-Butanone (MEK)	ND	---	0.491	mg/kg dry	50	09/24/19 19:30	5035A/8260C

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Lisa Domenighini, Client Services Manager



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EPA ID: OR01039

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Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-05-1 (A910735-09)				Matrix: Soil		Batch: 9091209		
n-Butylbenzene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
sec-Butylbenzene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
tert-Butylbenzene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Carbon disulfide	ND	---	0.491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Carbon tetrachloride	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Chlorobenzene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Chloroethane	ND	---	0.491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Chloroform	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Chloromethane	ND	---	0.246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
2-Chlorotoluene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
4-Chlorotoluene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Dibromochloromethane	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Dibromomethane	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,3-Dichloropropane	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
2,2-Dichloropropane	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,1-Dichloropropene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Ethylbenzene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Hexachlorobutadiene	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
2-Hexanone	ND	---	0.491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Isopropylbenzene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
4-Isopropyltoluene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Methylene chloride	ND	---	0.246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	0.491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Naphthalene	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C	

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Lisa Domenighini, Client Services Manager

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503-718-2323

EPA ID: OR01039

Stantec Portland

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-05-1 (A9I0735-09)				Matrix: Soil		Batch: 9091209		
n-Propylbenzene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Styrene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Toluene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	0.246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Trichlorofluoromethane	ND	---	0.0982	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,2,4-Trimethylbenzene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
1,3,5-Trimethylbenzene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
Vinyl chloride	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
m,p-Xylene	ND	---	0.0491	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
o-Xylene	ND	---	0.0246	mg/kg dry	50	09/24/19 19:30	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	98 %	<i>Limits:</i>	80-120 %	1	09/24/19 19:30	5035A/8260C
<i>Toluene-d8 (Surr)</i>			103 %		80-120 %	1	09/24/19 19:30	5035A/8260C
<i>4-Bromofluorobenzene (Surr)</i>			104 %		80-120 %	1	09/24/19 19:30	5035A/8260C
GP-05-8 (A9I0735-10RE1)				Matrix: Soil		Batch: 9091211		
Acetone	ND	---	2.24	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Acrylonitrile	ND	---	1.68	mg/kg dry	100	09/25/19 19:13	5035A/8260C	R-02
Benzene	ND	---	0.0224	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Bromobenzene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Bromochloromethane	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Bromodichloromethane	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Bromoform	ND	---	0.224	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Bromomethane	ND	---	1.12	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
2-Butanone (MEK)	ND	---	1.68	mg/kg dry	100	09/25/19 19:13	5035A/8260C	R-02
n-Butylbenzene	0.328	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	M-02
sec-Butylbenzene	0.158	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
tert-Butylbenzene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Carbon disulfide	ND	---	1.12	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Carbon tetrachloride	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Chlorobenzene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	

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503-718-2323

EPA ID: OR01039

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Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-05-8 (A910735-10RE1)				Matrix: Soil		Batch: 9091211		
Chloroethane	ND	---	1.12	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Chloroform	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Chloromethane	ND	---	0.560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
2-Chlorotoluene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
4-Chlorotoluene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Dibromochloromethane	ND	---	0.224	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	0.560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Dibromomethane	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2-Dichlorobenzene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,3-Dichlorobenzene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,4-Dichlorobenzene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Dichlorodifluoromethane	ND	---	0.224	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,1-Dichloroethane	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,1-Dichloroethene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2-Dichloropropane	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,3-Dichloropropane	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
2,2-Dichloropropane	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,1-Dichloropropene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Ethylbenzene	2.25	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Hexachlorobutadiene	ND	---	0.224	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
2-Hexanone	ND	---	1.12	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Isopropylbenzene	0.509	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
4-Isopropyltoluene	0.114	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	M-02
Methylene chloride	ND	---	0.560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
4-Methyl-2-pentanone (MIBK)	ND	---	1.12	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Naphthalene	0.647	---	0.224	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
n-Propylbenzene	1.67	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Styrene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Toluene	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-05-8 (A910735-10RE1)				Matrix: Soil		Batch: 9091211		
1,2,3-Trichlorobenzene	ND	---	0.560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	0.560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,1,1-Trichloroethane	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,1,2-Trichloroethane	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Trichloroethene (TCE)	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Trichlorofluoromethane	ND	---	0.224	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2,3-Trichloropropane	ND	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,2,4-Trimethylbenzene	0.343	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
1,3,5-Trimethylbenzene	2.99	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
Vinyl chloride	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
m,p-Xylene	2.47	---	0.112	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
o-Xylene	ND	---	0.0560	mg/kg dry	100	09/25/19 19:13	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	98 %	<i>Limits:</i>	80-120 %	1	09/25/19 19:13	5035A/8260C
<i>Toluene-d8 (Surr)</i>			98 %		80-120 %	1	09/25/19 19:13	5035A/8260C
<i>4-Bromofluorobenzene (Surr)</i>			102 %		80-120 %	1	09/25/19 19:13	5035A/8260C

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Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-01-2 (A9I0735-05)				Matrix: Soil		Batch: 9091258		C-07
Aroclor 1016	ND	---	0.0118	mg/kg dry	1	09/26/19 09:13	EPA 8082A	
Aroclor 1221	ND	---	0.0118	mg/kg dry	1	09/26/19 09:13	EPA 8082A	
Aroclor 1232	ND	---	0.0118	mg/kg dry	1	09/26/19 09:13	EPA 8082A	
Aroclor 1242	ND	---	0.0118	mg/kg dry	1	09/26/19 09:13	EPA 8082A	
Aroclor 1248	ND	---	0.0118	mg/kg dry	1	09/26/19 09:13	EPA 8082A	
Aroclor 1254	ND	---	0.0118	mg/kg dry	1	09/26/19 09:13	EPA 8082A	
Aroclor 1260	ND	---	0.0118	mg/kg dry	1	09/26/19 09:13	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)		Recovery: 92 %		Limits: 60-125 %	1	09/26/19 09:13	EPA 8082A	
GP-01-5 (A9I0735-06)				Matrix: Soil		Batch: 9091258		C-07
Aroclor 1016	ND	---	0.0118	mg/kg dry	1	09/26/19 09:48	EPA 8082A	
Aroclor 1221	ND	---	0.0118	mg/kg dry	1	09/26/19 09:48	EPA 8082A	
Aroclor 1232	ND	---	0.0118	mg/kg dry	1	09/26/19 09:48	EPA 8082A	
Aroclor 1242	ND	---	0.0118	mg/kg dry	1	09/26/19 09:48	EPA 8082A	
Aroclor 1248	ND	---	0.0118	mg/kg dry	1	09/26/19 09:48	EPA 8082A	
Aroclor 1254	ND	---	0.0118	mg/kg dry	1	09/26/19 09:48	EPA 8082A	
Aroclor 1260	ND	---	0.0118	mg/kg dry	1	09/26/19 09:48	EPA 8082A	
Surrogate: Decachlorobiphenyl (Surr)		Recovery: 97 %		Limits: 60-125 %	1	09/26/19 09:48	EPA 8082A	

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020A (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-01-8 (A910735-01) Matrix: Soil								
Batch: 9091243								
Arsenic	9.49	---	1.34	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
Barium	146	---	1.34	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
Cadmium	ND	---	0.269	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
Chromium	70.3	---	1.34	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
Lead	8.59	---	0.269	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
Mercury	0.137	---	0.108	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
Selenium	ND	---	1.34	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
Silver	ND	---	0.269	mg/kg dry	10	09/24/19 20:06	EPA 6020A	
FS-02-8 (A910735-02) Matrix: Soil								
Batch: 9091243								
Arsenic	1.73	---	1.41	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
Barium	110	---	1.41	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
Cadmium	ND	---	0.281	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
Chromium	49.5	---	1.41	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
Lead	3.25	---	0.281	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
Mercury	0.377	---	0.112	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
Selenium	ND	---	1.41	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
Silver	ND	---	0.281	mg/kg dry	10	09/24/19 20:10	EPA 6020A	
FS-04-9 (A910735-03) Matrix: Soil								
Batch: 9091243								
Arsenic	3.80	---	1.17	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
Barium	80.8	---	1.17	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
Cadmium	ND	---	0.233	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
Chromium	36.1	---	1.17	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
Lead	3.16	---	0.233	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
Mercury	0.174	---	0.0933	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
Selenium	ND	---	1.17	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
Silver	ND	---	0.233	mg/kg dry	10	09/24/19 20:15	EPA 6020A	
FS-03-9 (A910735-04) Matrix: Soil								
Batch: 9091243								
Arsenic	16.3	---	1.29	mg/kg dry	10	09/24/19 20:20	EPA 6020A	
Barium	152	---	1.29	mg/kg dry	10	09/24/19 20:20	EPA 6020A	
Cadmium	ND	---	0.258	mg/kg dry	10	09/24/19 20:20	EPA 6020A	

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503-718-2323

EPA ID: OR01039**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-03-9 (A910735-04) Matrix: Soil								
Chromium	64.7	---	1.29	mg/kg dry	10	09/24/19 20:20	EPA 6020A	
Lead	7.39	---	0.258	mg/kg dry	10	09/24/19 20:20	EPA 6020A	
Mercury	0.139	---	0.103	mg/kg dry	10	09/24/19 20:20	EPA 6020A	
Selenium	ND	---	1.29	mg/kg dry	10	09/24/19 20:20	EPA 6020A	
Silver	ND	---	0.258	mg/kg dry	10	09/24/19 20:20	EPA 6020A	
GP-01-2 (A910735-05) Matrix: Soil								
Batch: 9091243								
Arsenic	3.00	---	1.27	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
Barium	140	---	1.27	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
Cadmium	0.582	---	0.253	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
Chromium	28.0	---	1.27	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
Lead	24.8	---	0.253	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
Mercury	ND	---	0.101	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
Selenium	ND	---	1.27	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
Silver	ND	---	0.253	mg/kg dry	10	09/24/19 20:25	EPA 6020A	
GP-01-5 (A910735-06) Matrix: Soil								
Batch: 9091243								
Arsenic	ND	---	1.23	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
Barium	99.9	---	1.23	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
Cadmium	ND	---	0.245	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
Chromium	46.9	---	1.23	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
Lead	2.38	---	0.245	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
Mercury	0.117	---	0.0981	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
Selenium	ND	---	1.23	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
Silver	ND	---	0.245	mg/kg dry	10	09/24/19 20:43	EPA 6020A	
GP-02-1 (A910735-07) Matrix: Soil								
Batch: 9091243								
Arsenic	5.66	---	1.31	mg/kg dry	10	09/24/19 20:57	EPA 6020A	
Barium	126	---	1.31	mg/kg dry	10	09/24/19 20:57	EPA 6020A	
Cadmium	ND	---	0.262	mg/kg dry	10	09/24/19 20:57	EPA 6020A	
Chromium	38.4	---	1.31	mg/kg dry	10	09/24/19 20:57	EPA 6020A	
Lead	3.84	---	0.262	mg/kg dry	10	09/24/19 20:57	EPA 6020A	
Mercury	ND	---	0.105	mg/kg dry	10	09/24/19 20:57	EPA 6020A	
Selenium	ND	---	1.31	mg/kg dry	10	09/24/19 20:57	EPA 6020A	

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Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP-02-1 (A9I0735-07)				Matrix: Soil				
Silver	ND	---	0.262	mg/kg dry	10	09/24/19 20:57	EPA 6020A	
GP-02-12 (A9I0735-08)				Matrix: Soil				
Batch: 9091243								
Arsenic	1.82	---	1.22	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
Barium	108	---	1.22	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
Cadmium	ND	---	0.244	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
Chromium	35.4	---	1.22	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
Lead	3.57	---	0.244	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
Mercury	0.649	---	0.0976	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
Selenium	ND	---	1.22	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
Silver	ND	---	0.244	mg/kg dry	10	09/24/19 21:02	EPA 6020A	
GP-05-1 (A9I0735-09)				Matrix: Soil				
Batch: 9091243								
Arsenic	2.94	---	1.04	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
Barium	97.4	---	1.04	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
Cadmium	ND	---	0.208	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
Chromium	33.7	---	1.04	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
Lead	2.93	---	0.208	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
Mercury	ND	---	0.0830	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
Selenium	ND	---	1.04	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
Silver	ND	---	0.208	mg/kg dry	10	09/24/19 21:06	EPA 6020A	
GP-05-8 (A9I0735-10)				Matrix: Soil				
Batch: 9091243								
Arsenic	13.0	---	1.19	mg/kg dry	10	09/24/19 21:11	EPA 6020A	
Barium	146	---	1.19	mg/kg dry	10	09/24/19 21:11	EPA 6020A	
Cadmium	ND	---	0.238	mg/kg dry	10	09/24/19 21:11	EPA 6020A	
Chromium	56.6	---	1.19	mg/kg dry	10	09/24/19 21:11	EPA 6020A	
Lead	7.35	---	0.238	mg/kg dry	10	09/24/19 21:11	EPA 6020A	
Mercury	0.164	---	0.0950	mg/kg dry	10	09/24/19 21:11	EPA 6020A	
Selenium	ND	---	1.19	mg/kg dry	10	09/24/19 21:11	EPA 6020A	
Silver	ND	---	0.238	mg/kg dry	10	09/24/19 21:11	EPA 6020A	

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FS-01-8 (A9I0735-01)				Matrix: Soil		Batch: 9091260		
% Solids	76.4	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
FS-02-8 (A9I0735-02)				Matrix: Soil		Batch: 9091260		
% Solids	77.6	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
FS-04-9 (A9I0735-03)				Matrix: Soil		Batch: 9091260		
% Solids	88.0	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
FS-03-9 (A9I0735-04)				Matrix: Soil		Batch: 9091260		
% Solids	79.7	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
GP-01-2 (A9I0735-05)				Matrix: Soil		Batch: 9091260		
% Solids	84.5	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
GP-01-5 (A9I0735-06)				Matrix: Soil		Batch: 9091204		
% Solids	80.9	---	1.00	% by Weight	1	09/25/19 07:46	EPA 8000C	
GP-02-1 (A9I0735-07)				Matrix: Soil		Batch: 9091260		
% Solids	82.5	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
GP-02-12 (A9I0735-08)				Matrix: Soil		Batch: 9091260		
% Solids	87.4	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
GP-05-1 (A9I0735-09)				Matrix: Soil		Batch: 9091260		
% Solids	94.3	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	
GP-05-8 (A9I0735-10)				Matrix: Soil		Batch: 9091260		
% Solids	83.2	---	1.00	% by Weight	1	09/26/19 08:07	EPA 8000C	

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091331 - EPA 3546 (Fuels)						Soil						
Blank (9091331-BLK1)		Prepared: 09/26/19 11:47 Analyzed: 09/26/19 18:27										
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 93 %		Limits: 50-150 %		Dilution: 1x						
LCS (9091331-BS1)		Prepared: 09/26/19 11:47 Analyzed: 09/26/19 18:47										
NWTPH-Dx												
Diesel	125	---	25.0	mg/kg wet	1	125	---	100	76 - 115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (9091331-DUP1)		Prepared: 09/26/19 11:47 Analyzed: 09/26/19 22:47										
QC Source Sample: GP-01-5 (A910735-06)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	14.1	---	---	***	30%	
Oil	ND	---	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 77 %		Limits: 50-150 %		Dilution: 1x						
Matrix Spike (9091331-MS1)		Prepared: 09/26/19 11:55 Analyzed: 09/26/19 23:07										
QC Source Sample: GP-01-5 (A910735-06)												
NWTPH-Dx												
Diesel	146	---	25.0	mg/kg dry	1	149	14.1	89	50 - 150%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
Matrix Spike Dup (9091331-MSD1)		Prepared: 09/26/19 11:55 Analyzed: 09/26/19 23:27										
QC Source Sample: GP-01-5 (A910735-06)												
NWTPH-Dx												
Diesel	157	---	25.0	mg/kg dry	1	148	14.1	96	50 - 150%	7	50%	
Surr: o-Terphenyl (Surr)		Recovery: 86 %		Limits: 50-150 %		Dilution: 1x						

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EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A							Soil					
Blank (9091209-BLK1)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:59										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 96 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		110 %		50-150 %		"						
LCS (9091209-BS2)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:32										
NWTPH-Gx (MS)												
Gasoline Range Organics	24.6	---	5.00	mg/kg wet	50	25.0	---	98	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 97 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		107 %		50-150 %		"						
Duplicate (9091209-DUP1)		Prepared: 09/20/19 09:00 Analyzed: 09/24/19 19:03										
QC Source Sample: GP-01-2 (A910735-05)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	6.74	mg/kg dry	50	---	4.57	---	---	***	30%	Q-05
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		112 %		50-150 %		"						

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6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039**Stantec Portland**

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091211 - EPA 5035A						Soil						
Blank (9091211-BLK1)		Prepared: 09/25/19 16:31 Analyzed: 09/25/19 17:52										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		106 %		50-150 %		"						
LCS (9091211-BS2)		Prepared: 09/25/19 16:31 Analyzed: 09/25/19 17:25										
NWTPH-Gx (MS)												
Gasoline Range Organics	25.5	---	5.00	mg/kg wet	50	25.0	---	102	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 106 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		108 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A						Soil						
Blank (9091269-BLK1)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 12:01										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 97 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		91 %		50-150 %		"						
LCS (9091269-BS2)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 11:34										
NWTPH-Gx (MS)												
Gasoline Range Organics	23.5	---	5.00	mg/kg wet	50	25.0	---	94	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		94 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A						Soil						
Blank (9091209-BLK1)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:59										
5035A/8260C												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	

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Stantec Portland

9400 SW Barnes Rd Ste 200
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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A						Soil						
Blank (9091209-BLK1)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:59										
1,2-Dichloropropane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	B-02
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
2,2-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
1,1-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
Hexachlorobutadiene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---		
2-Hexanone	ND	---	0.333	mg/kg wet	50	---	---	---	---	---		
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
4-Isopropyltoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
Methylene chloride	ND	---	0.167	mg/kg wet	50	---	---	---	---	---		
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---		
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---		
n-Propylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
Styrene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---		
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---		
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
Trichloroethene (TCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
Trichlorofluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---		
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
Vinyl chloride	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
m,p-Xylene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---		
o-Xylene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 98 %

Limits: 80-120 %

Dilution: 1x

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A						Soil						
Blank (9091209-BLK1)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:59										
Surr: Toluene-d8 (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						
LCS (9091209-BS1)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:05										
5035A/8260C												
Acetone	2.12	---	1.00	mg/kg wet	50	2.00	---	106	80 - 120%	---	---	Q-56
Acrylonitrile	1.14	---	0.100	mg/kg wet	50	1.00	---	114	80 - 120%	---	---	
Benzene	1.02	---	0.0100	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Bromobenzene	0.981	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Bromochloromethane	1.22	---	0.0500	mg/kg wet	50	1.00	---	122	80 - 120%	---	---	
Bromodichloromethane	1.18	---	0.0500	mg/kg wet	50	1.00	---	118	80 - 120%	---	---	
Bromoform	0.977	---	0.100	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Bromomethane	1.07	---	0.500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
2-Butanone (MEK)	2.27	---	0.500	mg/kg wet	50	2.00	---	114	80 - 120%	---	---	
n-Butylbenzene	0.998	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
sec-Butylbenzene	0.995	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
tert-Butylbenzene	0.988	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
Carbon disulfide	1.06	---	0.500	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
Carbon tetrachloride	1.10	---	0.100	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
Chlorobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Chloroethane	1.02	---	0.500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Chloroform	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
Chloromethane	1.11	---	0.250	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
2-Chlorotoluene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
4-Chlorotoluene	1.06	---	0.0500	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
Dibromochloromethane	1.07	---	0.100	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	0.859	---	0.250	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Dibromomethane	1.09	---	0.0500	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
1,2-Dichlorobenzene	0.956	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
1,3-Dichlorobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,4-Dichlorobenzene	0.998	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Dichlorodifluoromethane	0.982	---	0.100	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
1,1-Dichloroethane	1.15	---	0.0250	mg/kg wet	50	1.00	---	115	80 - 120%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A							Soil					
LCS (9091209-BS1)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:05										
1,2-Dichloroethane (EDC)	1.12	---	0.0250	mg/kg wet	50	1.00	---	112	80 - 120%	---	---	
1,1-Dichloroethene	1.15	---	0.0250	mg/kg wet	50	1.00	---	115	80 - 120%	---	---	
cis-1,2-Dichloroethene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
trans-1,2-Dichloroethene	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80 - 120%	---	---	
1,2-Dichloropropane	1.13	---	0.100	mg/kg wet	50	1.00	---	113	80 - 120%	---	---	
1,3-Dichloropropane	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
2,2-Dichloropropane	1.17	---	0.0500	mg/kg wet	50	1.00	---	117	80 - 120%	---	---	
1,1-Dichloropropene	0.998	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
cis-1,3-Dichloropropene	0.963	---	0.0500	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
trans-1,3-Dichloropropene	1.19	---	0.0500	mg/kg wet	50	1.00	---	119	80 - 120%	---	---	
Ethylbenzene	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Hexachlorobutadiene	0.817	---	0.100	mg/kg wet	50	1.00	---	82	80 - 120%	---	---	
2-Hexanone	2.15	---	0.500	mg/kg wet	50	2.00	---	107	80 - 120%	---	---	
Isopropylbenzene	0.916	---	0.0500	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
4-Isopropyltoluene	0.933	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
Methylene chloride	1.10	---	0.250	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	2.18	---	0.500	mg/kg wet	50	2.00	---	109	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.894	---	0.0500	mg/kg wet	50	1.00	---	89	80 - 120%	---	---	
Naphthalene	0.858	---	0.100	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
n-Propylbenzene	1.08	---	0.0250	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
Styrene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	1.04	---	0.0250	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	1.27	---	0.0500	mg/kg wet	50	1.00	---	127	80 - 120%	---	---	Q-56
Tetrachloroethene (PCE)	0.979	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Toluene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,2,3-Trichlorobenzene	0.864	---	0.250	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
1,2,4-Trichlorobenzene	0.778	---	0.250	mg/kg wet	50	1.00	---	78	80 - 120%	---	---	Q-55
1,1,1-Trichloroethane	0.998	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
1,1,2-Trichloroethane	1.09	---	0.0250	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Trichloroethene (TCE)	0.863	---	0.0250	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
Trichlorofluoromethane	1.14	---	0.100	mg/kg wet	50	1.00	---	114	80 - 120%	---	---	
1,2,3-Trichloropropane	1.11	---	0.0500	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A							Soil					
LCS (9091209-BS1)		Prepared: 09/24/19 15:39 Analyzed: 09/24/19 16:05										
Vinyl chloride	1.13	---	0.0250	mg/kg wet	50	1.00	---	113	80 - 120%	---	---	
m,p-Xylene	2.02	---	0.0500	mg/kg wet	50	2.00	---	101	80 - 120%	---	---	
o-Xylene	0.859	---	0.0250	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		91 %		80-120 %		"						
Duplicate (9091209-DUP1)		Prepared: 09/20/19 09:00 Analyzed: 09/24/19 19:03										
QC Source Sample: GP-01-2 (A910735-05)												
5035A/8260C												
Acetone	ND	---	1.35	mg/kg dry	50	---	ND	---	---	---	30%	Q-05
Acrylonitrile	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	---	0.0135	mg/kg dry	50	---	0.0294	---	---	***	30%	
Bromobenzene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.674	mg/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	0.674	mg/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	0.674	mg/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.674	mg/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.337	mg/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.337	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A							Soil					
Duplicate (9091209-DUP1)		Prepared: 09/20/19 09:00 Analyzed: 09/24/19 19:03										
QC Source Sample: GP-01-2 (A910735-05)												
1,2-Dichlorobenzene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0337	mg/kg dry	50	---	0.0474	---	---	***	30%	Q-05
Hexachlorobutadiene	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	0.674	mg/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.337	mg/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	0.674	mg/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0337	mg/kg dry	50	---	0.0303	---	---	***	30%	Q-05
Styrene	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0674	mg/kg dry	50	---	0.129	---	---	***	30%	Q-05
1,2,3-Trichlorobenzene	ND	---	0.337	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.337	mg/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	

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EPA ID: OR01039**Stantec Portland**

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A							Soil					
Duplicate (9091209-DUP1)		Prepared: 09/20/19 09:00		Analyzed: 09/24/19 19:03								
QC Source Sample: GP-01-2 (A910735-05)												
1,1,2-Trichloroethane	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.135	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.0674	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0674	mg/kg dry	50	---	0.117	---	---	***	30%	Q-05
1,3,5-Trimethylbenzene	ND	---	0.0674	mg/kg dry	50	---	0.0428	---	---	***	30%	Q-05
Vinyl chloride	ND	---	0.0337	mg/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.0674	mg/kg dry	50	---	0.156	---	---	***	30%	Q-05
o-Xylene	ND	---	0.0337	mg/kg dry	50	---	0.0567	---	---	***	30%	Q-05
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						

Matrix Spike (9091209-MS1)

Prepared: 09/20/19 09:15 Analyzed: 09/25/19 02:37

QC Source Sample: GP-01-5 (A910735-06)**5035A/8260C**

Acetone	30.6	---	14.6	mg/kg dry	500	29.1	ND	105	36 - 164%	---	---	
Acrylonitrile	16.6	---	1.46	mg/kg dry	500	14.6	ND	114	65 - 134%	---	---	
Benzene	15.2	---	0.146	mg/kg dry	500	14.6	ND	104	77 - 121%	---	---	
Bromobenzene	14.5	---	0.364	mg/kg dry	500	14.6	ND	99	78 - 121%	---	---	
Bromochloromethane	18.9	---	0.728	mg/kg dry	500	14.6	ND	130	78 - 125%	---	---	Q-54
Bromodichloromethane	18.0	---	0.728	mg/kg dry	500	14.6	ND	123	75 - 127%	---	---	
Bromoform	14.5	---	1.46	mg/kg dry	500	14.6	ND	100	67 - 132%	---	---	
Bromomethane	17.8	---	7.28	mg/kg dry	500	14.6	ND	122	53 - 143%	---	---	
2-Butanone (MEK)	33.0	---	7.28	mg/kg dry	500	29.1	ND	113	51 - 148%	---	---	
n-Butylbenzene	15.2	---	0.728	mg/kg dry	500	14.6	ND	104	70 - 128%	---	---	
sec-Butylbenzene	15.0	---	0.728	mg/kg dry	500	14.6	ND	103	73 - 126%	---	---	
tert-Butylbenzene	14.6	---	0.728	mg/kg dry	500	14.6	ND	100	73 - 125%	---	---	
Carbon disulfide	16.6	---	7.28	mg/kg dry	500	14.6	ND	114	63 - 132%	---	---	
Carbon tetrachloride	17.0	---	1.46	mg/kg dry	500	14.6	ND	117	70 - 135%	---	---	
Chlorobenzene	15.2	---	0.364	mg/kg dry	500	14.6	ND	105	79 - 120%	---	---	
Chloroethane	21.9	---	7.28	mg/kg dry	500	14.6	ND	150	59 - 139%	---	---	Q-01
Chloroform	16.9	---	0.728	mg/kg dry	500	14.6	ND	116	78 - 123%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A						Soil						
Matrix Spike (9091209-MS1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 02:37										
QC Source Sample: GP-01-5 (A910735-06)												
Chloromethane	17.8	---	3.64	mg/kg dry	500	14.6	ND	122	50 - 136%	---	---	
2-Chlorotoluene	14.6	---	0.728	mg/kg dry	500	14.6	ND	100	75 - 122%	---	---	
4-Chlorotoluene	15.8	---	0.728	mg/kg dry	500	14.6	ND	109	72 - 124%	---	---	
Dibromochloromethane	16.1	---	1.46	mg/kg dry	500	14.6	ND	110	74 - 126%	---	---	
1,2-Dibromo-3-chloropropane	12.2	---	3.64	mg/kg dry	500	14.6	ND	84	61 - 132%	---	---	
1,2-Dibromoethane (EDB)	14.9	---	0.728	mg/kg dry	500	14.6	ND	102	78 - 122%	---	---	
Dibromomethane	16.6	---	0.728	mg/kg dry	500	14.6	ND	114	78 - 125%	---	---	
1,2-Dichlorobenzene	14.0	---	0.364	mg/kg dry	500	14.6	ND	96	78 - 121%	---	---	
1,3-Dichlorobenzene	15.1	---	0.364	mg/kg dry	500	14.6	ND	104	77 - 121%	---	---	
1,4-Dichlorobenzene	14.7	---	0.364	mg/kg dry	500	14.6	ND	101	75 - 120%	---	---	
Dichlorodifluoromethane	15.8	---	1.46	mg/kg dry	500	14.6	ND	109	29 - 149%	---	---	
1,1-Dichloroethane	18.2	---	0.364	mg/kg dry	500	14.6	ND	125	76 - 125%	---	---	
1,2-Dichloroethane (EDC)	17.2	---	0.364	mg/kg dry	500	14.6	ND	118	73 - 128%	---	---	
1,1-Dichloroethene	18.0	---	0.364	mg/kg dry	500	14.6	ND	124	70 - 131%	---	---	
cis-1,2-Dichloroethene	15.4	---	0.364	mg/kg dry	500	14.6	ND	106	77 - 123%	---	---	
trans-1,2-Dichloroethene	17.0	---	0.364	mg/kg dry	500	14.6	ND	117	74 - 125%	---	---	
1,2-Dichloropropane	17.2	---	1.46	mg/kg dry	500	14.6	ND	118	76 - 123%	---	---	
1,3-Dichloropropane	16.1	---	0.728	mg/kg dry	500	14.6	ND	111	77 - 121%	---	---	
2,2-Dichloropropane	14.3	---	0.728	mg/kg dry	500	14.6	ND	98	67 - 133%	---	---	
1,1-Dichloropropene	14.6	---	0.728	mg/kg dry	500	14.6	ND	100	76 - 125%	---	---	
cis-1,3-Dichloropropene	13.2	---	0.728	mg/kg dry	500	14.6	ND	91	74 - 126%	---	---	
trans-1,3-Dichloropropene	17.2	---	0.728	mg/kg dry	500	14.6	ND	118	71 - 130%	---	---	
Ethylbenzene	15.2	---	0.364	mg/kg dry	500	14.6	ND	104	76 - 122%	---	---	
Hexachlorobutadiene	11.8	---	1.46	mg/kg dry	500	14.6	ND	81	61 - 135%	---	---	
2-Hexanone	31.3	---	7.28	mg/kg dry	500	29.1	ND	108	53 - 145%	---	---	
Isopropylbenzene	13.6	---	0.728	mg/kg dry	500	14.6	ND	94	68 - 134%	---	---	
4-Isopropyltoluene	13.7	---	0.728	mg/kg dry	500	14.6	ND	94	73 - 127%	---	---	
Methylene chloride	17.6	---	3.64	mg/kg dry	500	14.6	ND	103	70 - 128%	---	---	B-02
4-Methyl-2-pentanone (MiBK)	32.6	---	7.28	mg/kg dry	500	29.1	ND	112	65 - 135%	---	---	
Methyl tert-butyl ether (MTBE)	12.7	---	0.728	mg/kg dry	500	14.6	ND	87	73 - 125%	---	---	
Naphthalene	11.8	---	1.46	mg/kg dry	500	14.6	ND	81	62 - 129%	---	---	
n-Propylbenzene	16.1	---	0.364	mg/kg dry	500	14.6	ND	110	73 - 125%	---	---	
Styrene	15.4	---	0.728	mg/kg dry	500	14.6	ND	106	76 - 124%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A							Soil					
Matrix Spike (9091209-MS1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 02:37										
QC Source Sample: GP-01-5 (A910735-06)												
1,1,1,2-Tetrachloroethane	15.5	---	0.364	mg/kg dry	500	14.6	ND	107	78 - 125%	---	---	Q-54e
1,1,2,2-Tetrachloroethane	19.0	---	0.728	mg/kg dry	500	14.6	ND	130	70 - 124%	---	---	
Tetrachloroethene (PCE)	13.9	---	0.364	mg/kg dry	500	14.6	ND	95	73 - 128%	---	---	
Toluene	15.0	---	0.728	mg/kg dry	500	14.6	ND	103	77 - 121%	---	---	Q-54h
1,2,3-Trichlorobenzene	12.1	---	3.64	mg/kg dry	500	14.6	ND	83	66 - 130%	---	---	
1,2,4-Trichlorobenzene	10.8	---	3.64	mg/kg dry	500	14.6	ND	74	67 - 129%	---	---	
1,1,1-Trichloroethane	15.0	---	0.364	mg/kg dry	500	14.6	ND	103	73 - 130%	---	---	Q-01
1,1,2-Trichloroethane	15.8	---	0.364	mg/kg dry	500	14.6	ND	109	78 - 121%	---	---	
Trichloroethene (TCE)	12.5	---	0.364	mg/kg dry	500	14.6	ND	86	77 - 123%	---	---	
Trichlorofluoromethane	22.3	---	1.46	mg/kg dry	500	14.6	ND	153	62 - 140%	---	---	Q-01
1,2,3-Trichloropropane	16.5	---	0.728	mg/kg dry	500	14.6	ND	113	73 - 125%	---	---	
1,2,4-Trimethylbenzene	15.3	---	0.728	mg/kg dry	500	14.6	ND	105	75 - 123%	---	---	
1,3,5-Trimethylbenzene	15.4	---	0.728	mg/kg dry	500	14.6	ND	106	73 - 124%	---	---	Q-01
Vinyl chloride	18.1	---	0.364	mg/kg dry	500	14.6	ND	124	56 - 135%	---	---	
m,p-Xylene	30.7	---	0.728	mg/kg dry	500	29.1	ND	105	77 - 124%	---	---	
o-Xylene	12.8	---	0.364	mg/kg dry	500	14.6	ND	88	77 - 123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 94 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		89 %		80-120 %		"						

Matrix Spike Dup (9091209-MSD1)

Prepared: 09/20/19 09:15 Analyzed: 09/25/19 03:04

QC Source Sample: GP-01-5 (A910735-06)**5035A/8260C**

Acetone	31.2	---	14.6	mg/kg dry	500	29.1	ND	107	36 - 164%	2	35%	Q-54
Acrylonitrile	16.9	---	1.46	mg/kg dry	500	14.6	ND	116	65 - 134%	2	35%	
Benzene	14.9	---	0.146	mg/kg dry	500	14.6	ND	102	77 - 121%	2	35%	
Bromobenzene	14.3	---	0.364	mg/kg dry	500	14.6	ND	98	78 - 121%	1	35%	Q-54
Bromochloromethane	18.7	---	0.728	mg/kg dry	500	14.6	ND	128	78 - 125%	1	35%	
Bromodichloromethane	17.7	---	0.728	mg/kg dry	500	14.6	ND	122	75 - 127%	2	35%	
Bromoform	13.9	---	1.46	mg/kg dry	500	14.6	ND	96	67 - 132%	4	35%	Q-54
Bromomethane	17.1	---	7.28	mg/kg dry	500	14.6	ND	117	53 - 143%	4	35%	
2-Butanone (MEK)	33.3	---	7.28	mg/kg dry	500	29.1	ND	114	51 - 148%	0.9	35%	
n-Butylbenzene	14.3	---	0.728	mg/kg dry	500	14.6	ND	98	70 - 128%	6	35%	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200

Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A						Soil						
Matrix Spike Dup (9091209-MSD1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 03:04										
QC Source Sample: GP-01-5 (A910735-06)												
sec-Butylbenzene	14.4	---	0.728	mg/kg dry	500	14.6	ND	99	73 - 126%	4	35%	Q-01
tert-Butylbenzene	14.5	---	0.728	mg/kg dry	500	14.6	ND	100	73 - 125%	0.6	35%	
Carbon disulfide	16.2	---	7.28	mg/kg dry	500	14.6	ND	111	63 - 132%	3	35%	
Carbon tetrachloride	16.2	---	1.46	mg/kg dry	500	14.6	ND	112	70 - 135%	5	35%	
Chlorobenzene	14.8	---	0.364	mg/kg dry	500	14.6	ND	101	79 - 120%	3	35%	
Chloroethane	21.0	---	7.28	mg/kg dry	500	14.6	ND	145	59 - 139%	4	35%	
Chloroform	16.7	---	0.728	mg/kg dry	500	14.6	ND	114	78 - 123%	2	35%	
Chloromethane	18.0	---	3.64	mg/kg dry	500	14.6	ND	124	50 - 136%	1	35%	
2-Chlorotoluene	14.4	---	0.728	mg/kg dry	500	14.6	ND	99	75 - 122%	1	35%	
4-Chlorotoluene	15.7	---	0.728	mg/kg dry	500	14.6	ND	108	72 - 124%	1	35%	
Dibromochloromethane	16.0	---	1.46	mg/kg dry	500	14.6	ND	110	74 - 126%	0.6	35%	
1,2-Dibromo-3-chloropropane	12.4	---	3.64	mg/kg dry	500	14.6	ND	85	61 - 132%	2	35%	
1,2-Dibromoethane (EDB)	14.2	---	0.728	mg/kg dry	500	14.6	ND	98	78 - 122%	4	35%	
Dibromomethane	16.0	---	0.728	mg/kg dry	500	14.6	ND	110	78 - 125%	3	35%	
1,2-Dichlorobenzene	13.8	---	0.364	mg/kg dry	500	14.6	ND	95	78 - 121%	1	35%	
1,3-Dichlorobenzene	14.8	---	0.364	mg/kg dry	500	14.6	ND	102	77 - 121%	2	35%	
1,4-Dichlorobenzene	14.7	---	0.364	mg/kg dry	500	14.6	ND	101	75 - 120%	0.09	35%	
Dichlorodifluoromethane	15.3	---	1.46	mg/kg dry	500	14.6	ND	105	29 - 149%	3	35%	
1,1-Dichloroethane	17.7	---	0.364	mg/kg dry	500	14.6	ND	122	76 - 125%	3	35%	
1,2-Dichloroethane (EDC)	16.8	---	0.364	mg/kg dry	500	14.6	ND	115	73 - 128%	2	35%	
1,1-Dichloroethene	17.5	---	0.364	mg/kg dry	500	14.6	ND	120	70 - 131%	3	35%	
cis-1,2-Dichloroethene	15.6	---	0.364	mg/kg dry	500	14.6	ND	107	77 - 123%	0.9	35%	
trans-1,2-Dichloroethene	16.7	---	0.364	mg/kg dry	500	14.6	ND	115	74 - 125%	2	35%	
1,2-Dichloropropane	16.9	---	1.46	mg/kg dry	500	14.6	ND	116	76 - 123%	1	35%	
1,3-Dichloropropane	15.6	---	0.728	mg/kg dry	500	14.6	ND	107	77 - 121%	3	35%	
2,2-Dichloropropane	13.7	---	0.728	mg/kg dry	500	14.6	ND	94	67 - 133%	4	35%	
1,1-Dichloropropene	14.5	---	0.728	mg/kg dry	500	14.6	ND	99	76 - 125%	1	35%	
cis-1,3-Dichloropropene	13.3	---	0.728	mg/kg dry	500	14.6	ND	91	74 - 126%	0.8	35%	
trans-1,3-Dichloropropene	16.7	---	0.728	mg/kg dry	500	14.6	ND	114	71 - 130%	3	35%	
Ethylbenzene	14.8	---	0.364	mg/kg dry	500	14.6	ND	101	76 - 122%	3	35%	
Hexachlorobutadiene	11.2	---	1.46	mg/kg dry	500	14.6	ND	77	61 - 135%	5	35%	
2-Hexanone	31.5	---	7.28	mg/kg dry	500	29.1	ND	108	53 - 145%	0.8	35%	
Isopropylbenzene	13.1	---	0.728	mg/kg dry	500	14.6	ND	90	68 - 134%	4	35%	

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091209 - EPA 5035A								Soil				
Matrix Spike Dup (9091209-MSD1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 03:04										
QC Source Sample: GP-01-5 (A910735-06)												
4-Isopropyltoluene	13.3	---	0.728	mg/kg dry	500	14.6	ND	91	73 - 127%	3	35%	B-02
Methylene chloride	17.8	---	3.64	mg/kg dry	500	14.6	ND	104	70 - 128%	0.8	35%	
4-Methyl-2-pentanone (MiBK)	32.3	---	7.28	mg/kg dry	500	29.1	ND	111	65 - 135%	1	35%	
Methyl tert-butyl ether (MTBE)	12.7	---	0.728	mg/kg dry	500	14.6	ND	88	73 - 125%	0.5	35%	
Naphthalene	12.1	---	1.46	mg/kg dry	500	14.6	ND	83	62 - 129%	2	35%	
n-Propylbenzene	15.8	---	0.364	mg/kg dry	500	14.6	ND	109	73 - 125%	1	35%	Q-54e
Styrene	15.0	---	0.728	mg/kg dry	500	14.6	ND	103	76 - 124%	2	35%	
1,1,1,2-Tetrachloroethane	14.9	---	0.364	mg/kg dry	500	14.6	ND	102	78 - 125%	4	35%	
1,1,2,2-Tetrachloroethane	18.7	---	0.728	mg/kg dry	500	14.6	ND	128	70 - 124%	2	35%	
Tetrachloroethene (PCE)	13.5	---	0.364	mg/kg dry	500	14.6	ND	93	73 - 128%	3	35%	
Toluene	14.7	---	0.728	mg/kg dry	500	14.6	ND	101	77 - 121%	2	35%	Q-54h
1,2,3-Trichlorobenzene	12.3	---	3.64	mg/kg dry	500	14.6	ND	85	66 - 130%	2	35%	
1,2,4-Trichlorobenzene	10.9	---	3.64	mg/kg dry	500	14.6	ND	75	67 - 129%	0.9	35%	
1,1,1-Trichloroethane	14.7	---	0.364	mg/kg dry	500	14.6	ND	101	73 - 130%	2	35%	
1,1,2-Trichloroethane	15.6	---	0.364	mg/kg dry	500	14.6	ND	107	78 - 121%	1	35%	
Trichloroethene (TCE)	12.3	---	0.364	mg/kg dry	500	14.6	ND	84	77 - 123%	2	35%	Q-01
Trichlorofluoromethane	20.5	---	1.46	mg/kg dry	500	14.6	ND	141	62 - 140%	8	35%	
1,2,3-Trichloropropane	16.0	---	0.728	mg/kg dry	500	14.6	ND	110	73 - 125%	3	35%	
1,2,4-Trimethylbenzene	14.9	---	0.728	mg/kg dry	500	14.6	ND	102	75 - 123%	3	35%	
1,3,5-Trimethylbenzene	15.1	---	0.728	mg/kg dry	500	14.6	ND	104	73 - 124%	2	35%	
Vinyl chloride	17.7	---	0.364	mg/kg dry	500	14.6	ND	121	56 - 135%	2	35%	
m,p-Xylene	29.8	---	0.728	mg/kg dry	500	29.1	ND	102	77 - 124%	3	35%	
o-Xylene	12.5	---	0.364	mg/kg dry	500	14.6	ND	86	77 - 123%	3	35%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		89 %		80-120 %		"						

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091211 - EPA 5035A						Soil						
Blank (9091211-BLK1)		Prepared: 09/25/19 16:31 Analyzed: 09/25/19 17:52										
5035A/8260C												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091211 - EPA 5035A						Soil						
Blank (9091211-BLK1)		Prepared: 09/25/19 16:31 Analyzed: 09/25/19 17:52										
1,2-Dichloropropane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091211 - EPA 5035A							Soil					
Blank (9091211-BLK1)		Prepared: 09/25/19 16:31 Analyzed: 09/25/19 17:52										
Surr: Toluene-d8 (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		106 %		80-120 %		"						
LCS (9091211-BS1)		Prepared: 09/25/19 16:31 Analyzed: 09/25/19 16:58										
5035A/8260C												
Acetone	1.85	---	1.00	mg/kg wet	50	2.00	---	92	80 - 120%	---	---	
Acrylonitrile	0.855	---	0.100	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
Benzene	0.910	---	0.0100	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
Bromobenzene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Bromochloromethane	0.942	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Bromodichloromethane	1.09	---	0.0500	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Bromoform	0.996	---	0.100	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Bromomethane	0.982	---	0.500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
2-Butanone (MEK)	1.68	---	0.500	mg/kg wet	50	2.00	---	84	80 - 120%	---	---	
n-Butylbenzene	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
sec-Butylbenzene	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
tert-Butylbenzene	1.11	---	0.0500	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
Carbon disulfide	0.852	---	0.500	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
Carbon tetrachloride	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Chlorobenzene	0.932	---	0.0250	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
Chloroethane	1.12	---	0.500	mg/kg wet	50	1.00	---	112	80 - 120%	---	---	
Chloroform	1.05	---	0.0500	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
Chloromethane	0.929	---	0.250	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
2-Chlorotoluene	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
4-Chlorotoluene	1.09	---	0.0500	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Dibromochloromethane	0.948	---	0.100	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	0.787	---	0.250	mg/kg wet	50	1.00	---	79	80 - 120%	---	---	Q-55
1,2-Dibromoethane (EDB)	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Dibromomethane	0.990	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,2-Dichlorobenzene	1.00	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
1,3-Dichlorobenzene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,4-Dichlorobenzene	0.978	---	0.0250	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Dichlorodifluoromethane	1.18	---	0.100	mg/kg wet	50	1.00	---	118	80 - 120%	---	---	
1,1-Dichloroethane	0.951	---	0.0250	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

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Stantec Portland

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091211 - EPA 5035A							Soil					
LCS (9091211-BS1)		Prepared: 09/25/19 16:31 Analyzed: 09/25/19 16:58										
1,2-Dichloroethane (EDC)	1.11	---	0.0250	mg/kg wet	50	1.00	---	111	80 - 120%	---	---	
1,1-Dichloroethene	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
cis-1,2-Dichloroethene	0.946	---	0.0250	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
trans-1,2-Dichloroethene	0.934	---	0.0250	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
1,2-Dichloropropane	0.852	---	0.0250	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
1,3-Dichloropropane	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
2,2-Dichloropropane	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,1-Dichloropropene	0.962	---	0.0500	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
cis-1,3-Dichloropropene	0.930	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
trans-1,3-Dichloropropene	0.973	---	0.0500	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Ethylbenzene	0.966	---	0.0250	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Hexachlorobutadiene	1.02	---	0.100	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
2-Hexanone	1.94	---	0.500	mg/kg wet	50	2.00	---	97	80 - 120%	---	---	
Isopropylbenzene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
4-Isopropyltoluene	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
Methylene chloride	0.817	---	0.250	mg/kg wet	50	1.00	---	82	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	1.93	---	0.500	mg/kg wet	50	2.00	---	96	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.930	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
Naphthalene	0.858	---	0.100	mg/kg wet	50	1.00	---	86	80 - 120%	---	---	
n-Propylbenzene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Styrene	0.976	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	1.04	---	0.0250	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	0.932	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
Tetrachloroethene (PCE)	1.01	---	0.0250	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Toluene	0.942	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
1,2,3-Trichlorobenzene	1.00	---	0.250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
1,2,4-Trichlorobenzene	0.990	---	0.250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,1,1-Trichloroethane	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,1,2-Trichloroethane	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Trichloroethene (TCE)	0.900	---	0.0250	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
Trichlorofluoromethane	1.51	---	0.100	mg/kg wet	50	1.00	---	151	80 - 120%	---	---	Q-56
1,2,3-Trichloropropane	1.13	---	0.0500	mg/kg wet	50	1.00	---	113	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.06	---	0.0500	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091211 - EPA 5035A							Soil					
LCS (9091211-BS1)		Prepared: 09/25/19 16:31		Analyzed: 09/25/19 16:58								
Vinyl chloride	0.899	---	0.0250	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
m,p-Xylene	2.00	---	0.0500	mg/kg wet	50	2.00	---	100	80 - 120%	---	---	
o-Xylene	0.956	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 92 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		98 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A						Soil						
Blank (9091269-BLK1)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 12:01										
5035A/8260C												
Acetone	ND	---	0.667	mg/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A						Soil						
Blank (9091269-BLK1)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 12:01										
1,2-Dichloropropane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						

Surr: 1,4-Difluorobenzene (Surr)

Recovery: 107 %

Limits: 80-120 %

Dilution: 1x

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A						Soil						
Blank (9091269-BLK1)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 12:01										
Surr: Toluene-d8 (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						
LCS (9091269-BS1)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 11:07										
5035A/8260C												
Acetone	2.02	---	1.00	mg/kg wet	50	2.00	---	101	80 - 120%	---	---	
Acrylonitrile	0.974	---	0.100	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Benzene	1.04	---	0.0100	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Bromobenzene	1.00	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Bromochloromethane	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Bromodichloromethane	0.996	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Bromoform	1.06	---	0.100	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
Bromomethane	1.26	---	0.500	mg/kg wet	50	1.00	---	126	80 - 120%	---	---	Q-56
2-Butanone (MEK)	2.05	---	0.500	mg/kg wet	50	2.00	---	103	80 - 120%	---	---	
n-Butylbenzene	0.958	---	0.0500	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
sec-Butylbenzene	0.921	---	0.0500	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
tert-Butylbenzene	0.902	---	0.0500	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
Carbon disulfide	0.853	---	0.500	mg/kg wet	50	1.00	---	85	80 - 120%	---	---	
Carbon tetrachloride	1.05	---	0.0500	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
Chlorobenzene	0.989	---	0.0250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
Chloroethane	1.49	---	0.500	mg/kg wet	50	1.00	---	149	80 - 120%	---	---	Q-56
Chloroform	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Chloromethane	1.10	---	0.250	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
2-Chlorotoluene	0.985	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
4-Chlorotoluene	0.951	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
Dibromochloromethane	1.03	---	0.100	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	0.873	---	0.250	mg/kg wet	50	1.00	---	87	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	0.981	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Dibromomethane	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,2-Dichlorobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,3-Dichlorobenzene	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,4-Dichlorobenzene	1.00	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Dichlorodifluoromethane	1.29	---	0.100	mg/kg wet	50	1.00	---	129	80 - 120%	---	---	E-05, Q-56
1,1-Dichloroethane	0.998	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A						Soil						
LCS (9091269-BS1)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 11:07										
1,2-Dichloroethane (EDC)	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
1,1-Dichloroethene	1.07	---	0.0250	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
cis-1,2-Dichloroethene	1.06	---	0.0250	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
trans-1,2-Dichloroethene	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
1,2-Dichloropropane	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,3-Dichloropropane	0.999	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
2,2-Dichloropropane	1.13	---	0.0500	mg/kg wet	50	1.00	---	113	80 - 120%	---	---	
1,1-Dichloropropene	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
cis-1,3-Dichloropropene	0.928	---	0.0500	mg/kg wet	50	1.00	---	93	80 - 120%	---	---	
trans-1,3-Dichloropropene	0.936	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Ethylbenzene	0.955	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Hexachlorobutadiene	0.954	---	0.100	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
2-Hexanone	1.83	---	0.500	mg/kg wet	50	2.00	---	91	80 - 120%	---	---	
Isopropylbenzene	0.972	---	0.0500	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
4-Isopropyltoluene	0.940	---	0.0500	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Methylene chloride	1.16	---	0.250	mg/kg wet	50	1.00	---	116	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	1.86	---	0.500	mg/kg wet	50	2.00	---	93	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.981	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Naphthalene	0.960	---	0.100	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
n-Propylbenzene	0.963	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Styrene	0.966	---	0.0500	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	0.923	---	0.0500	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
Tetrachloroethene (PCE)	1.08	---	0.0250	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
Toluene	0.958	---	0.0500	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
1,2,3-Trichlorobenzene	0.965	---	0.250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
1,2,4-Trichlorobenzene	0.987	---	0.250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,1,1-Trichloroethane	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,1,2-Trichloroethane	0.960	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Trichloroethene (TCE)	1.10	---	0.0250	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
Trichlorofluoromethane	1.45	---	0.100	mg/kg wet	50	1.00	---	145	80 - 120%	---	---	Q-56
1,2,3-Trichloropropane	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,2,4-Trimethylbenzene	0.906	---	0.0500	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
1,3,5-Trimethylbenzene	0.884	---	0.0500	mg/kg wet	50	1.00	---	88	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

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**Apex Laboratories, LLC**

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A							Soil					
LCS (9091269-BS1)		Prepared: 09/25/19 10:40 Analyzed: 09/25/19 11:07										
Vinyl chloride	1.17	---	0.0250	mg/kg wet	50	1.00	---	117	80 - 120%	---	---	
m,p-Xylene	1.98	---	0.0500	mg/kg wet	50	2.00	---	99	80 - 120%	---	---	
o-Xylene	0.943	---	0.0250	mg/kg wet	50	1.00	---	94	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		97 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		97 %		80-120 %		"						
Matrix Spike (9091269-MS1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 18:46										
QC Source Sample: GP-01-5 (A910735-06RE1)												
5035A/8260C												
Acetone	ND	---	1.21	mg/kg dry	50	2.42	ND	49	36 - 164%	---	---	
Acrylonitrile	0.875	---	0.121	mg/kg dry	50	1.21	ND	72	65 - 134%	---	---	
Benzene	1.27	---	0.0121	mg/kg dry	50	1.21	0.0132	104	77 - 121%	---	---	
Bromobenzene	1.23	---	0.0303	mg/kg dry	50	1.21	ND	102	78 - 121%	---	---	
Bromochloromethane	1.13	---	0.0606	mg/kg dry	50	1.21	ND	93	78 - 125%	---	---	
Bromodichloromethane	1.27	---	0.0606	mg/kg dry	50	1.21	ND	105	75 - 127%	---	---	
Bromoform	1.23	---	0.121	mg/kg dry	50	1.21	ND	102	67 - 132%	---	---	
Bromomethane	1.46	---	0.606	mg/kg dry	50	1.21	ND	120	53 - 143%	---	---	Q-54d
2-Butanone (MEK)	1.76	---	0.606	mg/kg dry	50	2.42	ND	73	51 - 148%	---	---	
n-Butylbenzene	1.18	---	0.0606	mg/kg dry	50	1.21	ND	98	70 - 128%	---	---	
sec-Butylbenzene	1.15	---	0.0606	mg/kg dry	50	1.21	ND	95	73 - 126%	---	---	
tert-Butylbenzene	1.12	---	0.0606	mg/kg dry	50	1.21	ND	92	73 - 125%	---	---	
Carbon disulfide	1.00	---	0.606	mg/kg dry	50	1.21	ND	83	63 - 132%	---	---	
Carbon tetrachloride	1.30	---	0.0606	mg/kg dry	50	1.21	ND	107	70 - 135%	---	---	
Chlorobenzene	1.16	---	0.0303	mg/kg dry	50	1.21	ND	96	79 - 120%	---	---	
Chloroethane	3.20	---	0.606	mg/kg dry	50	1.21	ND	265	59 - 139%	---	---	Q-54b
Chloroform	1.22	---	0.0606	mg/kg dry	50	1.21	ND	100	78 - 123%	---	---	
Chloromethane	1.20	---	0.303	mg/kg dry	50	1.21	ND	99	50 - 136%	---	---	
2-Chlorotoluene	1.23	---	0.0606	mg/kg dry	50	1.21	ND	102	75 - 122%	---	---	
4-Chlorotoluene	1.15	---	0.0606	mg/kg dry	50	1.21	ND	95	72 - 124%	---	---	
Dibromochloromethane	1.28	---	0.121	mg/kg dry	50	1.21	ND	106	74 - 126%	---	---	
1,2-Dibromo-3-chloropropane	0.932	---	0.303	mg/kg dry	50	1.21	ND	77	61 - 132%	---	---	
1,2-Dibromoethane (EDB)	1.15	---	0.0606	mg/kg dry	50	1.21	ND	95	78 - 122%	---	---	
Dibromomethane	1.28	---	0.0606	mg/kg dry	50	1.21	ND	106	78 - 125%	---	---	

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A						Soil						
Matrix Spike (9091269-MS1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 18:46										
QC Source Sample: GP-01-5 (A910735-06RE1)												
1,2-Dichlorobenzene	1.18	---	0.0303	mg/kg dry	50	1.21	ND	97	78 - 121%	---	---	E-05, Q-54f
1,3-Dichlorobenzene	1.21	---	0.0303	mg/kg dry	50	1.21	ND	100	77 - 121%	---	---	
1,4-Dichlorobenzene	1.18	---	0.0303	mg/kg dry	50	1.21	ND	97	75 - 120%	---	---	
Dichlorodifluoromethane	1.52	---	0.121	mg/kg dry	50	1.21	ND	125	29 - 149%	---	---	
1,1-Dichloroethane	1.29	---	0.0303	mg/kg dry	50	1.21	ND	107	76 - 125%	---	---	
1,2-Dichloroethane (EDC)	1.24	---	0.0303	mg/kg dry	50	1.21	ND	103	73 - 128%	---	---	
1,1-Dichloroethene	1.25	---	0.0303	mg/kg dry	50	1.21	ND	103	70 - 131%	---	---	
cis-1,2-Dichloroethene	1.30	---	0.0303	mg/kg dry	50	1.21	ND	107	77 - 123%	---	---	
trans-1,2-Dichloroethene	1.28	---	0.0303	mg/kg dry	50	1.21	ND	106	74 - 125%	---	---	
1,2-Dichloropropane	1.27	---	0.0303	mg/kg dry	50	1.21	ND	105	76 - 123%	---	---	
1,3-Dichloropropane	1.16	---	0.0606	mg/kg dry	50	1.21	ND	96	77 - 121%	---	---	
2,2-Dichloropropane	1.29	---	0.0606	mg/kg dry	50	1.21	ND	107	67 - 133%	---	---	
1,1-Dichloropropene	1.28	---	0.0606	mg/kg dry	50	1.21	ND	106	76 - 125%	---	---	
cis-1,3-Dichloropropene	1.11	---	0.0606	mg/kg dry	50	1.21	ND	92	74 - 126%	---	---	
trans-1,3-Dichloropropene	1.08	---	0.0606	mg/kg dry	50	1.21	ND	89	71 - 130%	---	---	
Ethylbenzene	1.11	---	0.0303	mg/kg dry	50	1.21	ND	90	76 - 122%	---	---	
Hexachlorobutadiene	1.03	---	0.121	mg/kg dry	50	1.21	ND	85	61 - 135%	---	---	
2-Hexanone	1.79	---	0.606	mg/kg dry	50	2.42	ND	74	53 - 145%	---	---	
Isopropylbenzene	1.14	---	0.0606	mg/kg dry	50	1.21	ND	94	68 - 134%	---	---	
4-Isopropyltoluene	1.16	---	0.0606	mg/kg dry	50	1.21	ND	96	73 - 127%	---	---	
Methylene chloride	1.08	---	0.303	mg/kg dry	50	1.21	ND	90	70 - 128%	---	---	
4-Methyl-2-pentanone (MiBK)	2.18	---	0.606	mg/kg dry	50	2.42	ND	90	65 - 135%	---	---	
Methyl tert-butyl ether (MTBE)	1.20	---	0.0606	mg/kg dry	50	1.21	ND	99	73 - 125%	---	---	
Naphthalene	1.06	---	0.121	mg/kg dry	50	1.21	ND	87	62 - 129%	---	---	
n-Propylbenzene	1.19	---	0.0303	mg/kg dry	50	1.21	0.0229	96	73 - 125%	---	---	
Styrene	1.14	---	0.0606	mg/kg dry	50	1.21	ND	94	76 - 124%	---	---	
1,1,1,2-Tetrachloroethane	1.25	---	0.0303	mg/kg dry	50	1.21	ND	103	78 - 125%	---	---	
1,1,2,2-Tetrachloroethane	1.08	---	0.0606	mg/kg dry	50	1.21	ND	86	70 - 124%	---	---	
Tetrachloroethene (PCE)	1.21	---	0.0303	mg/kg dry	50	1.21	ND	100	73 - 128%	---	---	
Toluene	1.16	---	0.0606	mg/kg dry	50	1.21	0.0627	90	77 - 121%	---	---	
1,2,3-Trichlorobenzene	1.02	---	0.303	mg/kg dry	50	1.21	ND	84	66 - 130%	---	---	
1,2,4-Trichlorobenzene	1.06	---	0.303	mg/kg dry	50	1.21	ND	88	67 - 129%	---	---	
1,1,1-Trichloroethane	1.21	---	0.0303	mg/kg dry	50	1.21	ND	100	73 - 130%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A						Soil						
Matrix Spike (9091269-MS1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 18:46										
QC Source Sample: GP-01-5 (A910735-06RE1)												
1,1,2-Trichloroethane	1.22	---	0.0303	mg/kg dry	50	1.21	ND	101	78 - 121%	---	---	Q-54a
Trichloroethene (TCE)	1.33	---	0.0303	mg/kg dry	50	1.21	ND	110	77 - 123%	---	---	
Trichlorofluoromethane	3.10	---	0.121	mg/kg dry	50	1.21	ND	256	62 - 140%	---	---	
1,2,3-Trichloropropane	1.13	---	0.0606	mg/kg dry	50	1.21	ND	93	73 - 125%	---	---	
1,2,4-Trimethylbenzene	1.19	---	0.0606	mg/kg dry	50	1.21	0.0452	94	75 - 123%	---	---	
1,3,5-Trimethylbenzene	1.13	---	0.0606	mg/kg dry	50	1.21	ND	93	73 - 124%	---	---	
Vinyl chloride	1.31	---	0.0303	mg/kg dry	50	1.21	ND	108	56 - 135%	---	---	
m,p-Xylene	2.31	---	0.0606	mg/kg dry	50	2.42	0.0874	92	77 - 124%	---	---	
o-Xylene	1.12	---	0.0303	mg/kg dry	50	1.21	0.0327	90	77 - 123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 111 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		94 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		101 %		80-120 %		"						

Matrix Spike Dup (9091269-MSD1) Prepared: 09/20/19 09:15 Analyzed: 09/25/19 19:13

QC Source Sample: GP-01-5 (A910735-06RE1)												
5035A/8260C												
Acetone	2.61	---	1.46	mg/kg dry	50	2.91	ND	90	36 - 164%	75	35%	Q-01
Acrylonitrile	1.34	---	0.146	mg/kg dry	50	1.45	ND	92	65 - 134%	42	35%	Q-01
Benzene	1.58	---	0.0146	mg/kg dry	50	1.45	0.0132	108	77 - 121%	22	35%	
Bromobenzene	1.46	---	0.0364	mg/kg dry	50	1.45	ND	101	78 - 121%	17	35%	
Bromochloromethane	1.54	---	0.0728	mg/kg dry	50	1.45	ND	106	78 - 125%	31	35%	
Bromodichloromethane	1.65	---	0.0728	mg/kg dry	50	1.45	ND	114	75 - 127%	26	35%	
Bromoform	1.78	---	0.146	mg/kg dry	50	1.45	ND	122	67 - 132%	36	35%	Q-01
Bromomethane	1.96	---	0.728	mg/kg dry	50	1.45	ND	135	53 - 143%	30	35%	Q-54d
2-Butanone (MEK)	2.88	---	0.728	mg/kg dry	50	2.91	ND	99	51 - 148%	49	35%	Q-01
n-Butylbenzene	1.42	---	0.0728	mg/kg dry	50	1.45	ND	98	70 - 128%	18	35%	
sec-Butylbenzene	1.28	---	0.0728	mg/kg dry	50	1.45	ND	88	73 - 126%	11	35%	
tert-Butylbenzene	1.28	---	0.0728	mg/kg dry	50	1.45	ND	88	73 - 125%	14	35%	
Carbon disulfide	1.21	---	0.728	mg/kg dry	50	1.45	ND	83	63 - 132%	19	35%	
Carbon tetrachloride	1.63	---	0.0728	mg/kg dry	50	1.45	ND	112	70 - 135%	23	35%	
Chlorobenzene	1.43	---	0.0364	mg/kg dry	50	1.45	ND	98	79 - 120%	21	35%	
Chloroethane	7.51	---	0.728	mg/kg dry	50	1.45	ND	517	59 - 139%	80	35%	Q-54b
Chloroform	1.53	---	0.0728	mg/kg dry	50	1.45	ND	105	78 - 123%	23	35%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A							Soil					
Matrix Spike Dup (9091269-MSD1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 19:13										
QC Source Sample: GP-01-5 (A910735-06RE1)												
Chloromethane	1.59	---	0.364	mg/kg dry	50	1.45	ND	110	50 - 136%	28	35%	E-05, Q-54f
2-Chlorotoluene	1.42	---	0.0728	mg/kg dry	50	1.45	ND	97	75 - 122%	14	35%	
4-Chlorotoluene	1.34	---	0.0728	mg/kg dry	50	1.45	ND	92	72 - 124%	16	35%	
Dibromochloromethane	1.68	---	0.146	mg/kg dry	50	1.45	ND	116	74 - 126%	27	35%	
1,2-Dibromo-3-chloropropane	1.27	---	0.364	mg/kg dry	50	1.45	ND	88	61 - 132%	31	35%	
1,2-Dibromoethane (EDB)	1.49	---	0.0728	mg/kg dry	50	1.45	ND	103	78 - 122%	26	35%	
Dibromomethane	1.66	---	0.0728	mg/kg dry	50	1.45	ND	115	78 - 125%	26	35%	
1,2-Dichlorobenzene	1.50	---	0.0364	mg/kg dry	50	1.45	ND	103	78 - 121%	25	35%	
1,3-Dichlorobenzene	1.48	---	0.0364	mg/kg dry	50	1.45	ND	102	77 - 121%	20	35%	
1,4-Dichlorobenzene	1.44	---	0.0364	mg/kg dry	50	1.45	ND	99	75 - 120%	20	35%	
Dichlorodifluoromethane	2.01	---	0.146	mg/kg dry	50	1.45	ND	138	29 - 149%	28	35%	Q-01
1,1-Dichloroethane	1.63	---	0.0364	mg/kg dry	50	1.45	ND	112	76 - 125%	23	35%	
1,2-Dichloroethane (EDC)	1.61	---	0.0364	mg/kg dry	50	1.45	ND	111	73 - 128%	26	35%	
1,1-Dichloroethene	1.53	---	0.0364	mg/kg dry	50	1.45	ND	105	70 - 131%	20	35%	
cis-1,2-Dichloroethene	1.64	---	0.0364	mg/kg dry	50	1.45	ND	113	77 - 123%	23	35%	
trans-1,2-Dichloroethene	1.58	---	0.0364	mg/kg dry	50	1.45	ND	109	74 - 125%	21	35%	
1,2-Dichloropropane	1.60	---	0.0364	mg/kg dry	50	1.45	ND	110	76 - 123%	23	35%	
1,3-Dichloropropane	1.49	---	0.0728	mg/kg dry	50	1.45	ND	102	77 - 121%	24	35%	
2,2-Dichloropropane	1.58	---	0.0728	mg/kg dry	50	1.45	ND	108	67 - 133%	20	35%	
1,1-Dichloropropene	1.58	---	0.0728	mg/kg dry	50	1.45	ND	109	76 - 125%	21	35%	
cis-1,3-Dichloropropene	1.40	---	0.0728	mg/kg dry	50	1.45	ND	96	74 - 126%	23	35%	
trans-1,3-Dichloropropene	1.40	---	0.0728	mg/kg dry	50	1.45	ND	97	71 - 130%	26	35%	
Ethylbenzene	1.34	---	0.0364	mg/kg dry	50	1.45	ND	90	76 - 122%	18	35%	
Hexachlorobutadiene	1.39	---	0.146	mg/kg dry	50	1.45	ND	96	61 - 135%	30	35%	
2-Hexanone	2.68	---	0.728	mg/kg dry	50	2.91	ND	92	53 - 145%	40	35%	
Isopropylbenzene	1.37	---	0.0728	mg/kg dry	50	1.45	ND	94	68 - 134%	19	35%	
4-Isopropyltoluene	1.38	---	0.0728	mg/kg dry	50	1.45	ND	95	73 - 127%	17	35%	
Methylene chloride	1.49	---	0.364	mg/kg dry	50	1.45	ND	103	70 - 128%	32	35%	
4-Methyl-2-pentanone (MiBK)	2.83	---	0.728	mg/kg dry	50	2.91	ND	97	65 - 135%	26	35%	
Methyl tert-butyl ether (MTBE)	1.55	---	0.0728	mg/kg dry	50	1.45	ND	107	73 - 125%	26	35%	
Naphthalene	1.35	---	0.146	mg/kg dry	50	1.45	ND	93	62 - 129%	24	35%	
n-Propylbenzene	1.35	---	0.0364	mg/kg dry	50	1.45	0.0229	91	73 - 125%	13	35%	
Styrene	1.41	---	0.0728	mg/kg dry	50	1.45	ND	97	76 - 124%	22	35%	

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503-718-2323
EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091269 - EPA 5035A							Soil					
Matrix Spike Dup (9091269-MSD1)		Prepared: 09/20/19 09:15 Analyzed: 09/25/19 19:13										
QC Source Sample: GP-01-5 (A910735-06RE1)												
1,1,1,2-Tetrachloroethane	1.59	---	0.0364	mg/kg dry	50	1.45	ND	109	78 - 125%	24	35%	
1,1,2,2-Tetrachloroethane	1.42	---	0.0728	mg/kg dry	50	1.45	ND	95	70 - 124%	27	35%	
Tetrachloroethene (PCE)	1.48	---	0.0364	mg/kg dry	50	1.45	ND	102	73 - 128%	20	35%	
Toluene	1.35	---	0.0728	mg/kg dry	50	1.45	0.0627	89	77 - 121%	16	35%	
1,2,3-Trichlorobenzene	1.32	---	0.364	mg/kg dry	50	1.45	ND	91	66 - 130%	26	35%	
1,2,4-Trichlorobenzene	1.40	---	0.364	mg/kg dry	50	1.45	ND	96	67 - 129%	27	35%	
1,1,1-Trichloroethane	1.49	---	0.0364	mg/kg dry	50	1.45	ND	102	73 - 130%	21	35%	
1,1,2-Trichloroethane	1.46	---	0.0364	mg/kg dry	50	1.45	ND	101	78 - 121%	18	35%	
Trichloroethene (TCE)	1.65	---	0.0364	mg/kg dry	50	1.45	ND	114	77 - 123%	22	35%	
Trichlorofluoromethane	6.55	---	0.146	mg/kg dry	50	1.45	ND	451	62 - 140%	72	35%	Q-54a
1,2,3-Trichloropropane	1.51	---	0.0728	mg/kg dry	50	1.45	ND	104	73 - 125%	29	35%	
1,2,4-Trimethylbenzene	1.37	---	0.0728	mg/kg dry	50	1.45	0.0452	91	75 - 123%	14	35%	
1,3,5-Trimethylbenzene	1.30	---	0.0728	mg/kg dry	50	1.45	ND	89	73 - 124%	14	35%	
Vinyl chloride	1.86	---	0.0364	mg/kg dry	50	1.45	ND	128	56 - 135%	35	35%	
m,p-Xylene	2.78	---	0.0728	mg/kg dry	50	2.91	0.0874	93	77 - 124%	19	35%	
o-Xylene	1.36	---	0.0364	mg/kg dry	50	1.45	0.0327	91	77 - 123%	19	35%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 112 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		94 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		97 %		80-120 %		"						

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Polychlorinated Biphenyls by EPA 8082A**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091258 - EPA 3546												
Soil												
Blank (9091258-BLK1)												
Prepared: 09/25/19 07:04 Analyzed: 09/26/19 08:38												
EPA 8082A												
Aroclor 1016	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1232	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1242	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1248	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1254	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Aroclor 1260	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr) Recovery: 114 % Limits: 60-125 % Dilution: 1x												
LCS (9091258-BS1)												
Prepared: 09/25/19 07:04 Analyzed: 09/26/19 08:55												
EPA 8082A												
Aroclor 1016	0.174	---	0.0100	mg/kg wet	1	0.250	---	70	47 - 134%	---	---	
Aroclor 1260	0.216	---	0.0100	mg/kg wet	1	0.250	---	86	53 - 140%	---	---	
Surr: Decachlorobiphenyl (Surr) Recovery: 107 % Limits: 60-125 % Dilution: 1x												
Matrix Spike (9091258-MS1)												
Prepared: 09/25/19 07:04 Analyzed: 09/26/19 10:23												
QC Source Sample: GP-01-5 (A910735-06)												
EPA 8082A												
Aroclor 1016	0.218	---	0.0118	mg/kg dry	1	0.294	ND	74	47 - 134%	---	---	
Aroclor 1260	0.268	---	0.0118	mg/kg dry	1	0.294	ND	91	53 - 140%	---	---	Q-41
Surr: Decachlorobiphenyl (Surr) Recovery: 104 % Limits: 60-125 % Dilution: 1x												
Matrix Spike Dup (9091258-MSD1)												
Prepared: 09/25/19 07:04 Analyzed: 09/26/19 10:59												
QC Source Sample: GP-01-5 (A910735-06)												
EPA 8082A												
Aroclor 1016	0.215	---	0.0118	mg/kg dry	1	0.296	ND	73	47 - 134%	1	30%	
Aroclor 1260	0.273	---	0.0118	mg/kg dry	1	0.296	ND	92	53 - 140%	2	30%	Q-41
Surr: Decachlorobiphenyl (Surr) Recovery: 105 % Limits: 60-125 % Dilution: 1x												

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091243 - EPA 3051A												
Soil												
Blank (9091243-BLK1)												
Prepared: 09/24/19 14:53 Analyzed: 09/24/19 19:29												
EPA 6020A												
Arsenic	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.192	mg/kg wet	10	---	---	---	---	---	---	
LCS (9091243-BS1)												
Prepared: 09/24/19 14:53 Analyzed: 09/24/19 19:43												
EPA 6020A												
Arsenic	52.8	---	1.00	mg/kg wet	10	50.0	---	106	80 - 120%	---	---	
Barium	54.8	---	1.00	mg/kg wet	10	50.0	---	110	80 - 120%	---	---	
Cadmium	53.4	---	0.200	mg/kg wet	10	50.0	---	107	80 - 120%	---	---	
Chromium	54.3	---	1.00	mg/kg wet	10	50.0	---	109	80 - 120%	---	---	
Lead	54.6	---	0.200	mg/kg wet	10	50.0	---	109	80 - 120%	---	---	
Mercury	1.04	---	0.0800	mg/kg wet	10	1.00	---	104	80 - 120%	---	---	
Selenium	26.4	---	1.00	mg/kg wet	10	25.0	---	106	80 - 120%	---	---	
Silver	28.5	---	0.200	mg/kg wet	10	25.0	---	114	80 - 120%	---	---	
Matrix Spike (9091243-MS1)												
Prepared: 09/24/19 14:53 Analyzed: 09/24/19 20:48												
QC Source Sample: GP-01-5 (A910735-06)												
EPA 6020A												
Arsenic	63.0	---	1.30	mg/kg dry	10	65.2	0.900	95	75 - 125%	---	---	
Barium	166	---	1.30	mg/kg dry	10	65.2	99.9	101	75 - 125%	---	---	
Cadmium	63.5	---	0.261	mg/kg dry	10	65.2	ND	97	75 - 125%	---	---	
Chromium	107	---	1.30	mg/kg dry	10	65.2	46.9	92	75 - 125%	---	---	
Lead	66.5	---	0.261	mg/kg dry	10	65.2	2.38	98	75 - 125%	---	---	
Mercury	1.29	---	0.104	mg/kg dry	10	1.30	0.117	90	75 - 125%	---	---	
Selenium	30.4	---	1.30	mg/kg dry	10	32.6	ND	93	75 - 125%	---	---	
Silver	34.1	---	0.261	mg/kg dry	10	32.6	ND	105	75 - 125%	---	---	
Matrix Spike Dup (9091243-MSD1)												
Prepared: 09/24/19 14:53 Analyzed: 09/24/19 20:53												

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 6020A (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091243 - EPA 3051A							Soil					
Matrix Spike Dup (9091243-MSD1)		Prepared: 09/24/19 14:53		Analyzed: 09/24/19 20:53								
QC Source Sample: GP-01-5 (A910735-06)												
EPA 6020A												
Arsenic	65.6	---	1.32	mg/kg dry	10	65.9	0.900	98	75 - 125%	4	40%	
Barium	167	---	1.32	mg/kg dry	10	65.9	99.9	102	75 - 125%	0.8	40%	
Cadmium	66.3	---	0.264	mg/kg dry	10	65.9	ND	101	75 - 125%	4	40%	
Chromium	108	---	1.32	mg/kg dry	10	65.9	46.9	92	75 - 125%	0.7	40%	
Lead	69.5	---	0.264	mg/kg dry	10	65.9	2.38	102	75 - 125%	4	40%	
Mercury	1.37	---	0.105	mg/kg dry	10	1.32	0.117	95	75 - 125%	6	40%	
Selenium	31.5	---	1.32	mg/kg dry	10	32.9	ND	95	75 - 125%	3	40%	
Silver	35.3	---	0.264	mg/kg dry	10	32.9	ND	107	75 - 125%	4	40%	

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091204 - Total Solids (Dry Weight)							Soil					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091260 - Total Solids (Dry Weight)							Soil					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3546 (Fuels)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091331							
A910735-01	Soil	NWTPH-Dx	09/19/19 15:30	09/26/19 11:47	10.74g/5mL	10g/5mL	0.93
A910735-02	Soil	NWTPH-Dx	09/19/19 16:00	09/26/19 11:47	10.5g/5mL	10g/5mL	0.95
A910735-03	Soil	NWTPH-Dx	09/19/19 16:30	09/26/19 11:47	11.47g/5mL	10g/5mL	0.87
A910735-04	Soil	NWTPH-Dx	09/19/19 17:00	09/26/19 11:47	10.4g/5mL	10g/5mL	0.96
A910735-05	Soil	NWTPH-Dx	09/20/19 09:00	09/26/19 11:47	11.11g/5mL	10g/5mL	0.90
A910735-06	Soil	NWTPH-Dx	09/20/19 09:15	09/26/19 11:47	10.39g/5mL	10g/5mL	0.96
A910735-07	Soil	NWTPH-Dx	09/20/19 09:30	09/26/19 11:47	10.51g/5mL	10g/5mL	0.95
A910735-08	Soil	NWTPH-Dx	09/20/19 10:00	09/26/19 11:47	10.64g/5mL	10g/5mL	0.94
A910735-09	Soil	NWTPH-Dx	09/20/19 11:30	09/26/19 11:47	10.11g/5mL	10g/5mL	0.99
A910735-10	Soil	NWTPH-Dx	09/20/19 12:00	09/26/19 11:47	11.01g/5mL	10g/5mL	0.91

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091209							
A910735-03	Soil	NWTPH-Gx (MS)	09/19/19 16:30	09/19/19 16:30	5.23g/5mL	5g/5mL	0.96
A910735-05	Soil	NWTPH-Gx (MS)	09/20/19 09:00	09/20/19 09:00	7.14g/5mL	5g/5mL	0.70
A910735-09	Soil	NWTPH-Gx (MS)	09/20/19 11:30	09/20/19 11:30	5.75g/5mL	5g/5mL	0.87
Batch: 9091211							
A910735-01RE1	Soil	NWTPH-Gx (MS)	09/19/19 15:30	09/19/19 15:30	5.85g/5mL	5g/5mL	0.86
A910735-02RE1	Soil	NWTPH-Gx (MS)	09/19/19 16:00	09/19/19 16:00	6.16g/5mL	5g/5mL	0.81
A910735-04RE1	Soil	NWTPH-Gx (MS)	09/19/19 17:00	09/19/19 17:00	6.29g/5mL	5g/5mL	0.80
A910735-08RE1	Soil	NWTPH-Gx (MS)	09/20/19 10:00	09/20/19 10:00	7.39g/5mL	5g/5mL	0.68
A910735-10RE1	Soil	NWTPH-Gx (MS)	09/20/19 12:00	09/20/19 12:00	6.54g/5mL	5g/5mL	0.77
Batch: 9091269							
A910735-06RE1	Soil	NWTPH-Gx (MS)	09/20/19 09:15	09/20/19 09:15	6.33g/5mL	5g/5mL	0.79
A910735-07RE1	Soil	NWTPH-Gx (MS)	09/20/19 09:30	09/20/19 09:30	6.89g/5mL	5g/5mL	0.73

Volatile Organic Compounds by EPA 5035A/8260C**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091209							
A910735-03	Soil	5035A/8260C	09/19/19 16:30	09/19/19 16:30	5.23g/5mL	5g/5mL	0.96

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Portland, OR 97225

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910735 - 10 02 19 1625****SAMPLE PREPARATION INFORMATION****Volatile Organic Compounds by EPA 5035A/8260C****Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A910735-05	Soil	5035A/8260C	09/20/19 09:00	09/20/19 09:00	7.14g/5mL	5g/5mL	0.70
A910735-09	Soil	5035A/8260C	09/20/19 11:30	09/20/19 11:30	5.75g/5mL	5g/5mL	0.87
Batch: 9091211							
A910735-01RE1	Soil	5035A/8260C	09/19/19 15:30	09/19/19 15:30	5.85g/5mL	5g/5mL	0.86
A910735-02RE1	Soil	5035A/8260C	09/19/19 16:00	09/19/19 16:00	6.16g/5mL	5g/5mL	0.81
A910735-04RE1	Soil	5035A/8260C	09/19/19 17:00	09/19/19 17:00	6.29g/5mL	5g/5mL	0.80
A910735-08RE1	Soil	5035A/8260C	09/20/19 10:00	09/20/19 10:00	7.39g/5mL	5g/5mL	0.68
A910735-10RE1	Soil	5035A/8260C	09/20/19 12:00	09/20/19 12:00	6.54g/5mL	5g/5mL	0.77
Batch: 9091269							
A910735-06RE1	Soil	5035A/8260C	09/20/19 09:15	09/20/19 09:15	6.33g/5mL	5g/5mL	0.79
A910735-07RE1	Soil	5035A/8260C	09/20/19 09:30	09/20/19 09:30	6.89g/5mL	5g/5mL	0.73

Polychlorinated Biphenyls by EPA 8082A**Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091258							
A910735-05	Soil	EPA 8082A	09/20/19 09:00	09/25/19 07:04	10.02g/5mL	10g/5mL	1.00
A910735-06	Soil	EPA 8082A	09/20/19 09:15	09/25/19 07:04	10.47g/5mL	10g/5mL	0.96

Total Metals by EPA 6020A (ICPMS)**Prep: EPA 3051A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091243							
A910735-01	Soil	EPA 6020A	09/19/19 15:30	09/24/19 14:53	0.487g/50mL	0.5g/50mL	1.03
A910735-02	Soil	EPA 6020A	09/19/19 16:00	09/24/19 14:53	0.458g/50mL	0.5g/50mL	1.09
A910735-03	Soil	EPA 6020A	09/19/19 16:30	09/24/19 14:53	0.487g/50mL	0.5g/50mL	1.03
A910735-04	Soil	EPA 6020A	09/19/19 17:00	09/24/19 14:53	0.486g/50mL	0.5g/50mL	1.03
A910735-05	Soil	EPA 6020A	09/20/19 09:00	09/24/19 14:53	0.467g/50mL	0.5g/50mL	1.07
A910735-06	Soil	EPA 6020A	09/20/19 09:15	09/24/19 14:53	0.504g/50mL	0.5g/50mL	0.99
A910735-07	Soil	EPA 6020A	09/20/19 09:30	09/24/19 14:53	0.463g/50mL	0.5g/50mL	1.08
A910735-08	Soil	EPA 6020A	09/20/19 10:00	09/24/19 14:53	0.469g/50mL	0.5g/50mL	1.07
A910735-09	Soil	EPA 6020A	09/20/19 11:30	09/24/19 14:53	0.511g/50mL	0.5g/50mL	0.98
A910735-10	Soil	EPA 6020A	09/20/19 12:00	09/24/19 14:53	0.506g/50mL	0.5g/50mL	0.99

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Lisa Domenighini, Client Services Manager



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6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Stantec Portland

9400 SW Barnes Rd Ste 200
Portland, OR 97225

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0735 - 10 02 19 1625

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9091204</u>							
A9I0735-06	Soil	EPA 8000C	09/20/19 09:15	09/24/19 18:36			NA
<u>Batch: 9091260</u>							
A9I0735-01	Soil	EPA 8000C	09/19/19 15:30	09/25/19 07:49			NA
A9I0735-02	Soil	EPA 8000C	09/19/19 16:00	09/25/19 07:49			NA
A9I0735-03	Soil	EPA 8000C	09/19/19 16:30	09/25/19 07:49			NA
A9I0735-04	Soil	EPA 8000C	09/19/19 17:00	09/25/19 07:49			NA
A9I0735-05	Soil	EPA 8000C	09/20/19 09:00	09/25/19 07:49			NA
A9I0735-07	Soil	EPA 8000C	09/20/19 09:30	09/25/19 07:49			NA
A9I0735-08	Soil	EPA 8000C	09/20/19 10:00	09/25/19 07:49			NA
A9I0735-09	Soil	EPA 8000C	09/20/19 11:30	09/25/19 07:49			NA
A9I0735-10	Soil	EPA 8000C	09/20/19 12:00	09/25/19 07:49			NA

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A910735 - 10 02 19 1625

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- C-07** Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- E-05** Estimated Result. Initial Calibration Verification (ICV) failed high. No affect on non-detect results.
- F-20** Result for Diesel is Estimated due to overlap from Gasoline Range Organics or other VOCs.
- M-02** Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +1.8%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +25.1%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +28.6%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +5.9%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +7.0%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +9.4%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -2.2%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260C, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260C
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

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A910735 - 10 02 19 1625

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported.
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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A9I0735 - 10 02 19 1625

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910735 - 10 02 19 1625

LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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A910735 - 10 02 19 1625

APEX LABS COOLER RECEIPT FORM

Client: Stantec Element WO#: A9 10735

Project/Project #: Lampson / 185750581

Delivery Info:

Date/time received: 9/24/19 @ 1015 By: JS

Delivered by: Apex ☐ Client ☐ ESS ☐ FedEx ☒ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐

Cooler Inspection Date/time inspected: 9/24/19 @ 1015 By: JS

Chain of Custody included? Yes ☒ No ☐ Custody seals? Yes ☒ No ☐

Signed/dated by client? Yes ☒ No ☐

Signed/dated by Apex? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.0</u>	<u>2.3</u>					

Received on ice? (Y/N) Y Y ☐ ☐ ☐ ☐ ☐ ☐

Temp. blanks? (Y/N) Y Y ☐ ☐ ☐ ☐ ☐ ☐

Ice type: (Gel/Real/Other) Real Real ☐ ☐ ☐ ☐ ☐ ☐

Condition: good good ☐ ☐ ☐ ☐ ☐ ☐

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

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

Out of temperature samples form initiated? Yes/No/NA ☒

Samples Inspection: Date/time inspected: 9/24/19 @ 1330 By: CB

All samples intact? Yes ☒ No ☐ Comments: _____

Bottle labels/COCs agree? Yes ☐ No ☒ Comments: 6P-01-5 MeOH vials smudged & incomplete, matched by process of elimination. 0P-02-1 no time

COC/container discrepancies form initiated? Yes ☐ No ☒ NA ☐

Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: _____

Do VOA vials have visible headspace? Yes ☐ No ☒ NA ☐

Comments: _____

Water samples: pH checked: Yes ☐ No ☐ NA ☒ pH appropriate? Yes ☐ No ☒ NA ☐

Comments: _____

Additional information: on 1/4 MeOH vials - (TB#2118) (2) vials provided, not listed on COC. Tracking # 7763 1239 7084, 7763 1239 6716, 7763 1239 7213, 7763 1239, 7452

Labeled by: CB Witness: THH Cooler Inspected by: CB See Project Contact Form ☒

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Lisa Domenighini

Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Monday, October 7, 2019

Len Farr

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

RE: A9I0744 - Lampson - 185750581

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

Enclosed are the results of analyses for work order A9I0744, which was received by the laboratory on 9/24/2019 at 10:15:00AM.

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

Please note: All samples will be disposed of within 30 days of final reporting, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.0 degC	Cooler #2	2.3 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0744 - 10 07 19 1649

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP02	A9I0744-01	Water	09/20/19 13:00	09/24/19 10:15
GP05	A9I0744-02	Water	09/20/19 14:15	09/24/19 10:15
EQ-092019	A9I0744-03	Water	09/20/19 16:30	09/24/19 10:15
TB-092319-1	A9I0744-04	Water	09/20/19 00:00	09/24/19 10:15

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Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP02 (A910744-01)		Matrix: Water			Batch: 9091399			
Diesel	0.322	---	0.278	mg/L	1	09/27/19 22:09	NWTPH-Dx	F-18
Oil	ND	---	0.556	mg/L	1	09/27/19 22:09	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 124 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/27/19 22:09</i>	<i>NWTPH-Dx</i>	<i>Q-41</i>
GP05 (A910744-02)		Matrix: Water			Batch: 9091399			
Diesel	ND	---	0.233	mg/L	1	09/27/19 22:33	NWTPH-Dx	
Oil	ND	---	0.465	mg/L	1	09/27/19 22:33	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 118 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/27/19 22:33</i>	<i>NWTPH-Dx</i>	<i>Q-41</i>
EQ-092019 (A910744-03)		Matrix: Water			Batch: 9091399			
Diesel	ND	---	0.202	mg/L	1	09/27/19 22:57	NWTPH-Dx	
Oil	ND	---	0.404	mg/L	1	09/27/19 22:57	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 117 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/27/19 22:57</i>	<i>NWTPH-Dx</i>	<i>Q-41</i>

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Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP02 (A910744-01RE1)				Matrix: Water		Batch: 9091347		
Gasoline Range Organics	2.46	---	0.100	mg/L	1	09/26/19 20:10	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	103 %	Limits: 50-150 %	1	09/26/19 20:10	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			182 %	50-150 %	1	09/26/19 20:10	NWTPH-Gx (MS)	S-08
GP05 (A910744-02RE1)				Matrix: Water		Batch: 9091347		
Gasoline Range Organics	0.232	---	0.100	mg/L	1	09/26/19 19:43	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	101 %	Limits: 50-150 %	1	09/26/19 19:43	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			100 %	50-150 %	1	09/26/19 19:43	NWTPH-Gx (MS)	
EQ-092019 (A910744-03)				Matrix: Water		Batch: 9091264		
Gasoline Range Organics	ND	---	0.100	mg/L	1	09/25/19 17:27	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	97 %	Limits: 50-150 %	1	09/25/19 17:27	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			92 %	50-150 %	1	09/25/19 17:27	NWTPH-Gx (MS)	

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503-718-2323

EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP02 (A910744-01RE1)				Matrix: Water		Batch: 9091347		
Acetone	ND	---	40.0	ug/L	1	09/26/19 20:10	EPA 8260C	R-02
Acrylonitrile	ND	---	2.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Benzene	6.25	---	0.200	ug/L	1	09/26/19 20:10	EPA 8260C	Q-42
Bromobenzene	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/26/19 20:10	EPA 8260C	
2-Butanone (MEK)	ND	---	11.0	ug/L	1	09/26/19 20:10	EPA 8260C	
n-Butylbenzene	2.86	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	M-02, Q-42
sec-Butylbenzene	1.81	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	09/26/19 20:10	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/26/19 20:10	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2-Dichloroethane (EDC)	159	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	Q-42
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP02 (A910744-01RE1)		Matrix: Water		Batch: 9091347				
Ethylbenzene	41.3	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/26/19 20:10	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/26/19 20:10	EPA 8260C	
Isopropylbenzene	5.83	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
4-Isopropyltoluene	1.89	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	Q-42, M-02
Methylene chloride	ND	---	5.00	ug/L	1	09/26/19 20:10	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	09/26/19 20:10	EPA 8260C	
Methyl tert-butyl ether (MTBE)	5.73	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Naphthalene	10.1	---	2.00	ug/L	1	09/26/19 20:10	EPA 8260C	Q-42
n-Propylbenzene	13.0	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
Toluene	16.4	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
1,1,2-Trichloroethane	ND	---	1.50	ug/L	1	09/26/19 20:10	EPA 8260C	R-02
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
1,2,4-Trimethylbenzene	82.5	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	Q-42
1,3,5-Trimethylbenzene	22.0	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/26/19 20:10	EPA 8260C	
m,p-Xylene	143	---	1.00	ug/L	1	09/26/19 20:10	EPA 8260C	Q-42
o-Xylene	45.3	---	0.500	ug/L	1	09/26/19 20:10	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %	1	09/26/19 20:10	EPA 8260C	
Toluene-d8 (Surr)		104 %		80-120 %	1	09/26/19 20:10	EPA 8260C	
4-Bromofluorobenzene (Surr)		104 %		80-120 %	1	09/26/19 20:10	EPA 8260C	

GP05 (A910744-02RE1)

Matrix: Water

Batch: 9091347

Acetone	ND	---	20.0	ug/L	1	09/26/19 19:43	EPA 8260C	
Acrylonitrile	ND	---	2.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Benzene	ND	---	0.200	ug/L	1	09/26/19 19:43	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	

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Stantec Portland

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP05 (A910744-02RE1)				Matrix: Water		Batch: 9091347		
Bromoform	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/26/19 19:43	EPA 8260C	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	09/26/19 19:43	EPA 8260C	
n-Butylbenzene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
sec-Butylbenzene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	09/26/19 19:43	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/26/19 19:43	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Ethylbenzene	8.53	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/26/19 19:43	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/26/19 19:43	EPA 8260C	
Isopropylbenzene	1.44	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/26/19 19:43	EPA 8260C	

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Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP05 (A910744-02RE1)				Matrix: Water		Batch: 9091347		
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	09/26/19 19:43	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	09/26/19 19:43	EPA 8260C	
n-Propylbenzene	4.23	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
1,3,5-Trimethylbenzene	5.49	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/26/19 19:43	EPA 8260C	
m,p-Xylene	7.68	---	1.00	ug/L	1	09/26/19 19:43	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	09/26/19 19:43	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/26/19 19:43</i>	<i>EPA 8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/26/19 19:43</i>	<i>EPA 8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/26/19 19:43</i>	<i>EPA 8260C</i>	

EQ-092019 (A910744-03)

Matrix: Water

Batch: 9091264

Acetone	ND	---	20.0	ug/L	1	09/25/19 17:27	EPA 8260C
Acrylonitrile	ND	---	2.00	ug/L	1	09/25/19 17:27	EPA 8260C
Benzene	ND	---	0.200	ug/L	1	09/25/19 17:27	EPA 8260C
Bromobenzene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C
Bromochloromethane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C
Bromodichloromethane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C
Bromoform	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C
Bromomethane	ND	---	5.00	ug/L	1	09/25/19 17:27	EPA 8260C
2-Butanone (MEK)	ND	---	10.0	ug/L	1	09/25/19 17:27	EPA 8260C
n-Butylbenzene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C
sec-Butylbenzene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EQ-092019 (A9I0744-03)				Matrix: Water		Batch: 9091264		
Carbon disulfide	ND	---	10.0	ug/L	1	09/25/19 17:27	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Chloroform	5.68	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/25/19 17:27	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/25/19 17:27	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/25/19 17:27	EPA 8260C	
Isopropylbenzene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/25/19 17:27	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	09/25/19 17:27	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	09/25/19 17:27	EPA 8260C	
n-Propylbenzene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	

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Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EQ-092019 (A910744-03)		Matrix: Water		Batch: 9091264				
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/25/19 17:27	EPA 8260C	
m,p-Xylene	ND	---	1.00	ug/L	1	09/25/19 17:27	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	09/25/19 17:27	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/25/19 17:27</i>	<i>EPA 8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 17:27</i>	<i>EPA 8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 17:27</i>	<i>EPA 8260C</i>	

TB-092319-1 (A910744-04)		Matrix: Water		Batch: 9091264				
Acetone	ND	---	20.0	ug/L	1	09/25/19 16:33	EPA 8260C	
Acrylonitrile	ND	---	2.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Benzene	ND	---	0.200	ug/L	1	09/25/19 16:33	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	09/25/19 16:33	EPA 8260C	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	09/25/19 16:33	EPA 8260C	
n-Butylbenzene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
sec-Butylbenzene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	09/25/19 16:33	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	09/25/19 16:33	EPA 8260C	

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

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EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-092319-1 (A910744-04)				Matrix: Water		Batch: 9091264		
2-Chlorotoluene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	09/25/19 16:33	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	09/25/19 16:33	EPA 8260C	
Isopropylbenzene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Methylene chloride	ND	---	5.00	ug/L	1	09/25/19 16:33	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	09/25/19 16:33	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	09/25/19 16:33	EPA 8260C	
n-Propylbenzene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	

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Lisa Domenighini, Client Services Manager

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EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-092319-1 (A910744-04)				Matrix: Water		Batch: 9091264		
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	09/25/19 16:33	EPA 8260C	
m,p-Xylene	ND	---	1.00	ug/L	1	09/25/19 16:33	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	09/25/19 16:33	EPA 8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/25/19 16:33</i>	<i>EPA 8260C</i>	
<i>Toluene-d8 (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 16:33</i>	<i>EPA 8260C</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/25/19 16:33</i>	<i>EPA 8260C</i>	

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****ANALYTICAL SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP02 (A910744-01)		Matrix: Water		Batch: 9091255				
Acenaphthene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Acenaphthylene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Anthracene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Benz(a)anthracene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Benzo(a)pyrene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Benzo(b)fluoranthene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Benzo(k)fluoranthene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Benzo(g,h,i)perylene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Chrysene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Dibenzofuran	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Fluoranthene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Fluorene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
1-Methylnaphthalene	3.41	---	0.0889	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
2-Methylnaphthalene	5.17	---	0.0889	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Naphthalene	9.89	---	0.0889	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Phenanthrene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
Pyrene	ND	---	0.0444	ug/L	1	09/26/19 11:28	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery:</i>	71 %	<i>Limits:</i>	44-120 %	1	09/26/19 11:28	EPA 8270D (SIM)
<i>p-Terphenyl-d14 (Surr)</i>			80 %		50-133 %	1	09/26/19 11:28	EPA 8270D (SIM)

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****ANALYTICAL SAMPLE RESULTS****Total Metals by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP02 (A910744-01) Matrix: Water								
Batch: 9091375								
Barium	826	---	1.00	ug/L	1	09/30/19 22:44	EPA 200.8	
Cadmium	0.379	---	0.200	ug/L	1	09/30/19 22:44	EPA 200.8	
Chromium	320	---	1.00	ug/L	1	09/30/19 22:44	EPA 200.8	
Lead	26.9	---	0.200	ug/L	1	09/30/19 22:44	EPA 200.8	
Mercury	1.29	---	0.0800	ug/L	1	09/30/19 22:44	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	09/30/19 22:44	EPA 200.8	
Silver	0.216	---	0.200	ug/L	1	09/30/19 22:44	EPA 200.8	
GP02 (A910744-01RE1) Matrix: Water								
Batch: 9091375								
Arsenic	17.7	---	10.0	ug/L	10	10/01/19 19:11	EPA 200.8	
GP05 (A910744-02) Matrix: Water								
Batch: 9091375								
Cadmium	1.66	---	0.200	ug/L	1	09/30/19 22:48	EPA 200.8	
Lead	144	---	0.200	ug/L	1	09/30/19 22:48	EPA 200.8	
Selenium	1.66	---	1.00	ug/L	1	09/30/19 22:48	EPA 200.8	
Silver	1.58	---	0.200	ug/L	1	09/30/19 22:48	EPA 200.8	
GP05 (A910744-02RE1) Matrix: Water								
Batch: 9091375								
Arsenic	106	---	10.0	ug/L	10	10/01/19 19:15	EPA 200.8	
Barium	4620	---	10.0	ug/L	10	10/01/19 19:15	EPA 200.8	
Chromium	1590	---	10.0	ug/L	10	10/01/19 19:15	EPA 200.8	
Mercury	11.0	---	0.800	ug/L	10	10/01/19 19:15	EPA 200.8 (Hg)	
EQ-092019 (A910744-03) Matrix: Water								
Batch: 9091375								
Barium	ND	---	1.00	ug/L	1	09/30/19 22:53	EPA 200.8	
Cadmium	ND	---	0.200	ug/L	1	09/30/19 22:53	EPA 200.8	
Chromium	ND	---	1.00	ug/L	1	09/30/19 22:53	EPA 200.8	
Lead	ND	---	0.200	ug/L	1	09/30/19 22:53	EPA 200.8	
Mercury	ND	---	0.0800	ug/L	1	09/30/19 22:53	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	09/30/19 22:53	EPA 200.8	
Silver	ND	---	0.200	ug/L	1	09/30/19 22:53	EPA 200.8	

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
EQ-092019 (A9I0744-03RE1)				Matrix: Water				
Batch: 9091375								
Arsenic	ND	---	1.00	ug/L	1	10/01/19 19:20	EPA 200.8	

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EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A9I0744 - 10 07 19 1649****ANALYTICAL SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GP02 (A9I0744-01) Matrix: Water								
Batch: 9091376								
Barium	110	---	1.00	ug/L	1	10/01/19 00:07	EPA 200.8 (Diss)	
Cadmium	ND	---	0.200	ug/L	1	10/01/19 00:07	EPA 200.8 (Diss)	
Chromium	ND	---	1.00	ug/L	1	10/01/19 00:07	EPA 200.8 (Diss)	
Lead	0.238	---	0.200	ug/L	1	10/01/19 00:07	EPA 200.8 (Diss)	
Mercury	ND	---	0.0800	ug/L	1	10/01/19 00:07	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	10/01/19 00:07	EPA 200.8 (Diss)	
Silver	ND	---	0.200	ug/L	1	10/01/19 00:07	EPA 200.8 (Diss)	
GP02 (A9I0744-01RE1) Matrix: Water								
Batch: 9091376								
Arsenic	2.15	---	1.00	ug/L	1	10/01/19 20:29	EPA 200.8 (Diss)	
GP05 (A9I0744-02) Matrix: Water								
Batch: 9091384								
Arsenic	36.6	---	10.0	ug/L	10	10/02/19 20:37	EPA 200.8 (Diss)	
Barium	549	---	10.0	ug/L	10	10/02/19 20:37	EPA 200.8 (Diss)	Q-42
Cadmium	ND	---	2.00	ug/L	10	10/02/19 20:37	EPA 200.8 (Diss)	R-04
Chromium	277	---	10.0	ug/L	10	10/02/19 20:37	EPA 200.8 (Diss)	Q-42
Lead	19.2	---	2.00	ug/L	10	10/02/19 20:37	EPA 200.8 (Diss)	
Mercury	1.33	---	0.800	ug/L	10	10/02/19 20:37	EPA 200.8 (Hg)	
Selenium	ND	---	10.0	ug/L	10	10/02/19 20:37	EPA 200.8 (Diss)	R-04
Silver	ND	---	2.00	ug/L	10	10/02/19 20:37	EPA 200.8 (Diss)	R-04
EQ-092019 (A9I0744-03) Matrix: Water								
Batch: 9091376								
Barium	ND	---	1.00	ug/L	1	10/01/19 00:12	EPA 200.8 (Diss)	
Cadmium	ND	---	0.200	ug/L	1	10/01/19 00:12	EPA 200.8 (Diss)	
Chromium	ND	---	1.00	ug/L	1	10/01/19 00:12	EPA 200.8 (Diss)	
Lead	ND	---	0.200	ug/L	1	10/01/19 00:12	EPA 200.8 (Diss)	
Mercury	ND	---	0.0800	ug/L	1	10/01/19 00:12	EPA 200.8 (Hg)	
Selenium	ND	---	1.00	ug/L	1	10/01/19 00:12	EPA 200.8 (Diss)	
Silver	ND	---	0.200	ug/L	1	10/01/19 00:12	EPA 200.8 (Diss)	
EQ-092019 (A9I0744-03RE1) Matrix: Water								
Batch: 9091376								
Arsenic	ND	---	1.00	ug/L	1	10/01/19 20:34	EPA 200.8 (Diss)	

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Lisa Domenighini, Client Services Manager

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Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0744 - 10 07 19 1649

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Diesel and/or Oil Hydrocarbons by NWTPH-Dx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091399 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (9091399-BLK1)		Prepared: 09/27/19 12:50 Analyzed: 09/27/19 20:33										
NWTPH-Dx												
Diesel	ND	---	0.182	mg/L	1	---	---	---	---	---	---	
Oil	ND	---	0.364	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 116 %		Limits: 50-150 %		Dilution: 1x		Q-41				
LCS (9091399-BS1)		Prepared: 09/27/19 12:50 Analyzed: 09/27/19 20:56										
NWTPH-Dx												
Diesel	1.18	---	0.200	mg/L	1	1.25	---	94	58 - 115%	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 120 %		Limits: 50-150 %		Dilution: 1x		Q-41				
LCS Dup (9091399-BSD1)		Prepared: 09/27/19 12:50 Analyzed: 09/27/19 21:20										
NWTPH-Dx												
Diesel	1.21	---	0.200	mg/L	1	1.25	---	97	58 - 115%	3	20%	
Surr: o-Terphenyl (Surr)		Recovery: 120 %		Limits: 50-150 %		Dilution: 1x		Q-41				

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B						Water						
Blank (9091264-BLK1)		Prepared: 09/25/19 09:00 Analyzed: 09/25/19 12:02										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 97 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		91 %		50-150 %		"						
LCS (9091264-BS2)		Prepared: 09/25/19 09:00 Analyzed: 09/25/19 11:35										
NWTPH-Gx (MS)												
Gasoline Range Organics	0.500	---	0.100	mg/L	1	0.500	---	100	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 94 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		115 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B						Water						
Blank (9091347-BLK1)		Prepared: 09/26/19 15:50 Analyzed: 09/26/19 18:22										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		95 %		50-150 %		"						
LCS (9091347-BS2)		Prepared: 09/26/19 15:50 Analyzed: 09/26/19 17:55										
NWTPH-Gx (MS)												
Gasoline Range Organics	0.513	---	0.100	mg/L	1	0.500	---	103	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		120 %		50-150 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B						Water						
Blank (9091264-BLK1)		Prepared: 09/25/19 09:00		Analyzed: 09/25/19 12:02								
EPA 8260C												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B						Water						
Blank (9091264-BLK1)		Prepared: 09/25/19 09:00		Analyzed: 09/25/19 12:02								
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B							Water					
Blank (9091264-BLK1)		Prepared: 09/25/19 09:00		Analyzed: 09/25/19 12:02								
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		104 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						
LCS (9091264-BS1)		Prepared: 09/25/19 09:00		Analyzed: 09/25/19 11:08								
EPA 8260C												
Acetone	39.1	---	20.0	ug/L	1	40.0	---	98	80 - 120%	---	---	
Acrylonitrile	20.0	---	2.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
Benzene	19.9	---	0.200	ug/L	1	20.0	---	99	80 - 120%	---	---	
Bromobenzene	21.1	---	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	
Bromochloromethane	22.3	---	1.00	ug/L	1	20.0	---	112	80 - 120%	---	---	
Bromodichloromethane	20.9	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
Bromoform	22.1	---	1.00	ug/L	1	20.0	---	111	80 - 120%	---	---	
Bromomethane	23.4	---	5.00	ug/L	1	20.0	---	117	80 - 120%	---	---	
2-Butanone (MEK)	42.5	---	10.0	ug/L	1	40.0	---	106	80 - 120%	---	---	
n-Butylbenzene	22.9	---	1.00	ug/L	1	20.0	---	115	80 - 120%	---	---	
sec-Butylbenzene	21.0	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
tert-Butylbenzene	20.6	---	1.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
Carbon disulfide	21.4	---	10.0	ug/L	1	20.0	---	107	80 - 120%	---	---	
Carbon tetrachloride	23.8	---	1.00	ug/L	1	20.0	---	119	80 - 120%	---	---	
Chlorobenzene	20.5	---	0.500	ug/L	1	20.0	---	102	80 - 120%	---	---	
Chloroethane	20.4	---	5.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
Chloroform	20.3	---	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
Chloromethane	21.1	---	5.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
2-Chlorotoluene	20.2	---	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
4-Chlorotoluene	20.8	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
Dibromochloromethane	21.1	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	21.4	---	5.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	21.2	---	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
Dibromomethane	20.9	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
1,2-Dichlorobenzene	21.0	---	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	
1,3-Dichlorobenzene	21.5	---	0.500	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,4-Dichlorobenzene	21.0	---	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B						Water						
LCS (9091264-BS1)		Prepared: 09/25/19 09:00		Analyzed: 09/25/19 11:08								
Dichlorodifluoromethane	22.0	---	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	Q-56
1,1-Dichloroethane	21.5	---	0.400	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	21.1	---	0.400	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,1-Dichloroethene	22.1	---	0.400	ug/L	1	20.0	---	111	80 - 120%	---	---	
cis-1,2-Dichloroethene	21.3	---	0.400	ug/L	1	20.0	---	107	80 - 120%	---	---	
trans-1,2-Dichloroethene	21.4	---	0.400	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2-Dichloropropane	21.1	---	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,3-Dichloropropane	20.8	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
2,2-Dichloropropane	27.3	---	1.00	ug/L	1	20.0	---	137	80 - 120%	---	---	
1,1-Dichloropropene	21.1	---	1.00	ug/L	1	20.0	---	106	80 - 120%	---	---	
cis-1,3-Dichloropropene	21.6	---	1.00	ug/L	1	20.0	---	108	80 - 120%	---	---	
trans-1,3-Dichloropropene	21.8	---	1.00	ug/L	1	20.0	---	109	80 - 120%	---	---	
Ethylbenzene	20.3	---	0.500	ug/L	1	20.0	---	102	80 - 120%	---	---	
Hexachlorobutadiene	23.7	---	5.00	ug/L	1	20.0	---	119	80 - 120%	---	---	
2-Hexanone	43.3	---	10.0	ug/L	1	40.0	---	108	80 - 120%	---	---	
Isopropylbenzene	20.8	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
4-Isopropyltoluene	21.5	---	1.00	ug/L	1	20.0	---	108	80 - 120%	---	---	
Methylene chloride	21.3	---	5.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	41.8	---	10.0	ug/L	1	40.0	---	105	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	20.7	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
Naphthalene	22.3	---	2.00	ug/L	1	20.0	---	111	80 - 120%	---	---	
n-Propylbenzene	21.4	---	0.500	ug/L	1	20.0	---	107	80 - 120%	---	---	
Styrene	20.5	---	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	20.5	---	0.400	ug/L	1	20.0	---	103	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	23.7	---	0.500	ug/L	1	20.0	---	118	80 - 120%	---	---	
Tetrachloroethene (PCE)	21.0	---	0.400	ug/L	1	20.0	---	105	80 - 120%	---	---	
Toluene	19.6	---	1.00	ug/L	1	20.0	---	98	80 - 120%	---	---	
1,2,3-Trichlorobenzene	21.9	---	2.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
1,2,4-Trichlorobenzene	22.3	---	2.00	ug/L	1	20.0	---	112	80 - 120%	---	---	
1,1,1-Trichloroethane	20.3	---	0.400	ug/L	1	20.0	---	102	80 - 120%	---	---	
1,1,2-Trichloroethane	20.1	---	0.500	ug/L	1	20.0	---	101	80 - 120%	---	---	
Trichloroethene (TCE)	20.3	---	0.400	ug/L	1	20.0	---	101	80 - 120%	---	---	
Trichlorofluoromethane	23.7	---	2.00	ug/L	1	20.0	---	118	80 - 120%	---	---	
1,2,3-Trichloropropane	21.8	---	1.00	ug/L	1	20.0	---	109	80 - 120%	---	---	

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B						Water						
LCS (9091264-BS1)		Prepared: 09/25/19 09:00		Analyzed: 09/25/19 11:08								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	22.2	---	2.00	ug/L	1	20.0	---	111	80 - 120%	---	---	
1,2,4-Trimethylbenzene	22.1	---	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
1,3,5-Trimethylbenzene	22.0	---	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
Vinyl chloride	23.0	---	0.400	ug/L	1	20.0	---	115	80 - 120%	---	---	
m,p-Xylene	40.9	---	1.00	ug/L	1	40.0	---	102	80 - 120%	---	---	
o-Xylene	19.9	---	0.500	ug/L	1	20.0	---	100	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 99 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						
Matrix Spike (9091264-MS1)						Prepared: 09/25/19 12:01 Analyzed: 09/25/19 20:36						
QC Source Sample: GP02 (A910744-01)												
EPA 8260C												
Acetone	425	---	200	ug/L	10	400	ND	106	39 - 160%	---	---	
Acrylonitrile	198	---	20.0	ug/L	10	200	ND	99	63 - 135%	---	---	
Benzene	217	---	2.00	ug/L	10	200	5.70	106	79 - 120%	---	---	
Bromobenzene	211	---	5.00	ug/L	10	200	ND	106	80 - 120%	---	---	
Bromochloromethane	236	---	10.0	ug/L	10	200	ND	118	78 - 123%	---	---	
Bromodichloromethane	212	---	10.0	ug/L	10	200	ND	106	79 - 125%	---	---	
Bromoform	219	---	10.0	ug/L	10	200	ND	110	66 - 130%	---	---	
Bromomethane	264	---	50.0	ug/L	10	200	ND	132	53 - 141%	---	---	
2-Butanone (MEK)	428	---	100	ug/L	10	400	ND	107	56 - 143%	---	---	
n-Butylbenzene	252	---	10.0	ug/L	10	200	ND	126	75 - 128%	---	---	
sec-Butylbenzene	226	---	10.0	ug/L	10	200	ND	113	77 - 126%	---	---	
tert-Butylbenzene	222	---	10.0	ug/L	10	200	ND	111	78 - 124%	---	---	
Carbon disulfide	238	---	100	ug/L	10	200	ND	119	64 - 133%	---	---	
Carbon tetrachloride	259	---	10.0	ug/L	10	200	ND	129	72 - 136%	---	---	
Chlorobenzene	211	---	5.00	ug/L	10	200	ND	106	80 - 120%	---	---	
Chloroethane	244	---	50.0	ug/L	10	200	ND	122	60 - 138%	---	---	
Chloroform	211	---	10.0	ug/L	10	200	ND	105	79 - 124%	---	---	
Chloromethane	227	---	50.0	ug/L	10	200	ND	114	50 - 139%	---	---	
2-Chlorotoluene	211	---	10.0	ug/L	10	200	ND	105	79 - 122%	---	---	
4-Chlorotoluene	219	---	10.0	ug/L	10	200	ND	109	78 - 122%	---	---	

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B						Water						
Matrix Spike (9091264-MS1)		Prepared: 09/25/19 12:01		Analyzed: 09/25/19 20:36								
QC Source Sample: GP02 (A9I0744-01)												
Dibromochloromethane	207	---	10.0	ug/L	10	200	ND	104	74 - 126%	---	---	
1,2-Dibromo-3-chloropropane	206	---	50.0	ug/L	10	200	ND	103	62 - 128%	---	---	
1,2-Dibromoethane (EDB)	216	---	5.00	ug/L	10	200	ND	108	77 - 121%	---	---	
Dibromomethane	211	---	10.0	ug/L	10	200	ND	106	79 - 123%	---	---	
1,2-Dichlorobenzene	211	---	5.00	ug/L	10	200	ND	105	80 - 120%	---	---	
1,3-Dichlorobenzene	226	---	5.00	ug/L	10	200	ND	113	80 - 120%	---	---	
1,4-Dichlorobenzene	215	---	5.00	ug/L	10	200	ND	107	79 - 120%	---	---	
Dichlorodifluoromethane	249	---	10.0	ug/L	10	200	ND	124	32 - 152%	---	---	
1,1-Dichloroethane	225	---	4.00	ug/L	10	200	ND	113	77 - 125%	---	---	
1,2-Dichloroethane (EDC)	362	---	4.00	ug/L	10	200	148	107	73 - 128%	---	---	
1,1-Dichloroethene	244	---	4.00	ug/L	10	200	ND	122	71 - 131%	---	---	
cis-1,2-Dichloroethene	222	---	4.00	ug/L	10	200	ND	111	78 - 123%	---	---	
trans-1,2-Dichloroethene	231	---	4.00	ug/L	10	200	ND	116	75 - 124%	---	---	
1,2-Dichloropropane	223	---	5.00	ug/L	10	200	ND	112	78 - 122%	---	---	
1,3-Dichloropropane	214	---	10.0	ug/L	10	200	ND	107	80 - 120%	---	---	
2,2-Dichloropropane	255	---	10.0	ug/L	10	200	ND	127	60 - 139%	---	---	Q-54a
1,1-Dichloropropene	229	---	10.0	ug/L	10	200	ND	114	79 - 125%	---	---	
cis-1,3-Dichloropropene	213	---	10.0	ug/L	10	200	ND	106	75 - 124%	---	---	
trans-1,3-Dichloropropene	216	---	10.0	ug/L	10	200	ND	108	73 - 127%	---	---	
Ethylbenzene	256	---	5.00	ug/L	10	200	34.8	111	79 - 121%	---	---	
Hexachlorobutadiene	248	---	50.0	ug/L	10	200	ND	124	66 - 134%	---	---	
2-Hexanone	430	---	100	ug/L	10	400	ND	108	57 - 139%	---	---	
Isopropylbenzene	228	---	10.0	ug/L	10	200	5.42	111	72 - 131%	---	---	
4-Isopropyltoluene	233	---	10.0	ug/L	10	200	ND	117	77 - 127%	---	---	
Methylene chloride	234	---	50.0	ug/L	10	200	ND	117	74 - 124%	---	---	
4-Methyl-2-pentanone (MiBK)	428	---	100	ug/L	10	400	ND	107	67 - 130%	---	---	
Methyl tert-butyl ether (MTBE)	215	---	10.0	ug/L	10	200	7.26	104	71 - 124%	---	---	
Naphthalene	228	---	20.0	ug/L	10	200	ND	114	61 - 128%	---	---	
n-Propylbenzene	239	---	5.00	ug/L	10	200	11.2	114	76 - 126%	---	---	
Styrene	207	---	10.0	ug/L	10	200	ND	104	78 - 123%	---	---	
1,1,1,2-Tetrachloroethane	212	---	4.00	ug/L	10	200	ND	106	78 - 124%	---	---	
1,1,2,2-Tetrachloroethane	239	---	5.00	ug/L	10	200	ND	119	71 - 121%	---	---	
Tetrachloroethene (PCE)	224	---	4.00	ug/L	10	200	ND	112	74 - 129%	---	---	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B							Water					
Matrix Spike (9091264-MS1)		Prepared: 09/25/19 12:01		Analyzed: 09/25/19 20:36								
QC Source Sample: GP02 (A910744-01)												
Toluene	222	---	10.0	ug/L	10	200	14.8	104	80 - 121%	---	---	
1,2,3-Trichlorobenzene	218	---	20.0	ug/L	10	200	ND	109	69 - 129%	---	---	
1,2,4-Trichlorobenzene	222	---	20.0	ug/L	10	200	ND	111	69 - 130%	---	---	
1,1,1-Trichloroethane	224	---	4.00	ug/L	10	200	ND	112	74 - 131%	---	---	
1,1,2-Trichloroethane	207	---	5.00	ug/L	10	200	ND	104	80 - 120%	---	---	
Trichloroethene (TCE)	216	---	4.00	ug/L	10	200	ND	108	79 - 123%	---	---	
Trichlorofluoromethane	288	---	20.0	ug/L	10	200	ND	144	65 - 141%	---	---	Q-01
1,2,3-Trichloropropane	217	---	10.0	ug/L	10	200	ND	109	73 - 122%	---	---	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	250	---	20.0	ug/L	10	200	ND	125	70 - 136%	---	---	
1,2,4-Trimethylbenzene	307	---	10.0	ug/L	10	200	57.0	125	76 - 124%	---	---	Q-01
1,3,5-Trimethylbenzene	252	---	10.0	ug/L	10	200	17.5	117	75 - 124%	---	---	
Vinyl chloride	271	---	4.00	ug/L	10	200	ND	135	58 - 137%	---	---	
m,p-Xylene	553	---	10.0	ug/L	10	400	112	110	80 - 121%	---	---	
o-Xylene	248	---	5.00	ug/L	10	200	37.9	105	78 - 122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						

Matrix Spike Dup (9091264-MSD1) Prepared: 09/25/19 12:01 Analyzed: 09/25/19 21:03**QC Source Sample: GP02 (A910744-01)****EPA 8260C**

Acetone	432	---	200	ug/L	10	400	ND	108	39 - 160%	2	30%
Acrylonitrile	210	---	20.0	ug/L	10	200	ND	105	63 - 135%	6	30%
Benzene	216	---	2.00	ug/L	10	200	5.70	105	79 - 120%	0.7	30%
Bromobenzene	209	---	5.00	ug/L	10	200	ND	105	80 - 120%	0.9	30%
Bromochloromethane	234	---	10.0	ug/L	10	200	ND	117	78 - 123%	0.7	30%
Bromodichloromethane	213	---	10.0	ug/L	10	200	ND	106	79 - 125%	0.4	30%
Bromoform	210	---	10.0	ug/L	10	200	ND	105	66 - 130%	4	30%
Bromomethane	267	---	50.0	ug/L	10	200	ND	134	53 - 141%	1	30%
2-Butanone (MEK)	434	---	100	ug/L	10	400	ND	108	56 - 143%	1	30%
n-Butylbenzene	239	---	10.0	ug/L	10	200	ND	119	75 - 128%	5	30%
sec-Butylbenzene	218	---	10.0	ug/L	10	200	ND	109	77 - 126%	4	30%

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B							Water					
Matrix Spike Dup (9091264-MSD1)		Prepared: 09/25/19 12:01		Analyzed: 09/25/19 21:03								
QC Source Sample: GP02 (A9I0744-01)												
tert-Butylbenzene	213	---	10.0	ug/L	10	200	ND	107	78 - 124%	4	30%	
Carbon disulfide	235	---	100	ug/L	10	200	ND	117	64 - 133%	1	30%	
Carbon tetrachloride	263	---	10.0	ug/L	10	200	ND	131	72 - 136%	1	30%	
Chlorobenzene	204	---	5.00	ug/L	10	200	ND	102	80 - 120%	4	30%	
Chloroethane	245	---	50.0	ug/L	10	200	ND	123	60 - 138%	0.5	30%	
Chloroform	212	---	10.0	ug/L	10	200	ND	106	79 - 124%	0.4	30%	
Chloromethane	232	---	50.0	ug/L	10	200	ND	116	50 - 139%	2	30%	
2-Chlorotoluene	203	---	10.0	ug/L	10	200	ND	101	79 - 122%	4	30%	
4-Chlorotoluene	209	---	10.0	ug/L	10	200	ND	105	78 - 122%	4	30%	
Dibromochloromethane	204	---	10.0	ug/L	10	200	ND	102	74 - 126%	2	30%	
1,2-Dibromo-3-chloropropane	198	---	50.0	ug/L	10	200	ND	99	62 - 128%	4	30%	
1,2-Dibromoethane (EDB)	207	---	5.00	ug/L	10	200	ND	103	77 - 121%	4	30%	
Dibromomethane	211	---	10.0	ug/L	10	200	ND	105	79 - 123%	0.08	30%	
1,2-Dichlorobenzene	206	---	5.00	ug/L	10	200	ND	103	80 - 120%	2	30%	
1,3-Dichlorobenzene	214	---	5.00	ug/L	10	200	ND	107	80 - 120%	5	30%	
1,4-Dichlorobenzene	204	---	5.00	ug/L	10	200	ND	102	79 - 120%	5	30%	
Dichlorodifluoromethane	247	---	10.0	ug/L	10	200	ND	124	32 - 152%	0.7	30%	
1,1-Dichloroethane	224	---	4.00	ug/L	10	200	ND	112	77 - 125%	0.6	30%	
1,2-Dichloroethane (EDC)	364	---	4.00	ug/L	10	200	148	108	73 - 128%	0.6	30%	
1,1-Dichloroethene	245	---	4.00	ug/L	10	200	ND	123	71 - 131%	0.3	30%	
cis-1,2-Dichloroethene	220	---	4.00	ug/L	10	200	ND	110	78 - 123%	0.7	30%	
trans-1,2-Dichloroethene	229	---	4.00	ug/L	10	200	ND	115	75 - 124%	1	30%	
1,2-Dichloropropane	214	---	5.00	ug/L	10	200	ND	107	78 - 122%	4	30%	
1,3-Dichloropropane	208	---	10.0	ug/L	10	200	ND	104	80 - 120%	3	30%	
2,2-Dichloropropane	246	---	10.0	ug/L	10	200	ND	123	60 - 139%	4	30%	Q-54a
1,1-Dichloropropene	230	---	10.0	ug/L	10	200	ND	115	79 - 125%	0.3	30%	
cis-1,3-Dichloropropene	209	---	10.0	ug/L	10	200	ND	104	75 - 124%	2	30%	
trans-1,3-Dichloropropene	208	---	10.0	ug/L	10	200	ND	104	73 - 127%	4	30%	
Ethylbenzene	248	---	5.00	ug/L	10	200	34.8	107	79 - 121%	3	30%	
Hexachlorobutadiene	219	---	50.0	ug/L	10	200	ND	110	66 - 134%	12	30%	
2-Hexanone	416	---	100	ug/L	10	400	ND	104	57 - 139%	3	30%	
Isopropylbenzene	220	---	10.0	ug/L	10	200	5.42	107	72 - 131%	4	30%	
4-Isopropyltoluene	222	---	10.0	ug/L	10	200	ND	111	77 - 127%	5	30%	

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091264 - EPA 5030B							Water					
Matrix Spike Dup (9091264-MSD1)		Prepared: 09/25/19 12:01		Analyzed: 09/25/19 21:03								
QC Source Sample: GP02 (A9I0744-01)												
Methylene chloride	229	---	50.0	ug/L	10	200	ND	114	74 - 124%	2	30%	
4-Methyl-2-pentanone (MiBK)	412	---	100	ug/L	10	400	ND	103	67 - 130%	4	30%	
Methyl tert-butyl ether (MTBE)	217	---	10.0	ug/L	10	200	7.26	105	71 - 124%	1	30%	
Naphthalene	216	---	20.0	ug/L	10	200	ND	108	61 - 128%	5	30%	
n-Propylbenzene	228	---	5.00	ug/L	10	200	11.2	108	76 - 126%	5	30%	
Styrene	201	---	10.0	ug/L	10	200	ND	101	78 - 123%	3	30%	
1,1,1,2-Tetrachloroethane	210	---	4.00	ug/L	10	200	ND	105	78 - 124%	1	30%	
1,1,2,2-Tetrachloroethane	227	---	5.00	ug/L	10	200	ND	114	71 - 121%	5	30%	
Tetrachloroethene (PCE)	221	---	4.00	ug/L	10	200	ND	110	74 - 129%	1	30%	
Toluene	215	---	10.0	ug/L	10	200	14.8	100	80 - 121%	3	30%	
1,2,3-Trichlorobenzene	211	---	20.0	ug/L	10	200	ND	106	69 - 129%	3	30%	
1,2,4-Trichlorobenzene	212	---	20.0	ug/L	10	200	ND	106	69 - 130%	5	30%	
1,1,1-Trichloroethane	219	---	4.00	ug/L	10	200	ND	110	74 - 131%	2	30%	
1,1,2-Trichloroethane	204	---	5.00	ug/L	10	200	ND	102	80 - 120%	1	30%	
Trichloroethene (TCE)	211	---	4.00	ug/L	10	200	ND	106	79 - 123%	2	30%	
Trichlorofluoromethane	280	---	20.0	ug/L	10	200	ND	140	65 - 141%	3	30%	
1,2,3-Trichloropropane	206	---	10.0	ug/L	10	200	ND	103	73 - 122%	5	30%	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	242	---	20.0	ug/L	10	200	ND	121	70 - 136%	3	30%	
1,2,4-Trimethylbenzene	290	---	10.0	ug/L	10	200	57.0	117	76 - 124%	6	30%	
1,3,5-Trimethylbenzene	241	---	10.0	ug/L	10	200	17.5	112	75 - 124%	4	30%	
Vinyl chloride	271	---	4.00	ug/L	10	200	ND	135	58 - 137%	0.01	30%	
m,p-Xylene	537	---	10.0	ug/L	10	400	112	106	80 - 121%	3	30%	
o-Xylene	241	---	5.00	ug/L	10	200	37.9	102	78 - 122%	3	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B						Water						
Blank (9091347-BLK1)		Prepared: 09/26/19 15:50 Analyzed: 09/26/19 18:22										
EPA 8260C												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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Lisa Domenighini, Client Services Manager

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601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B						Water						
Blank (9091347-BLK1)		Prepared: 09/26/19 15:50		Analyzed: 09/26/19 18:22								
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B							Water					
Blank (9091347-BLK1)		Prepared: 09/26/19 15:50 Analyzed: 09/26/19 18:22										
Surr: Toluene-d8 (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		97 %		80-120 %		"						
LCS (9091347-BS1)		Prepared: 09/26/19 15:50 Analyzed: 09/26/19 17:27										
EPA 8260C												
Acetone	39.9	---	20.0	ug/L	1	40.0	---	100	80 - 120%	---	---	
Acrylonitrile	19.5	---	2.00	ug/L	1	20.0	---	98	80 - 120%	---	---	
Benzene	20.0	---	0.200	ug/L	1	20.0	---	100	80 - 120%	---	---	
Bromobenzene	20.5	---	0.500	ug/L	1	20.0	---	103	80 - 120%	---	---	
Bromochloromethane	22.3	---	1.00	ug/L	1	20.0	---	111	80 - 120%	---	---	
Bromodichloromethane	20.8	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
Bromoform	22.5	---	1.00	ug/L	1	20.0	---	112	80 - 120%	---	---	
Bromomethane	28.7	---	5.00	ug/L	1	20.0	---	144	80 - 120%	---	---	Q-56
2-Butanone (MEK)	42.5	---	10.0	ug/L	1	40.0	---	106	80 - 120%	---	---	
n-Butylbenzene	23.2	---	1.00	ug/L	1	20.0	---	116	80 - 120%	---	---	
sec-Butylbenzene	21.0	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
tert-Butylbenzene	20.7	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
Carbon disulfide	21.6	---	10.0	ug/L	1	20.0	---	108	80 - 120%	---	---	
Carbon tetrachloride	24.6	---	1.00	ug/L	1	20.0	---	123	80 - 120%	---	---	Q-56
Chlorobenzene	20.6	---	0.500	ug/L	1	20.0	---	103	80 - 120%	---	---	
Chloroethane	27.1	---	5.00	ug/L	1	20.0	---	136	80 - 120%	---	---	Q-56
Chloroform	20.3	---	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
Chloromethane	20.8	---	5.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
2-Chlorotoluene	20.0	---	1.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
4-Chlorotoluene	21.1	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
Dibromochloromethane	21.2	---	1.00	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,2-Dibromo-3-chloropropane	20.1	---	5.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	21.2	---	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
Dibromomethane	20.8	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
1,2-Dichlorobenzene	20.7	---	0.500	ug/L	1	20.0	---	103	80 - 120%	---	---	
1,3-Dichlorobenzene	21.2	---	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,4-Dichlorobenzene	20.3	---	0.500	ug/L	1	20.0	---	102	80 - 120%	---	---	
Dichlorodifluoromethane	21.9	---	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
1,1-Dichloroethane	21.0	---	0.400	ug/L	1	20.0	---	105	80 - 120%	---	---	

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B						Water						
LCS (9091347-BS1)		Prepared: 09/26/19 15:50		Analyzed: 09/26/19 17:27								
1,2-Dichloroethane (EDC)	20.6	---	0.400	ug/L	1	20.0	---	103	80 - 120%	---	---	Q-56
1,1-Dichloroethene	22.5	---	0.400	ug/L	1	20.0	---	112	80 - 120%	---	---	
cis-1,2-Dichloroethene	21.2	---	0.400	ug/L	1	20.0	---	106	80 - 120%	---	---	
trans-1,2-Dichloroethene	21.5	---	0.400	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2-Dichloropropane	21.2	---	0.500	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,3-Dichloropropane	20.7	---	1.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
2,2-Dichloropropane	27.3	---	1.00	ug/L	1	20.0	---	136	80 - 120%	---	---	
1,1-Dichloropropene	21.0	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
cis-1,3-Dichloropropene	22.0	---	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
trans-1,3-Dichloropropene	22.1	---	1.00	ug/L	1	20.0	---	110	80 - 120%	---	---	
Ethylbenzene	21.0	---	0.500	ug/L	1	20.0	---	105	80 - 120%	---	---	Q-56
Hexachlorobutadiene	22.2	---	5.00	ug/L	1	20.0	---	111	80 - 120%	---	---	
2-Hexanone	43.1	---	10.0	ug/L	1	40.0	---	108	80 - 120%	---	---	
Isopropylbenzene	21.1	---	1.00	ug/L	1	20.0	---	106	80 - 120%	---	---	
4-Isopropyltoluene	21.8	---	1.00	ug/L	1	20.0	---	109	80 - 120%	---	---	
Methylene chloride	21.5	---	5.00	ug/L	1	20.0	---	107	80 - 120%	---	---	
4-Methyl-2-pentanone (MiBK)	42.3	---	10.0	ug/L	1	40.0	---	106	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	20.5	---	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
Naphthalene	20.8	---	2.00	ug/L	1	20.0	---	104	80 - 120%	---	---	
n-Propylbenzene	21.8	---	0.500	ug/L	1	20.0	---	109	80 - 120%	---	---	
Styrene	20.4	---	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
1,1,1,2-Tetrachloroethane	20.7	---	0.400	ug/L	1	20.0	---	104	80 - 120%	---	---	
1,1,2,2-Tetrachloroethane	23.1	---	0.500	ug/L	1	20.0	---	115	80 - 120%	---	---	
Tetrachloroethene (PCE)	21.0	---	0.400	ug/L	1	20.0	---	105	80 - 120%	---	---	
Toluene	20.0	---	1.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
1,2,3-Trichlorobenzene	20.5	---	2.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
1,2,4-Trichlorobenzene	21.3	---	2.00	ug/L	1	20.0	---	106	80 - 120%	---	---	
1,1,1-Trichloroethane	20.7	---	0.400	ug/L	1	20.0	---	103	80 - 120%	---	---	
1,1,2-Trichloroethane	20.3	---	0.500	ug/L	1	20.0	---	101	80 - 120%	---	---	
Trichloroethene (TCE)	19.5	---	0.400	ug/L	1	20.0	---	98	80 - 120%	---	---	
Trichlorofluoromethane	29.8	---	2.00	ug/L	1	20.0	---	149	80 - 120%	---	---	
1,2,3-Trichloropropane	20.6	---	1.00	ug/L	1	20.0	---	103	80 - 120%	---	---	
1,2,4-Trimethylbenzene	22.2	---	1.00	ug/L	1	20.0	---	111	80 - 120%	---	---	
1,3,5-Trimethylbenzene	21.9	---	1.00	ug/L	1	20.0	---	109	80 - 120%	---	---	

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B						Water						
LCS (9091347-BS1)		Prepared: 09/26/19 15:50		Analyzed: 09/26/19 17:27								
Vinyl chloride	27.2	---	0.400	ug/L	1	20.0	---	136	80 - 120%	---	---	Q-56
m,p-Xylene	41.3	---	1.00	ug/L	1	40.0	---	103	80 - 120%	---	---	
o-Xylene	20.3	---	0.500	ug/L	1	20.0	---	102	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
Matrix Spike (9091347-MS1)		Prepared: 09/26/19 18:02		Analyzed: 09/26/19 20:37								
QC Source Sample: GP02 (A910744-01RE1)												
EPA 8260C												
Acetone	69.8	---	20.0	ug/L	1	40.0	ND	97	39 - 160%	---	---	
Acrylonitrile	19.9	---	2.00	ug/L	1	20.0	ND	100	63 - 135%	---	---	
Benzene	32.2	---	0.200	ug/L	1	20.0	6.25	130	79 - 120%	---	---	Q-01
Bromobenzene	21.0	---	0.500	ug/L	1	20.0	ND	105	80 - 120%	---	---	
Bromochloromethane	23.0	---	1.00	ug/L	1	20.0	ND	115	78 - 123%	---	---	
Bromodichloromethane	21.1	---	1.00	ug/L	1	20.0	ND	105	79 - 125%	---	---	
Bromoform	22.1	---	1.00	ug/L	1	20.0	ND	110	66 - 130%	---	---	
Bromomethane	27.0	---	5.00	ug/L	1	20.0	ND	135	53 - 141%	---	---	Q-54b
2-Butanone (MEK)	62.3	---	10.0	ug/L	1	40.0	ND	131	56 - 143%	---	---	
n-Butylbenzene	27.2	---	1.00	ug/L	1	20.0	2.86	122	75 - 128%	---	---	
sec-Butylbenzene	23.2	---	1.00	ug/L	1	20.0	1.81	107	77 - 126%	---	---	
tert-Butylbenzene	21.6	---	1.00	ug/L	1	20.0	ND	108	78 - 124%	---	---	
Carbon disulfide	23.1	---	10.0	ug/L	1	20.0	ND	115	64 - 133%	---	---	
Carbon tetrachloride	25.3	---	1.00	ug/L	1	20.0	ND	126	72 - 136%	---	---	Q-54d
Chlorobenzene	21.1	---	0.500	ug/L	1	20.0	ND	105	80 - 120%	---	---	
Chloroethane	27.0	---	5.00	ug/L	1	20.0	ND	135	60 - 138%	---	---	Q-54
Chloroform	21.1	---	1.00	ug/L	1	20.0	ND	106	79 - 124%	---	---	
Chloromethane	29.6	---	5.00	ug/L	1	20.0	ND	148	50 - 139%	---	---	Q-01
2-Chlorotoluene	21.0	---	1.00	ug/L	1	20.0	ND	105	79 - 122%	---	---	
4-Chlorotoluene	21.3	---	1.00	ug/L	1	20.0	ND	107	78 - 122%	---	---	
Dibromochloromethane	20.9	---	1.00	ug/L	1	20.0	ND	105	74 - 126%	---	---	
1,2-Dibromo-3-chloropropane	21.6	---	5.00	ug/L	1	20.0	ND	108	62 - 128%	---	---	
1,2-Dibromoethane (EDB)	20.9	---	0.500	ug/L	1	20.0	ND	105	77 - 121%	---	---	
Dibromomethane	20.9	---	1.00	ug/L	1	20.0	ND	104	79 - 123%	---	---	

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B							Water					
Matrix Spike (9091347-MS1)		Prepared: 09/26/19 18:02 Analyzed: 09/26/19 20:37										
QC Source Sample: GP02 (A9I0744-01RE1)												
1,2-Dichlorobenzene	20.9	---	0.500	ug/L	1	20.0	ND	104	80 - 120%	---	---	
1,3-Dichlorobenzene	21.4	---	0.500	ug/L	1	20.0	ND	107	80 - 120%	---	---	
1,4-Dichlorobenzene	20.6	---	0.500	ug/L	1	20.0	ND	103	79 - 120%	---	---	
Dichlorodifluoromethane	23.2	---	1.00	ug/L	1	20.0	ND	116	32 - 152%	---	---	
1,1-Dichloroethane	22.3	---	0.400	ug/L	1	20.0	ND	112	77 - 125%	---	---	
1,2-Dichloroethane (EDC)	107	---	0.400	ug/L	1	20.0	159	-261	73 - 128%	---	---	Q-01
1,1-Dichloroethene	23.7	---	0.400	ug/L	1	20.0	ND	119	71 - 131%	---	---	
cis-1,2-Dichloroethene	22.1	---	0.400	ug/L	1	20.0	ND	110	78 - 123%	---	---	
trans-1,2-Dichloroethene	22.4	---	0.400	ug/L	1	20.0	ND	112	75 - 124%	---	---	
1,2-Dichloropropane	21.4	---	0.500	ug/L	1	20.0	ND	107	78 - 122%	---	---	
1,3-Dichloropropane	21.2	---	1.00	ug/L	1	20.0	ND	106	80 - 120%	---	---	
2,2-Dichloropropane	27.3	---	1.00	ug/L	1	20.0	ND	136	60 - 139%	---	---	Q-54
1,1-Dichloropropene	22.4	---	1.00	ug/L	1	20.0	ND	112	79 - 125%	---	---	
cis-1,3-Dichloropropene	21.6	---	1.00	ug/L	1	20.0	ND	108	75 - 124%	---	---	
trans-1,3-Dichloropropene	21.8	---	1.00	ug/L	1	20.0	ND	109	73 - 127%	---	---	
Ethylbenzene	60.0	---	0.500	ug/L	1	20.0	41.3	94	79 - 121%	---	---	
Hexachlorobutadiene	21.9	---	5.00	ug/L	1	20.0	ND	110	66 - 134%	---	---	
2-Hexanone	44.7	---	10.0	ug/L	1	40.0	ND	112	57 - 139%	---	---	
Isopropylbenzene	27.2	---	1.00	ug/L	1	20.0	5.83	107	72 - 131%	---	---	
4-Isopropyltoluene	24.9	---	1.00	ug/L	1	20.0	1.89	115	77 - 127%	---	---	
Methylene chloride	20.8	---	5.00	ug/L	1	20.0	ND	104	74 - 124%	---	---	
4-Methyl-2-pentanone (MiBK)	43.9	---	10.0	ug/L	1	40.0	ND	110	67 - 130%	---	---	
Methyl tert-butyl ether (MTBE)	23.5	---	1.00	ug/L	1	20.0	5.73	89	71 - 124%	---	---	
Naphthalene	44.1	---	2.00	ug/L	1	20.0	10.1	170	61 - 128%	---	---	Q-01
n-Propylbenzene	31.6	---	0.500	ug/L	1	20.0	13.0	93	76 - 126%	---	---	
Styrene	21.0	---	1.00	ug/L	1	20.0	ND	105	78 - 123%	---	---	
1,1,1,2-Tetrachloroethane	20.9	---	0.400	ug/L	1	20.0	ND	104	78 - 124%	---	---	
1,1,2,2-Tetrachloroethane	23.4	---	0.500	ug/L	1	20.0	ND	117	71 - 121%	---	---	
Tetrachloroethene (PCE)	21.4	---	0.400	ug/L	1	20.0	ND	107	74 - 129%	---	---	
Toluene	36.4	---	1.00	ug/L	1	20.0	16.4	100	80 - 121%	---	---	
1,2,3-Trichlorobenzene	20.6	---	2.00	ug/L	1	20.0	ND	103	69 - 129%	---	---	
1,2,4-Trichlorobenzene	21.2	---	2.00	ug/L	1	20.0	ND	106	69 - 130%	---	---	
1,1,1-Trichloroethane	21.5	---	0.400	ug/L	1	20.0	ND	107	74 - 131%	---	---	

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Lisa Domenighini, Client Services Manager

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B							Water					
Matrix Spike (9091347-MS1)		Prepared: 09/26/19 18:02		Analyzed: 09/26/19 20:37								
QC Source Sample: GP02 (A910744-01RE1)												
1,1,2-Trichloroethane	21.2	---	0.500	ug/L	1	20.0	ND	99	80 - 120%	---	---	Q-54c
Trichloroethene (TCE)	20.9	---	0.400	ug/L	1	20.0	ND	105	79 - 123%	---	---	
Trichlorofluoromethane	28.8	---	2.00	ug/L	1	20.0	ND	144	65 - 141%	---	---	
1,2,3-Trichloropropane	21.0	---	1.00	ug/L	1	20.0	ND	105	73 - 122%	---	---	
1,2,4-Trimethylbenzene	104	---	1.00	ug/L	1	20.0	82.5	106	76 - 124%	---	---	Q-54
1,3,5-Trimethylbenzene	40.5	---	1.00	ug/L	1	20.0	22.0	92	75 - 124%	---	---	
Vinyl chloride	27.3	---	0.400	ug/L	1	20.0	ND	137	58 - 137%	---	---	
m,p-Xylene	176	---	1.00	ug/L	1	40.0	143	82	80 - 121%	---	---	
o-Xylene	67.6	---	0.500	ug/L	1	20.0	45.3	112	78 - 122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						

Matrix Spike Dup (9091347-MSD1) Prepared: 09/26/19 18:02 Analyzed: 09/26/19 21:04

QC Source Sample: GP02 (A910744-01RE1)												
EPA 8260C												
Acetone	70.4	---	20.0	ug/L	1	40.0	ND	98	39 - 160%	0.8	30%	
Acrylonitrile	19.8	---	2.00	ug/L	1	20.0	ND	99	63 - 135%	0.7	30%	
Benzene	28.0	---	0.200	ug/L	1	20.0	6.25	109	79 - 120%	14	30%	
Bromobenzene	22.0	---	0.500	ug/L	1	20.0	ND	110	80 - 120%	5	30%	
Bromochloromethane	23.0	---	1.00	ug/L	1	20.0	ND	115	78 - 123%	0.1	30%	
Bromodichloromethane	21.7	---	1.00	ug/L	1	20.0	ND	108	79 - 125%	3	30%	
Bromoform	23.1	---	1.00	ug/L	1	20.0	ND	115	66 - 130%	4	30%	
Bromomethane	27.0	---	5.00	ug/L	1	20.0	ND	135	53 - 141%	0.08	30%	Q-54b
2-Butanone (MEK)	55.1	---	10.0	ug/L	1	40.0	ND	113	56 - 143%	12	30%	
n-Butylbenzene	30.7	---	1.00	ug/L	1	20.0	2.86	139	75 - 128%	12	30%	Q-01
sec-Butylbenzene	24.9	---	1.00	ug/L	1	20.0	1.81	116	77 - 126%	7	30%	
tert-Butylbenzene	23.4	---	1.00	ug/L	1	20.0	ND	117	78 - 124%	8	30%	
Carbon disulfide	23.7	---	10.0	ug/L	1	20.0	ND	118	64 - 133%	3	30%	
Carbon tetrachloride	26.7	---	1.00	ug/L	1	20.0	ND	134	72 - 136%	6	30%	Q-54d
Chlorobenzene	22.1	---	0.500	ug/L	1	20.0	ND	111	80 - 120%	5	30%	
Chloroethane	27.2	---	5.00	ug/L	1	20.0	ND	136	60 - 138%	1	30%	Q-54
Chloroform	21.5	---	1.00	ug/L	1	20.0	ND	107	79 - 124%	2	30%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B							Water					
Matrix Spike Dup (9091347-MSD1)		Prepared: 09/26/19 18:02		Analyzed: 09/26/19 21:04								
QC Source Sample: GP02 (A9I0744-01RE1)												
Chloromethane	23.3	---	5.00	ug/L	1	20.0	ND	116	50 - 139%	24	30%	
2-Chlorotoluene	22.2	---	1.00	ug/L	1	20.0	ND	111	79 - 122%	5	30%	
4-Chlorotoluene	22.7	---	1.00	ug/L	1	20.0	ND	113	78 - 122%	6	30%	
Dibromochloromethane	21.6	---	1.00	ug/L	1	20.0	ND	108	74 - 126%	3	30%	
1,2-Dibromo-3-chloropropane	22.2	---	5.00	ug/L	1	20.0	ND	111	62 - 128%	3	30%	
1,2-Dibromoethane (EDB)	21.9	---	0.500	ug/L	1	20.0	ND	109	77 - 121%	4	30%	
Dibromomethane	21.2	---	1.00	ug/L	1	20.0	ND	106	79 - 123%	2	30%	
1,2-Dichlorobenzene	22.1	---	0.500	ug/L	1	20.0	ND	111	80 - 120%	6	30%	
1,3-Dichlorobenzene	23.2	---	0.500	ug/L	1	20.0	ND	116	80 - 120%	8	30%	
1,4-Dichlorobenzene	22.1	---	0.500	ug/L	1	20.0	ND	111	79 - 120%	7	30%	
Dichlorodifluoromethane	23.9	---	1.00	ug/L	1	20.0	ND	119	32 - 152%	3	30%	
1,1-Dichloroethane	22.6	---	0.400	ug/L	1	20.0	ND	113	77 - 125%	1	30%	
1,2-Dichloroethane (EDC)	177	---	0.400	ug/L	1	20.0	159	93	73 - 128%	50	30%	Q-01
1,1-Dichloroethene	24.1	---	0.400	ug/L	1	20.0	ND	120	71 - 131%	1	30%	
cis-1,2-Dichloroethene	22.6	---	0.400	ug/L	1	20.0	ND	113	78 - 123%	2	30%	
trans-1,2-Dichloroethene	23.2	---	0.400	ug/L	1	20.0	ND	116	75 - 124%	4	30%	
1,2-Dichloropropane	21.5	---	0.500	ug/L	1	20.0	ND	108	78 - 122%	0.4	30%	
1,3-Dichloropropane	22.2	---	1.00	ug/L	1	20.0	ND	111	80 - 120%	4	30%	
2,2-Dichloropropane	27.4	---	1.00	ug/L	1	20.0	ND	137	60 - 139%	0.7	30%	Q-54
1,1-Dichloropropene	22.7	---	1.00	ug/L	1	20.0	ND	114	79 - 125%	1	30%	
cis-1,3-Dichloropropene	22.5	---	1.00	ug/L	1	20.0	ND	113	75 - 124%	4	30%	
trans-1,3-Dichloropropene	23.1	---	1.00	ug/L	1	20.0	ND	115	73 - 127%	5	30%	
Ethylbenzene	65.0	---	0.500	ug/L	1	20.0	41.3	118	79 - 121%	8	30%	
Hexachlorobutadiene	23.9	---	5.00	ug/L	1	20.0	ND	120	66 - 134%	9	30%	
2-Hexanone	46.4	---	10.0	ug/L	1	40.0	ND	116	57 - 139%	4	30%	
Isopropylbenzene	29.0	---	1.00	ug/L	1	20.0	5.83	116	72 - 131%	6	30%	
4-Isopropyltoluene	27.7	---	1.00	ug/L	1	20.0	1.89	129	77 - 127%	11	30%	Q-01
Methylene chloride	21.5	---	5.00	ug/L	1	20.0	ND	107	74 - 124%	3	30%	
4-Methyl-2-pentanone (MiBK)	45.3	---	10.0	ug/L	1	40.0	ND	113	67 - 130%	3	30%	
Methyl tert-butyl ether (MTBE)	26.5	---	1.00	ug/L	1	20.0	5.73	104	71 - 124%	12	30%	
Naphthalene	34.5	---	2.00	ug/L	1	20.0	10.1	122	61 - 128%	24	30%	
n-Propylbenzene	37.0	---	0.500	ug/L	1	20.0	13.0	120	76 - 126%	16	30%	
Styrene	21.2	---	1.00	ug/L	1	20.0	ND	106	78 - 123%	0.9	30%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091347 - EPA 5030B							Water					
Matrix Spike Dup (9091347-MSD1)		Prepared: 09/26/19 18:02		Analyzed: 09/26/19 21:04								
QC Source Sample: GP02 (A9I0744-01RE1)												
1,1,1,2-Tetrachloroethane	22.1	---	0.400	ug/L	1	20.0	ND	110	78 - 124%	6	30%	
1,1,2,2-Tetrachloroethane	25.1	---	0.500	ug/L	1	20.0	ND	126	71 - 121%	7	30%	Q-01
Tetrachloroethene (PCE)	22.5	---	0.400	ug/L	1	20.0	ND	113	74 - 129%	5	30%	
Toluene	38.2	---	1.00	ug/L	1	20.0	16.4	109	80 - 121%	5	30%	
1,2,3-Trichlorobenzene	21.8	---	2.00	ug/L	1	20.0	ND	109	69 - 129%	6	30%	
1,2,4-Trichlorobenzene	22.8	---	2.00	ug/L	1	20.0	ND	114	69 - 130%	7	30%	
1,1,1-Trichloroethane	22.4	---	0.400	ug/L	1	20.0	ND	112	74 - 131%	4	30%	
1,1,2-Trichloroethane	22.6	---	0.500	ug/L	1	20.0	ND	106	80 - 120%	6	30%	
Trichloroethene (TCE)	21.6	---	0.400	ug/L	1	20.0	ND	108	79 - 123%	3	30%	
Trichlorofluoromethane	29.0	---	2.00	ug/L	1	20.0	ND	145	65 - 141%	0.4	30%	Q-54c
1,2,3-Trichloropropane	23.1	---	1.00	ug/L	1	20.0	ND	116	73 - 122%	10	30%	
1,2,4-Trimethylbenzene	109	---	1.00	ug/L	1	20.0	82.5	134	76 - 124%	5	30%	Q-01
1,3,5-Trimethylbenzene	46.3	---	1.00	ug/L	1	20.0	22.0	122	75 - 124%	14	30%	
Vinyl chloride	27.7	---	0.400	ug/L	1	20.0	ND	138	58 - 137%	1	30%	Q-54
m,p-Xylene	199	---	1.00	ug/L	1	40.0	143	140	80 - 121%	12	30%	Q-01
o-Xylene	69.2	---	0.500	ug/L	1	20.0	45.3	120	78 - 122%	2	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		104 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		100 %		80-120 %		"						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091255 - EPA 3510C (Acid Extraction)							Water					
Blank (9091255-BLK1)		Prepared: 09/25/19 06:55 Analyzed: 09/25/19 17:49										
EPA 8270D (SIM)												
Acenaphthene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.0364	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.0364	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.0364	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	---	0.0182	ug/L	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 69 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		87 %		50-133 %		"						

LCS (9091255-BS1)

Prepared: 09/25/19 06:55 Analyzed: 09/25/19 18:15

EPA 8270D (SIM)

Acenaphthene	3.09	---	0.0200	ug/L	1	4.00	---	77	47 - 122%	---	---
Acenaphthylene	3.02	---	0.0200	ug/L	1	4.00	---	75	41 - 130%	---	---
Anthracene	3.25	---	0.0200	ug/L	1	4.00	---	81	57 - 123%	---	---
Benz(a)anthracene	3.02	---	0.0200	ug/L	1	4.00	---	75	58 - 125%	---	---
Benzo(a)pyrene	3.41	---	0.0200	ug/L	1	4.00	---	85	54 - 128%	---	---
Benzo(b)fluoranthene	3.34	---	0.0200	ug/L	1	4.00	---	83	53 - 131%	---	---
Benzo(k)fluoranthene	3.58	---	0.0200	ug/L	1	4.00	---	90	57 - 129%	---	---
Benzo(g,h,i)perylene	2.67	---	0.0200	ug/L	1	4.00	---	67	50 - 134%	---	---
Chrysene	3.26	---	0.0200	ug/L	1	4.00	---	81	59 - 123%	---	---

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091255 - EPA 3510C (Acid Extraction)							Water					
LCS (9091255-BS1)		Prepared: 09/25/19 06:55		Analyzed: 09/25/19 18:15								
Dibenz(a,h)anthracene	3.14	---	0.0200	ug/L	1	4.00	---	78	51 - 134%	---	---	
Dibenzofuran	3.18	---	0.0200	ug/L	1	4.00	---	79	53 - 120%	---	---	
Fluoranthene	3.29	---	0.0200	ug/L	1	4.00	---	82	57 - 128%	---	---	
Fluorene	3.24	---	0.0200	ug/L	1	4.00	---	81	52 - 124%	---	---	
Indeno(1,2,3-cd)pyrene	2.92	---	0.0200	ug/L	1	4.00	---	73	52 - 133%	---	---	
1-Methylnaphthalene	3.13	---	0.0400	ug/L	1	4.00	---	78	41 - 120%	---	---	
2-Methylnaphthalene	3.10	---	0.0400	ug/L	1	4.00	---	77	40 - 121%	---	---	
Naphthalene	2.99	---	0.0400	ug/L	1	4.00	---	75	40 - 121%	---	---	
Phenanthrene	3.09	---	0.0200	ug/L	1	4.00	---	77	59 - 120%	---	---	
Pyrene	3.20	---	0.0200	ug/L	1	4.00	---	80	57 - 126%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			Recovery: 76 %	Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)			83 %	50-133 %		"						

LCS Dup (9091255-BSD1)		Prepared: 09/25/19 06:55		Analyzed: 09/25/19 18:40								Q-19	
EPA 8270D (SIM)													
Acenaphthene	2.91	---	0.0200	ug/L	1	4.00	---	73	47 - 122%	6	30%		
Acenaphthylene	2.85	---	0.0200	ug/L	1	4.00	---	71	41 - 130%	6	30%		
Anthracene	3.05	---	0.0200	ug/L	1	4.00	---	76	57 - 123%	7	30%		
Benz(a)anthracene	2.76	---	0.0200	ug/L	1	4.00	---	69	58 - 125%	9	30%		
Benzo(a)pyrene	3.04	---	0.0200	ug/L	1	4.00	---	76	54 - 128%	11	30%		
Benzo(b)fluoranthene	3.04	---	0.0200	ug/L	1	4.00	---	76	53 - 131%	9	30%		
Benzo(k)fluoranthene	3.27	---	0.0200	ug/L	1	4.00	---	82	57 - 129%	9	30%		
Benzo(g,h,i)perylene	2.44	---	0.0200	ug/L	1	4.00	---	61	50 - 134%	9	30%		
Chrysene	2.99	---	0.0200	ug/L	1	4.00	---	75	59 - 123%	9	30%		
Dibenz(a,h)anthracene	2.87	---	0.0200	ug/L	1	4.00	---	72	51 - 134%	9	30%		
Dibenzofuran	3.00	---	0.0200	ug/L	1	4.00	---	75	53 - 120%	6	30%		
Fluoranthene	3.01	---	0.0200	ug/L	1	4.00	---	75	57 - 128%	9	30%		
Fluorene	3.04	---	0.0200	ug/L	1	4.00	---	76	52 - 124%	6	30%		
Indeno(1,2,3-cd)pyrene	2.58	---	0.0200	ug/L	1	4.00	---	65	52 - 133%	12	30%		
1-Methylnaphthalene	2.90	---	0.0400	ug/L	1	4.00	---	73	41 - 120%	8	30%		
2-Methylnaphthalene	2.86	---	0.0400	ug/L	1	4.00	---	71	40 - 121%	8	30%		
Naphthalene	2.75	---	0.0400	ug/L	1	4.00	---	69	40 - 121%	8	30%		
Phenanthrene	2.88	---	0.0200	ug/L	1	4.00	---	72	59 - 120%	7	30%		
Pyrene	2.96	---	0.0200	ug/L	1	4.00	---	74	57 - 126%	8	30%		

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601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0744 - 10 07 19 1649

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091255 - EPA 3510C (Acid Extraction)						Water						
LCS Dup (9091255-BSD1)		Prepared: 09/25/19 06:55 Analyzed: 09/25/19 18:40										Q-19
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 71 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>75 %</i>		<i>50-133 %</i>		<i>"</i>						

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091375 - EPA 3015A												
Water												
Blank (9091375-BLK1)												
Prepared: 09/27/19 09:18 Analyzed: 09/30/19 22:06												
<u>EPA 200.8</u>												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
<u>EPA 200.8 (Hg)</u>												
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
LCS (9091375-BS1)												
Prepared: 09/27/19 09:18 Analyzed: 09/30/19 22:11												
<u>EPA 200.8</u>												
Arsenic	54.5	---	1.00	ug/L	1	55.6	---	98	85 - 115%	---	---	
Barium	56.5	---	1.00	ug/L	1	55.6	---	102	85 - 115%	---	---	
Cadmium	54.9	---	0.200	ug/L	1	55.6	---	99	85 - 115%	---	---	
Chromium	56.8	---	1.00	ug/L	1	55.6	---	102	85 - 115%	---	---	
Lead	54.5	---	0.200	ug/L	1	55.6	---	98	85 - 115%	---	---	
Selenium	26.5	---	1.00	ug/L	1	27.8	---	96	85 - 115%	---	---	
Silver	28.9	---	0.200	ug/L	1	27.8	---	104	85 - 115%	---	---	
<u>EPA 200.8 (Hg)</u>												
Mercury	1.02	---	0.0800	ug/L	1	1.11	---	92	85 - 115%	---	---	
Duplicate (9091375-DUP1)												
Prepared: 09/27/19 09:18 Analyzed: 09/30/19 22:57												
<u>QC Source Sample: EQ-092019 (A910744-03)</u>												
<u>EPA 200.8</u>												
Barium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Cadmium	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
<u>EPA 200.8 (Hg)</u>												
Mercury	ND	---	0.0800	ug/L	1	---	ND	---	---	---	20%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Total Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091375 - EPA 3015A						Water						
Duplicate (9091375-DUP2)						Prepared: 09/27/19 09:18 Analyzed: 10/01/19 19:34						
QC Source Sample: EQ-092019 (A9I0744-03RE1)												
EPA 200.8												
Arsenic	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	Q-16
Matrix Spike (9091375-MS1)						Prepared: 09/27/19 09:18 Analyzed: 09/30/19 23:02						
QC Source Sample: EQ-092019 (A9I0744-03)												
EPA 200.8												
Barium	54.6	---	1.00	ug/L	1	55.6	ND	98	70 - 130%	---	---	
Cadmium	53.9	---	0.200	ug/L	1	55.6	ND	97	70 - 130%	---	---	
Chromium	53.4	---	1.00	ug/L	1	55.6	ND	96	70 - 130%	---	---	
Lead	56.2	---	0.200	ug/L	1	55.6	ND	101	70 - 130%	---	---	
Selenium	25.5	---	1.00	ug/L	1	27.8	ND	92	70 - 130%	---	---	
Silver	28.6	---	0.200	ug/L	1	27.8	ND	103	70 - 130%	---	---	
EPA 200.8 (Hg)												
Mercury	1.09	---	0.0800	ug/L	1	1.11	ND	98	70 - 130%	---	---	
Matrix Spike (9091375-MS2)						Prepared: 09/27/19 09:18 Analyzed: 10/01/19 19:39						
QC Source Sample: EQ-092019 (A9I0744-03RE1)												
EPA 200.8												
Arsenic	52.2	---	1.00	ug/L	1	55.6	ND	94	70 - 130%	---	---	Q-16

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091376 - Matrix Matched Direct Inject							Water					
Blank (9091376-BLK1)		Prepared: 09/27/19 09:24 Analyzed: 09/30/19 23:48										
EPA 200.8 (Diss)												
Barium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
EPA 200.8 (Hg)												
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
Blank (9091376-BLK2)		Prepared: 09/27/19 09:24 Analyzed: 10/01/19 20:11										
EPA 200.8 (Diss)												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	Q-16
LCS (9091376-BS1)		Prepared: 09/27/19 09:24 Analyzed: 09/30/19 23:53										
EPA 200.8 (Diss)												
Barium	55.3	---	1.00	ug/L	1	55.6	---	100	85 - 115%	---	---	
Cadmium	54.0	---	0.200	ug/L	1	55.6	---	97	85 - 115%	---	---	
Chromium	54.4	---	1.00	ug/L	1	55.6	---	98	85 - 115%	---	---	
Lead	53.5	---	0.200	ug/L	1	55.6	---	96	85 - 115%	---	---	
Selenium	26.5	---	1.00	ug/L	1	27.8	---	96	85 - 115%	---	---	
Silver	28.5	---	0.200	ug/L	1	27.8	---	103	85 - 115%	---	---	
EPA 200.8 (Hg)												
Mercury	1.00	---	0.0800	ug/L	1	1.11	---	90	85 - 115%	---	---	
LCS (9091376-BS2)		Prepared: 09/27/19 09:24 Analyzed: 10/01/19 20:15										
EPA 200.8 (Diss)												
Arsenic	50.8	---	1.00	ug/L	1	55.6	---	91	85 - 115%	---	---	Q-16
Duplicate (9091376-DUP1)		Prepared: 09/27/19 09:24 Analyzed: 10/01/19 00:16										
QC Source Sample: EQ-092019 (A910744-03)												
EPA 200.8 (Diss)												
Barium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Cadmium	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091376 - Matrix Matched Direct Inject							Water					
Duplicate (9091376-DUP1)		Prepared: 09/27/19 09:24 Analyzed: 10/01/19 00:16										
QC Source Sample: EQ-092019 (A910744-03)												
Chromium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	---	0.200	ug/L	1	---	ND	---	---	---	20%	
EPA 200.8 (Hg)												
Mercury	ND	---	0.0800	ug/L	1	---	ND	---	---	---	20%	
Duplicate (9091376-DUP2)		Prepared: 09/27/19 09:24 Analyzed: 10/01/19 20:39										
QC Source Sample: EQ-092019 (A910744-03RE1)												
EPA 200.8 (Diss)												
Arsenic	ND	---	1.00	ug/L	1	---	ND	---	---	---	20%	Q-16
Matrix Spike (9091376-MS1)		Prepared: 09/27/19 09:24 Analyzed: 10/01/19 00:21										
QC Source Sample: EQ-092019 (A910744-03)												
EPA 200.8 (Diss)												
Barium	52.9	---	1.00	ug/L	1	55.6	ND	95	70 - 130%	---	---	
Cadmium	53.2	---	0.200	ug/L	1	55.6	ND	96	70 - 130%	---	---	
Chromium	52.2	---	1.00	ug/L	1	55.6	ND	94	70 - 130%	---	---	
Lead	58.8	---	0.200	ug/L	1	55.6	ND	106	70 - 130%	---	---	
Selenium	26.7	---	1.00	ug/L	1	27.8	ND	96	70 - 130%	---	---	
Silver	28.1	---	0.200	ug/L	1	27.8	ND	101	70 - 130%	---	---	
EPA 200.8 (Hg)												
Mercury	1.18	---	0.0800	ug/L	1	1.11	ND	106	70 - 130%	---	---	
Matrix Spike (9091376-MS2)		Prepared: 09/27/19 09:24 Analyzed: 10/01/19 20:43										
QC Source Sample: EQ-092019 (A910744-03RE1)												
EPA 200.8 (Diss)												
Arsenic	50.9	---	1.00	ug/L	1	55.6	ND	92	70 - 130%	---	---	Q-16

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091384 - EPA 3015A - Dissolved							Water					
Blank (9091384-BLK1)		Prepared: 09/27/19 11:22		Analyzed: 10/02/19 20:28								
EPA 200.8 (Diss)												
Arsenic	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Selenium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
EPA 200.8 (Hg)												
Mercury	ND	---	0.0800	ug/L	1	---	---	---	---	---	---	
LCS (9091384-BS1)		Prepared: 09/27/19 11:22		Analyzed: 10/02/19 20:32								
EPA 200.8 (Diss)												
Arsenic	53.1	---	1.00	ug/L	1	55.6	---	96	85 - 115%	---	---	
Barium	55.9	---	1.00	ug/L	1	55.6	---	101	85 - 115%	---	---	
Cadmium	53.4	---	0.200	ug/L	1	55.6	---	96	85 - 115%	---	---	
Chromium	56.1	---	1.00	ug/L	1	55.6	---	101	85 - 115%	---	---	
Lead	53.2	---	0.200	ug/L	1	55.6	---	96	85 - 115%	---	---	
Selenium	26.9	---	1.00	ug/L	1	27.8	---	97	85 - 115%	---	---	
Silver	29.3	---	0.200	ug/L	1	27.8	---	105	85 - 115%	---	---	
EPA 200.8 (Hg)												
Mercury	1.04	---	0.0800	ug/L	1	1.11	---	94	85 - 115%	---	---	
Duplicate (9091384-DUP1)		Prepared: 09/27/19 11:22		Analyzed: 10/02/19 20:41								
QC Source Sample: GP05 (A910744-02)												
EPA 200.8 (Diss)												
Arsenic	31.1	---	10.0	ug/L	10	---	36.6	---	---	16	20%	
Barium	489	---	10.0	ug/L	10	---	549	---	---	12	20%	
Cadmium	ND	---	2.00	ug/L	10	---	ND	---	---	---	20%	R-04
Chromium	231	---	10.0	ug/L	10	---	277	---	---	18	20%	
Lead	17.8	---	2.00	ug/L	10	---	19.2	---	---	8	20%	
Selenium	ND	---	10.0	ug/L	10	---	ND	---	---	---	20%	R-04
Silver	ND	---	2.00	ug/L	10	---	ND	---	---	---	20%	R-04
EPA 200.8 (Hg)												

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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****QUALITY CONTROL (QC) SAMPLE RESULTS****Dissolved Metals by EPA 200.8 (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9091384 - EPA 3015A - Dissolved						Water						
Duplicate (9091384-DUP1)		Prepared: 09/27/19 11:22 Analyzed: 10/02/19 20:41										
QC Source Sample: GP05 (A9I0744-02)												
Mercury	1.29	---	0.800	ug/L	10	---	1.33	---	---	3	20%	
Matrix Spike (9091384-MS1)		Prepared: 09/27/19 11:22 Analyzed: 10/02/19 20:46										
QC Source Sample: GP05 (A9I0744-02)												
EPA 200.8 (Diss)												
Arsenic	81.4	---	10.0	ug/L	10	55.6	36.6	81	70 - 130%	---	---	
Barium	581	---	10.0	ug/L	10	55.6	549	58	70 - 130%	---	---	Q-03
Cadmium	59.2	---	2.00	ug/L	10	55.6	ND	106	70 - 130%	---	---	
Chromium	297	---	10.0	ug/L	10	55.6	277	36	70 - 130%	---	---	Q-03
Lead	76.8	---	2.00	ug/L	10	55.6	19.2	104	70 - 130%	---	---	
Selenium	23.7	---	10.0	ug/L	10	27.8	ND	85	70 - 130%	---	---	
Silver	31.0	---	2.00	ug/L	10	27.8	ND	112	70 - 130%	---	---	
EPA 200.8 (Hg)												
Mercury	2.62	---	0.800	ug/L	10	1.11	1.33	116	70 - 130%	---	---	

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601 SW 2nd Ave Suite 1400
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Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****SAMPLE PREPARATION INFORMATION****Diesel and/or Oil Hydrocarbons by NWTPH-Dx****Prep: EPA 3510C (Fuels/Acid Ext.)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091399							
A910744-01	Water	NWTPH-Dx	09/20/19 13:00	09/27/19 12:50	720mL/5mL	1000mL/5mL	1.39
A910744-02	Water	NWTPH-Dx	09/20/19 14:15	09/27/19 12:50	860mL/5mL	1000mL/5mL	1.16
A910744-03	Water	NWTPH-Dx	09/20/19 16:30	09/27/19 12:50	990mL/5mL	1000mL/5mL	1.01

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091264							
A910744-03	Water	NWTPH-Gx (MS)	09/20/19 16:30	09/25/19 12:01	5mL/5mL	5mL/5mL	1.00
Batch: 9091347							
A910744-01RE1	Water	NWTPH-Gx (MS)	09/20/19 13:00	09/26/19 18:02	5mL/5mL	5mL/5mL	1.00
A910744-02RE1	Water	NWTPH-Gx (MS)	09/20/19 14:15	09/26/19 18:02	5mL/5mL	5mL/5mL	1.00

Volatile Organic Compounds by EPA 8260C**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091264							
A910744-03	Water	EPA 8260C	09/20/19 16:30	09/25/19 12:01	5mL/5mL	5mL/5mL	1.00
A910744-04	Water	EPA 8260C	09/20/19 00:00	09/25/19 12:01	5mL/5mL	5mL/5mL	1.00
Batch: 9091347							
A910744-01RE1	Water	EPA 8260C	09/20/19 13:00	09/26/19 18:02	5mL/5mL	5mL/5mL	1.00
A910744-02RE1	Water	EPA 8260C	09/20/19 14:15	09/26/19 18:02	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**Prep: EPA 3510C (Acid Extraction)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091255							
A910744-01	Water	EPA 8270D (SIM)	09/20/19 13:00	09/25/19 09:23	900mL/2mL	1000mL/2mL	1.11

Total Metals by EPA 200.8 (ICPMS)

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Lisa Domenighini, Client Services Manager

**Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****SAMPLE PREPARATION INFORMATION****Total Metals by EPA 200.8 (ICPMS)****Prep: EPA 3015A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091375							
A910744-01	Water	EPA 200.8	09/20/19 13:00	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-01	Water	EPA 200.8 (Hg)	09/20/19 13:00	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-01RE1	Water	EPA 200.8	09/20/19 13:00	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-02	Water	EPA 200.8	09/20/19 14:15	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-02RE1	Water	EPA 200.8	09/20/19 14:15	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-02RE1	Water	EPA 200.8 (Hg)	09/20/19 14:15	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-03	Water	EPA 200.8	09/20/19 16:30	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-03	Water	EPA 200.8 (Hg)	09/20/19 16:30	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00
A910744-03RE1	Water	EPA 200.8	09/20/19 16:30	09/27/19 09:18	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 200.8 (ICPMS)**Prep: EPA 3015A - Dissolved**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091384							
A910744-02	Water	EPA 200.8 (Diss)	09/20/19 14:15	09/27/19 11:22	45mL/50mL	45mL/50mL	1.00
A910744-02	Water	EPA 200.8 (Hg)	09/20/19 14:15	09/27/19 11:22	45mL/50mL	45mL/50mL	1.00

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9091376							
A910744-01	Water	EPA 200.8 (Diss)	09/20/19 13:00	09/27/19 09:24	45mL/50mL	45mL/50mL	1.00
A910744-01	Water	EPA 200.8 (Hg)	09/20/19 13:00	09/27/19 09:24	45mL/50mL	45mL/50mL	1.00
A910744-01RE1	Water	EPA 200.8 (Diss)	09/20/19 13:00	09/27/19 09:24	45mL/50mL	45mL/50mL	1.00
A910744-03	Water	EPA 200.8 (Diss)	09/20/19 16:30	09/27/19 09:24	45mL/50mL	45mL/50mL	1.00
A910744-03	Water	EPA 200.8 (Hg)	09/20/19 16:30	09/27/19 09:24	45mL/50mL	45mL/50mL	1.00
A910744-03RE1	Water	EPA 200.8 (Diss)	09/20/19 16:30	09/27/19 09:24	45mL/50mL	45mL/50mL	1.00

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A910744 - 10 07 19 1649

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- F-18** Result for Diesel (Diesel Range Organics, C12-C24) is due to overlap from Gasoline or a Gasoline Range product.
- M-02** Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +16%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +17%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +24%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +29%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +3%. The results are reported as Estimated Values.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260C
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-04** Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
- S-08** TPH-Gx Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract. See 8260 results for accurate Surrogate recovery.

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Project Number: **185750581**

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A910744 - 10 07 19 1649

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported.
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Project: **Lampson**

Project Number: **185750581**

Project Manager: **Len Farr**

Report ID:

A9I0744 - 10 07 19 1649

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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EPA ID: OR01039**Stantec Portland**

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581**Project Manager: **Len Farr****Report ID:****A910744 - 10 07 19 1649****LABORATORY ACCREDITATION INFORMATION****TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Project: Lampson

Project Number: 185750581

Project Manager: Len Farr

Report ID:

A910744 - 10 07 19 1649

APEX LABS		CHAIN OF CUSTODY		Lab # <u>A910744</u> of <u>1</u>	
Company: <u>Stantec</u>		Project Mgr: <u>Len Farr</u>		Project Name: <u>Lampson</u>	
Address: <u>225 NE Hillside St.</u>		Phone: <u>503-718-2323</u>		Email: <u>len.farr@stantec.com</u>	
Sampled by: <u>Dana Hutchins</u>		Date: <u>9/24/19</u>		Project #: <u>185750581</u>	
Site Location: <u>OR WA CA</u>		Matrix: <u>W15</u>		EPA ID: <u>OR01039</u>	
AK ID: <u>---</u>		TIME: <u>---</u>		ANALYSIS REQUEST	
LAB ID #		DATE		TCLP Metals (8)	
SAMPLE ID		MATRIX		TOTAL DISS. TCLP	
6P02		9/24/19		V, Zn, Pb, Cu, Fe, Ni, Mn, Mo, K, Se, Ag, Na, TL	
6P05		9/24/19		Priority Metals (13)	
EQ-092019		9/24/19		RCRA Metals (8)	
TB-042319-1		9/24/19		8081 Pest	
				8082 PCBs	
				8270 Semi-Vols Full List	
				8270 SVI PAHs	
				8260 VOCs Full List	
				8260 Halo VOCs	
				8260 RBDM VOCs	
				8260 BTEX	
				NWTPH-Gs	
				NWTPH-Ds	
				NWTPH-HCID	
				# OF CONTAINERS	
				TAT Requested (circle)	
				1 Day 2 Day 3 Day	
				4 DAY 5 DAY Other:	
				SPECIAL INSTRUCTIONS:	
				*MS/MSD on Gx and VOCs only.	
RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:	
Signature: <u>Dana Hutchins</u>		Signature: <u>Len Farr</u>		Signature: <u>Len Farr</u>	
Date: <u>9/24/19</u>		Date: <u>9/24/19</u>		Date: <u>9/24/19</u>	
Printed Name: <u>Dana Hutchins</u>		Printed Name: <u>Len Farr</u>		Printed Name: <u>Len Farr</u>	
Company: <u>Stantec</u>		Company: <u>Stantec</u>		Company: <u>Stantec</u>	

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EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: Lampson

Project Number: 185750581

Project Manager: Len Farr

Report ID:

A910744 - 10 07 19 1649

APEX LABS COOLER RECEIPT FORM

Client: Stantec Element WO#: A9 50744

Project/Project #: Lampson 185750 581

Delivery Info:

Date/time received: 9/24/19 @ 1015 By: JS

Delivered by: Apex ☐ Client ☐ ESS ☐ FedEx ☒ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐

Cooler Inspection Date/time inspected: 9/24/19 @ 1015 By: JS

Chain of Custody included? Yes ☒ No ☐ Custody seals? Yes ☒ No ☒

Signed/dated by client? Yes ☒ No ☐

Signed/dated by Apex? Yes ☒ No ☐

CD Cooler #1 Cooler #2 Cooler #3 Cooler #4 Cooler #5 Cooler #6 Cooler #7

Temperature (°C) 9/24/19 5.1 2.7 1.0 2.3 _____

Received on ice? (Y/N) y y y y _____

Temp. blanks? (Y/N) y y y y _____

Ice type: (Gel/Real/Other) real real real real _____

Condition: good good good good _____

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

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

Out of temperature samples form initiated? Yes/No/NA NA

Samples Inspection: Date/time inspected: 9/24/19 @ 1050 By: CD

All samples intact? Yes ☒ No ☐ Comments: _____

Bottle labels/COCs agree? Yes ☒ No ☐ Comments: GP05 no time on 250 mL
EE Nitric TB#2118

COC/container discrepancies form initiated? Yes ☐ No ☐ NA ☒

Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: _____

Do VOA vials have visible headspace? Yes ☐ No ☒ NA ☐

Comments: GP02 9/19 HCL vials vis. sed. GP05 3/3 HCL vials vis. sed.

Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☒ No ☐ NA ☐

Comments: _____

* Additional information: Trk # 7763 1239 7084

GP02 9/19 vials not Apex provided *

" 6776

" 7213

7452

7763 1239 7084

JS 9/24/19

Labeled by: AKC

Witness: CD

Cooler Inspected by: CD

See Project Contact Form: Y

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Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Thursday, October 10, 2019

Len Farr

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

RE: A9J0155 - Lampson - 185750581 Tank 3.D.3

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

Enclosed are the results of analyses for work order A9J0155, which was received by the laboratory on 10/4/2019 at 11:12:00AM.

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

Please note: All samples will be disposed of within 30 days of final reporting, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler#1

5.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
A44-Stockpile	A9J0155-01	Soil	10/03/19 10:00	10/04/19 11:12
A43-Stockpile	A9J0155-02	Soil	10/03/19 10:15	10/04/19 11:12

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EPA ID: OR01039

Stantec Portland

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Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

ANALYTICAL SAMPLE RESULTS

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

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A44-Stockpile (A9J0155-01RE2)				Matrix: Soil		Batch: 9100727		
Gasoline Range Organics	1760	---	105	mg/kg dry	500	10/07/19 18:31	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	94 %	Limits: 50-150 %	1	10/07/19 18:31	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			99 %	50-150 %	1	10/07/19 18:31	NWTPH-Gx (MS)	
A43-Stockpile (A9J0155-02RE2)				Matrix: Soil		Batch: 9100727		
Gasoline Range Organics	1350	---	82.4	mg/kg dry	500	10/07/19 18:04	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		Recovery:	96 %	Limits: 50-150 %	1	10/07/19 18:04	NWTPH-Gx (MS)	
1,4-Difluorobenzene (Sur)			99 %	50-150 %	1	10/07/19 18:04	NWTPH-Gx (MS)	

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****ANALYTICAL SAMPLE RESULTS****Selected Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A44-Stockpile (A9J0155-01)				Matrix: Soil		Batch: 9100661		
Benzene	ND	---	0.0210	mg/kg dry	50	10/04/19 16:54	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.105	mg/kg dry	50	10/04/19 16:54	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0525	mg/kg dry	50	10/04/19 16:54	5035A/8260C	
Ethylbenzene	0.780	---	0.0525	mg/kg dry	50	10/04/19 16:54	5035A/8260C	Q-42
Methyl tert-butyl ether (MTBE)	ND	---	0.105	mg/kg dry	50	10/04/19 16:54	5035A/8260C	
Naphthalene	1.38	---	0.210	mg/kg dry	50	10/04/19 16:54	5035A/8260C	
Toluene	ND	---	0.105	mg/kg dry	50	10/04/19 16:54	5035A/8260C	
Xylenes, total	5.02	---	0.157	mg/kg dry	50	10/04/19 16:54	5035A/8260C	Q-42
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>105 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>10/04/19 16:54</i>	<i>5035A/8260C</i>
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>10/04/19 16:54</i>	<i>5035A/8260C</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>		<i>80-120 %</i>	<i>1</i>	<i>10/04/19 16:54</i>	<i>5035A/8260C</i>
A43-Stockpile (A9J0155-02)				Matrix: Soil		Batch: 9100661		
Benzene	ND	---	0.0165	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	0.0824	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	0.0412	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
Ethylbenzene	0.667	---	0.0412	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	0.0824	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
Naphthalene	3.13	---	0.165	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
Toluene	ND	---	0.0824	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
Xylenes, total	4.39	---	0.124	mg/kg dry	50	10/04/19 17:47	5035A/8260C	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>106 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>10/04/19 17:47</i>	<i>5035A/8260C</i>
<i>Toluene-d8 (Surr)</i>			<i>104 %</i>		<i>80-120 %</i>	<i>1</i>	<i>10/04/19 17:47</i>	<i>5035A/8260C</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>10/04/19 17:47</i>	<i>5035A/8260C</i>

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Lisa Domenighini, Client Services Manager



Apex Laboratories, LLC

6700 S.W. Sandburg Street

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503-718-2323

EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

ANALYTICAL SAMPLE RESULTS

TCLP Volatile Organic Compounds by EPA 1311/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A44-Stockpile (A9J0155-01)				Matrix: Soil		Batch: 9100780		
Benzene	ND	---	0.0125	mg/L	50	10/08/19 14:15	1311/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	92 %	Limits: 80-120 %	1	10/08/19 14:15	1311/8260C	
Toluene-d8 (Surr)			111 %	80-120 %	1	10/08/19 14:15	1311/8260C	
4-Bromofluorobenzene (Surr)			86 %	80-120 %	1	10/08/19 14:15	1311/8260C	
A43-Stockpile (A9J0155-02)				Matrix: Soil		Batch: 9100780		
Benzene	ND	---	0.0125	mg/L	50	10/08/19 15:10	1311/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	93 %	Limits: 80-120 %	1	10/08/19 15:10	1311/8260C	
Toluene-d8 (Surr)			109 %	80-120 %	1	10/08/19 15:10	1311/8260C	
4-Bromofluorobenzene (Surr)			87 %	80-120 %	1	10/08/19 15:10	1311/8260C	

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Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****ANALYTICAL SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A44-Stockpile (A9J0155-01)				Matrix: Soil		Batch: 9100669		
Acenaphthene	ND	---	0.0634	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0264	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	R-02
Anthracene	ND	---	0.0211	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	R-02
Benz(a)anthracene	0.0504	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Benzo(a)pyrene	0.0561	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Benzo(b)fluoranthene	0.0986	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Benzo(k)fluoranthene	0.0331	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	M-05
Benzo(g,h,i)perylene	0.0606	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Chrysene	0.0750	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Dibenzofuran	0.0497	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Fluoranthene	0.0969	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Fluorene	0.139	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	0.0522	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
1-Methylnaphthalene	0.540	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
2-Methylnaphthalene	0.890	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Naphthalene	0.288	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Phenanthrene	0.312	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
Pyrene	0.129	---	0.0106	mg/kg dry	1	10/07/19 13:27	EPA 8270D (SIM)	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery:</i>	77 %	<i>Limits:</i>	44-120 %	1	10/07/19 13:27	EPA 8270D (SIM)
<i>p-Terphenyl-d14 (Surr)</i>			95 %		54-127 %	1	10/07/19 13:27	EPA 8270D (SIM)

A43-Stockpile (A9J0155-02)				Matrix: Soil		Batch: 9100669		
Acenaphthene	ND	---	0.123	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	R-02
Acenaphthylene	ND	---	0.0353	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	R-02
Anthracene	ND	---	0.0321	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	R-02
Benz(a)anthracene	0.0326	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Benzo(a)pyrene	0.0304	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Benzo(b)fluoranthene	0.0523	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Benzo(k)fluoranthene	0.0174	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	M-05
Benzo(g,h,i)perylene	0.0296	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Chrysene	0.0434	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Dibenz(a,h)anthracene	ND	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Dibenzofuran	0.0883	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Fluoranthene	0.0625	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Fluorene	0.323	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Indeno(1,2,3-cd)pyrene	0.0273	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
1-Methylnaphthalene	1.55	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	

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Portland, OR 97204

Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A43-Stockpile (A9J0155-02)				Matrix: Soil		Batch: 9100669		
2-Methylnaphthalene	2.45	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Naphthalene	1.22	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Phenanthrene	0.751	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Pyrene	0.0806	---	0.0107	mg/kg dry	1	10/07/19 13:53	EPA 8270D (SIM)	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 80 %		Limits: 44-120 %	1	10/07/19 13:53	EPA 8270D (SIM)	
p-Terphenyl-d14 (Surr)		93 %		54-127 %	1	10/07/19 13:53	EPA 8270D (SIM)	

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Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****ANALYTICAL SAMPLE RESULTS****TCLP Metals by EPA 6020A (ICPMS)**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A44-Stockpile (A9J0155-01)				Matrix: Soil				
Batch: 9100788								
Arsenic	ND	---	0.100	mg/L	10	10/08/19 15:08	1311/6020A	
Barium	ND	---	5.00	mg/L	10	10/08/19 15:08	1311/6020A	
Cadmium	ND	---	0.100	mg/L	10	10/08/19 15:08	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	10/08/19 15:08	1311/6020A	
Lead	ND	---	0.100	mg/L	10	10/08/19 15:08	1311/6020A	
Mercury	ND	---	0.00700	mg/L	10	10/08/19 15:08	1311/6020A	
Selenium	ND	---	0.100	mg/L	10	10/08/19 15:08	1311/6020A	
Silver	ND	---	0.100	mg/L	10	10/08/19 15:08	1311/6020A	
A43-Stockpile (A9J0155-02)				Matrix: Soil				
Batch: 9100788								
Arsenic	ND	---	0.100	mg/L	10	10/08/19 15:13	1311/6020A	
Barium	ND	---	5.00	mg/L	10	10/08/19 15:13	1311/6020A	
Cadmium	ND	---	0.100	mg/L	10	10/08/19 15:13	1311/6020A	
Chromium	ND	---	0.100	mg/L	10	10/08/19 15:13	1311/6020A	
Lead	ND	---	0.100	mg/L	10	10/08/19 15:13	1311/6020A	
Mercury	ND	---	0.00700	mg/L	10	10/08/19 15:13	1311/6020A	
Selenium	ND	---	0.100	mg/L	10	10/08/19 15:13	1311/6020A	
Silver	ND	---	0.100	mg/L	10	10/08/19 15:13	1311/6020A	

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Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A44-Stockpile (A9J0155-01)				Matrix: Soil		Batch: 9100654		
% Solids	86.9	---	1.00	% by Weight	1	10/07/19 07:47	EPA 8000C	
A43-Stockpile (A9J0155-02)				Matrix: Soil		Batch: 9100718		
% Solids	86.7	---	1.00	% by Weight	1	10/08/19 07:22	EPA 8000C	

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Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****ANALYTICAL SAMPLE RESULTS****TCLP Extraction by EPA 1311**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
A44-Stockpile (A9J0155-01)				Matrix: Soil		Batch: 9100723		
TCLP Extraction	PREP	---		N/A	1	10/07/19 16:05	EPA 1311	
TCLP ZHE Extraction	PREP	---		N/A	1	10/07/19 15:50	EPA 1311 ZHE	
A43-Stockpile (A9J0155-02)				Matrix: Soil		Batch: 9100723		
TCLP Extraction	PREP	---		N/A	1	10/07/19 16:05	EPA 1311	
TCLP ZHE Extraction	PREP	---		N/A	1	10/07/19 15:50	EPA 1311 ZHE	

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Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

QUALITY CONTROL (QC) SAMPLE RESULTS

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

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100661 - EPA 5035A												
Soil												
Blank (9100661-BLK1)												
Prepared: 10/04/19 09:44 Analyzed: 10/04/19 11:31												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 92 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			101 %	50-150 %			"					
LCS (9100661-BS2)												
Prepared: 10/04/19 09:44 Analyzed: 10/04/19 11:04												
NWTPH-Gx (MS)												
Gasoline Range Organics	24.2	---	5.00	mg/kg wet	50	25.0	---	97	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 90 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			99 %	50-150 %			"					
Duplicate (9100661-DUP1)												
Prepared: 10/03/19 10:00 Analyzed: 10/04/19 17:21												
QC Source Sample: A44-Stockpile (A9J0155-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	583	---	10.2	mg/kg dry	50	---	1750	---	---	100	30%	Q-04
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 95 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			99 %	50-150 %			"					
Batch 9100727 - EPA 5035A												
Soil												
Blank (9100727-BLK1)												
Prepared: 10/07/19 09:30 Analyzed: 10/07/19 11:49												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 92 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			99 %	50-150 %			"					
LCS (9100727-BS2)												
Prepared: 10/07/19 09:30 Analyzed: 10/07/19 11:22												
NWTPH-Gx (MS)												
Gasoline Range Organics	23.8	---	5.00	mg/kg wet	50	25.0	---	95	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 94 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			98 %	50-150 %			"					

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EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****QUALITY CONTROL (QC) SAMPLE RESULTS****Selected Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100661 - EPA 5035A						Soil						
Blank (9100661-BLK1)		Prepared: 10/04/19 09:44 Analyzed: 10/04/19 11:31										
5035A/8260C												
Benzene	ND	---	0.00667	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 91 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr) 103 % 80-120 % "												
4-Bromofluorobenzene (Surr) 97 % 80-120 % "												
LCS (9100661-BS1)		Prepared: 10/04/19 09:44 Analyzed: 10/04/19 10:37										
5035A/8260C												
Benzene	0.888	---	0.0100	mg/kg wet	50	1.00	---	89	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Ethylbenzene	0.995	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Isopropylbenzene	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.916	---	0.0500	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
Naphthalene	1.06	---	0.100	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
Toluene	0.986	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Xylenes, total	3.01	---	0.0750	mg/kg wet	50	3.00	---	100	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 92 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr) 103 % 80-120 % "												
4-Bromofluorobenzene (Surr) 97 % 80-120 % "												
Duplicate (9100661-DUP1)		Prepared: 10/03/19 10:00 Analyzed: 10/04/19 17:21										

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Lisa Domenighini, Client Services Manager

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**Apex Laboratories, LLC**

6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****QUALITY CONTROL (QC) SAMPLE RESULTS****Selected Volatile Organic Compounds by EPA 5035A/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100661 - EPA 5035A							Soil					
Duplicate (9100661-DUP1)		Prepared: 10/03/19 10:00 Analyzed: 10/04/19 17:21										
QC Source Sample: A44-Stockpile (A9J0155-01)												
5035A/8260C												
Benzene	ND	---	0.0204	mg/kg dry	50	---	ND	---	---	---	30%	Q-05
1,2-Dibromoethane (EDB)	ND	---	0.102	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0511	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	0.472	---	0.0511	mg/kg dry	50	---	0.780	---	---	49	30%	Q-04
Isopropylbenzene	0.128	---	0.102	mg/kg dry	50	---	0.481	---	---	116	30%	Q-05
Methyl tert-butyl ether (MTBE)	ND	---	0.102	mg/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	0.429	---	0.204	mg/kg dry	50	---	1.38	---	---	105	30%	Q-04
Toluene	ND	---	0.102	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	3.22	---	0.102	mg/kg dry	50	---	19.1	---	---	142	30%	Q-04
1,3,5-Trimethylbenzene	1.61	---	0.102	mg/kg dry	50	---	7.18	---	---	127	30%	Q-04
Xylenes, total	2.24	---	0.153	mg/kg dry	50	---	5.02	---	---	77	30%	Q-04
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		104 %		80-120 %		"						

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Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****QUALITY CONTROL (QC) SAMPLE RESULTS****TCLP Volatile Organic Compounds by EPA 1311/8260C**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100780 - EPA 1311/5030B TCLP Volatiles						Water						
Blank (9100780-BLK1)		Prepared: 10/08/19 10:00		Analyzed: 10/08/19 13:48		TCLPa						
1311/8260C												
Benzene	ND	---	0.0125	mg/L	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 93 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		109 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		91 %		80-120 %		"						
LCS (9100780-BS1)		Prepared: 10/08/19 10:00		Analyzed: 10/08/19 13:21		TCLPa						
1311/8260C												
Benzene	0.909	---	0.0125	mg/L	50	1.00	---	91	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 92 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		107 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		90 %		80-120 %		"						
Duplicate (9100780-DUP1)		Prepared: 10/08/19 13:09		Analyzed: 10/08/19 14:42								
QC Source Sample: A44-Stockpile (A9J0155-01)												
1311/8260C												
Benzene	ND	---	0.0125	mg/L	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 91 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		110 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		90 %		80-120 %		"						
Matrix Spike (9100780-MS1)		Prepared: 10/08/19 13:09		Analyzed: 10/08/19 15:37								
QC Source Sample: A43-Stockpile (A9J0155-02)												
1311/8260C												
Benzene	1.00	---	0.0125	mg/L	50	1.00	ND	100	70 - 130%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 94 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		108 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		89 %		80-120 %		"						

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100669 - EPA 3546						Soil						
Blank (9100669-BLK1)		Prepared: 10/04/19 10:55 Analyzed: 10/04/19 19:51										
EPA 8270D (SIM)												
Acenaphthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	---	0.00909	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2-Fluorobiphenyl (Surr)		Recovery: 80 %		Limits: 44-120 %		Dilution: 1x						
p-Terphenyl-d14 (Surr)		113 %		54-127 %		"						

LCS (9100669-BS1)

Prepared: 10/04/19 10:55 Analyzed: 10/04/19 20:16

EPA 8270D (SIM)												
Acenaphthene	0.737	---	0.0100	mg/kg wet	1	0.800	---	92	40 - 122%	---	---	
Acenaphthylene	0.728	---	0.0100	mg/kg wet	1	0.800	---	91	32 - 132%	---	---	
Anthracene	0.727	---	0.0100	mg/kg wet	1	0.800	---	91	47 - 123%	---	---	
Benz(a)anthracene	0.739	---	0.0100	mg/kg wet	1	0.800	---	92	49 - 126%	---	---	
Benzo(a)pyrene	0.738	---	0.0100	mg/kg wet	1	0.800	---	92	45 - 129%	---	---	
Benzo(b)fluoranthene	0.755	---	0.0100	mg/kg wet	1	0.800	---	94	45 - 132%	---	---	
Benzo(k)fluoranthene	0.760	---	0.0100	mg/kg wet	1	0.800	---	95	47 - 132%	---	---	
Benzo(g,h,i)perylene	0.682	---	0.0100	mg/kg wet	1	0.800	---	85	43 - 134%	---	---	
Chrysene	0.747	---	0.0100	mg/kg wet	1	0.800	---	93	50 - 124%	---	---	

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EPA ID: OR01039**Stantec Portland**

601 SW 2nd Ave Suite 1400

Portland, OR 97204

Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****QUALITY CONTROL (QC) SAMPLE RESULTS****Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100669 - EPA 3546							Soil					
LCS (9100669-BS1)		Prepared: 10/04/19 10:55 Analyzed: 10/04/19 20:16										
Dibenz(a,h)anthracene	0.763	---	0.0100	mg/kg wet	1	0.800	---	95	45 - 134%	---	---	
Dibenzofuran	0.722	---	0.0100	mg/kg wet	1	0.800	---	90	44 - 120%	---	---	
Fluoranthene	0.762	---	0.0100	mg/kg wet	1	0.800	---	95	50 - 127%	---	---	
Fluorene	0.724	---	0.0100	mg/kg wet	1	0.800	---	90	43 - 125%	---	---	
Indeno(1,2,3-cd)pyrene	0.704	---	0.0100	mg/kg wet	1	0.800	---	88	45 - 133%	---	---	
1-Methylnaphthalene	0.704	---	0.0100	mg/kg wet	1	0.800	---	88	40 - 120%	---	---	
2-Methylnaphthalene	0.696	---	0.0100	mg/kg wet	1	0.800	---	87	38 - 122%	---	---	
Naphthalene	0.697	---	0.0100	mg/kg wet	1	0.800	---	87	35 - 123%	---	---	
Phenanthrene	0.725	---	0.0100	mg/kg wet	1	0.800	---	91	50 - 121%	---	---	
Pyrene	0.771	---	0.0100	mg/kg wet	1	0.800	---	96	47 - 127%	---	---	
Surr: 2-Fluorobiphenyl (Surr)			Recovery: 93 %		Limits: 44-120 %		Dilution: 1x					
p-Terphenyl-d14 (Surr)			102 %		54-127 %		"					

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Portland, OR 97204

Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****QUALITY CONTROL (QC) SAMPLE RESULTS****TCLP Metals by EPA 6020A (ICPMS)**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100788 - EPA 1311/3015												
Soil												
Blank (9100788-BLK1)												
Prepared: 10/08/19 09:36 Analyzed: 10/08/19 14:31												
1311/6020A												
Arsenic	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
Barium	ND	---	5.00	mg/L	10	---	---	---	---	---	---	TCLP
Cadmium	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
Chromium	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
Lead	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
Mercury	ND	---	0.00700	mg/L	10	---	---	---	---	---	---	TCLP
Selenium	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
Silver	ND	---	0.100	mg/L	10	---	---	---	---	---	---	TCLP
LCS (9100788-BS1)												
Prepared: 10/08/19 09:36 Analyzed: 10/08/19 14:36												
1311/6020A												
Arsenic	4.90	---	0.100	mg/L	10	5.00	---	98	80 - 120%	---	---	TCLP
Barium	10.3	---	5.00	mg/L	10	10.0	---	103	80 - 120%	---	---	TCLP
Cadmium	1.00	---	0.100	mg/L	10	1.00	---	100	80 - 120%	---	---	TCLP
Chromium	5.00	---	0.100	mg/L	10	5.00	---	100	80 - 120%	---	---	TCLP
Lead	4.94	---	0.100	mg/L	10	5.00	---	99	80 - 120%	---	---	TCLP
Mercury	0.0980	---	0.00700	mg/L	10	0.100	---	98	80 - 120%	---	---	TCLP
Selenium	0.994	---	0.100	mg/L	10	1.00	---	99	80 - 120%	---	---	TCLP
Silver	1.04	---	0.100	mg/L	10	1.00	---	104	80 - 120%	---	---	TCLP
Matrix Spike (9100788-MS1)												
Prepared: 10/08/19 09:36 Analyzed: 10/08/19 15:17												
QC Source Sample: A43-Stockpile (A9J0155-02)												
1311/6020A												
Arsenic	5.15	---	0.100	mg/L	10	5.00	ND	103	50 - 150%	---	---	
Barium	11.7	---	5.00	mg/L	10	10.0	ND	117	50 - 150%	---	---	
Cadmium	1.05	---	0.100	mg/L	10	1.00	ND	105	50 - 150%	---	---	
Chromium	5.10	---	0.100	mg/L	10	5.00	ND	102	50 - 150%	---	---	
Lead	5.31	---	0.100	mg/L	10	5.00	0.0592	105	50 - 150%	---	---	
Mercury	0.106	---	0.00700	mg/L	10	0.100	ND	106	50 - 150%	---	---	
Selenium	1.02	---	0.100	mg/L	10	1.00	ND	102	50 - 150%	---	---	
Silver	1.09	---	0.100	mg/L	10	1.00	ND	109	50 - 150%	---	---	

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Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100654 - Total Solids (Dry Weight)							Soil					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9100718 - Total Solids (Dry Weight)						Soil						

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****SAMPLE PREPARATION INFORMATION****Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx****Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9100727							
A9J0155-01RE2	Soil	NWTPH-Gx (MS)	10/03/19 10:00	10/03/19 10:00	5.91g/10mL	5g/5mL	1.69
A9J0155-02RE2	Soil	NWTPH-Gx (MS)	10/03/19 10:15	10/03/19 10:15	7.71g/10mL	5g/5mL	1.30

Selected Volatile Organic Compounds by EPA 5035A/8260C**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9100661							
A9J0155-01	Soil	5035A/8260C	10/03/19 10:00	10/03/19 10:00	5.91g/10mL	5g/5mL	1.69
A9J0155-02	Soil	5035A/8260C	10/03/19 10:15	10/03/19 10:15	7.71g/10mL	5g/5mL	1.30

TCLP Volatile Organic Compounds by EPA 1311/8260C**Prep: EPA 1311/5030B TCLP Volatiles**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9100780							
A9J0155-01	Soil	1311/8260C	10/03/19 10:00	10/08/19 13:09	5mL/5mL	5mL/5mL	1.00
A9J0155-02	Soil	1311/8260C	10/03/19 10:15	10/08/19 13:09	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D SIM**Prep: EPA 3546**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9100669							
A9J0155-01	Soil	EPA 8270D (SIM)	10/03/19 10:00	10/04/19 16:19	10.89g/5mL	10g/5mL	0.92
A9J0155-02	Soil	EPA 8270D (SIM)	10/03/19 10:15	10/04/19 16:19	10.78g/5mL	10g/5mL	0.93

TCLP Metals by EPA 6020A (ICPMS)**Prep: EPA 1311/3015**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9100788							
A9J0155-01	Soil	1311/6020A	10/03/19 10:00	10/08/19 09:36	10mL/50mL	10mL/50mL	1.00
A9J0155-02	Soil	1311/6020A	10/03/19 10:15	10/08/19 09:36	10mL/50mL	10mL/50mL	1.00

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Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****SAMPLE PREPARATION INFORMATION****Percent Dry Weight****Prep: Total Solids (Dry Weight)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9100654</u>							
A9J0155-01	Soil	EPA 8000C	10/03/19 10:00	10/04/19 19:21			NA
<u>Batch: 9100718</u>							
A9J0155-02	Soil	EPA 8000C	10/03/19 10:15	10/07/19 07:57			NA

TCLP Extraction by EPA 1311**Prep: EPA 1311 (TCLP)**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9100723</u>							
A9J0155-01	Soil	EPA 1311	10/03/19 10:00	10/07/19 16:05	100g/2000mL	100g/2000mL	NA
A9J0155-02	Soil	EPA 1311	10/03/19 10:15	10/07/19 16:05	100g/2000mL	100g/2000mL	NA

Prep: EPA 1311 TCLP/ZHE

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 9100764</u>							
A9J0155-01	Soil	EPA 1311 ZHE	10/03/19 10:00	10/07/19 15:50	25g/500mL	25g/500mL	NA
A9J0155-02	Soil	EPA 1311 ZHE	10/03/19 10:15	10/07/19 15:50	25.1g/500mL	25g/500mL	NA

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503-718-2323
EPA ID: OR01039

Stantec Portland

601 SW 2nd Ave Suite 1400
Portland, OR 97204

Project: **Lampson**

Project Number: **185750581 Tank 3.D.3**

Project Manager: **Len Farr**

Report ID:

A9J0155 - 10 10 19 1602

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

M-05	Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
Q-04	Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
Q-05	Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
TCLP	This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 9100723.
TCLPa	This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 9100764.

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Project: **Lampson**Project Number: **185750581 Tank 3.D.3**Project Manager: **Len Farr****Report ID:****A9J0155 - 10 10 19 1602****REPORTING NOTES AND CONVENTIONS:****Abbreviations:**

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported.
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).

If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

- Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
- For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
 - For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
- For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION**TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039**

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

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Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Apex Labs
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Company: Stantec Project Mgr: Len Farr Project Name: Lampson Project #: 185750581

Address: 225 NE Hillcrest Dr. Ste 100 Phone: 503-494-8793 Email: diana.hutchins@stantec.com PO #

Sampled by: Diana Hutchins

Site Location: OR WA CA AK ID

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-DX	NWTPH-GX	8260 BTEX	8260 RBDN VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pest	RCRA Metals (8)	Priority Metals (13)	Cr, Co, Cu, Fe, Pb, Hg, Mn, Ni, Mo, Nb, K, Se, Ag, Na, Tl, Zn	TOTAL DISS. TCLP	TCLP Metals (8)	Archive
A44 - Stockpile	10/3/14	1000	S	7		X	X			X	X					X				H	
A43 - Stockpile	10/7/14	1015	S	7		X	X			X	X					X				H	

SPECIAL INSTRUCTIONS: Also send results to Leonard Farr and Graeme Taylor

Normal Turn Around Time (TAT) = 10 Business Days

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

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: Diana Hutchins Date: 10-3-14 Time: 11:30

RELINQUISHED BY: Signature: Tanna Godley Date: 10-4-14 Time: 11:12

RELINQUISHED BY: Signature: Apex Date: _____ Time: _____

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Lisa Domenighini

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Project: Lampson

Project Number: 185750581 Tank 3.D.3

Project Manager: Len Farr

Report ID:

A9J0155 - 10 10 19 1602

APEX LABS COOLER RECEIPT FORM

Client: Stantec Element WO#: A9J0155

Project/Project #: Lampson / 185750581

Delivery Info:

Date/time received: 10-4-19 @ 11:12 By: TAM

Delivered by: Apex ☐ Client ☐ ESS ☐ FedEx ☒ UPS ☐ Swift ☐ Senvoy ☐ SDS ☐ Other ☐

Cooler Inspection Date/time inspected: 10-4-19 @ 11:12 By: TAM

Chain of Custody included? Yes ☒ No ☐ Custody seals? Yes ☒ No ☐

Signed/dated by client? Yes ☒ No ☐

Signed/dated by Apex? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>5.8</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition:	<u>good</u>						

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

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

Out of temperature samples form initiated? Yes/No ☒ NA

Samples Inspection: Date/time inspected: 10-4-19 @ 11:54 By: TAM

All samples intact? Yes ☒ No ☐ Comments:

Bottle labels/COCs agree? Yes ☒ No ☒ Comments: TAM 10-4-19 TB# 2118 received not on COC

COC/container discrepancies form initiated? Yes ☐ No ☐ NA ☒

Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:

Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒

Comments:

Water samples: pH checked: Yes ☐ No ☒ NA ☒ pH appropriate? Yes ☐ No ☒ NA ☒

Comments:

Additional information: Tracking # 7704 6813 7155 TB# 2118

Labeled by:

TAM

Witness:

ON

Cooler Inspected by:

TAM

See Project Contact Form: Y

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Lisa A. Domenighini

Lisa Domenighini, Client Services Manager

Stantec Portland

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Report ID:

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Qosa A Jomeynghini

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APPENDIX E

Site-Specific Risk-Based Concentration Calculations

TPH Fraction Composition (Weight Fraction)

Fuel Fractions	Site-Specific Data			Generic Weight Fraction Data		
	Raw Data mg/kg (ppm)	Adjusted Data mg/kg (ppm)	Weight Fraction	Gasoline	Diesel	Mineral Oil
Aliphatic C5-C6	175	136	8.31E-02	2.06E-01	0.00E+00	0.00E+00
Aliphatic >C6-C8	327	327	2.00E-01	2.20E-01	0.00E+00	0.00E+00
Aliphatic >C8-C10	342	342	2.09E-01	9.00E-02	2.00E-02	1.00E-03
Aliphatic >C10-C12	192	192	1.18E-01	3.00E-02	7.00E-02	3.00E-03
Aliphatic >C12-C16	70	70	4.27E-02	0.00E+00	3.50E-01	1.60E-01
Aliphatic >C16-C21	16	16	9.91E-03	0.00E+00	3.40E-01	7.00E-01
Aliphatic >C21-C34	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aromatic >C8-C10	199	76	4.65E-02	9.02E-02	2.52E-03	1.00E-03
Aromatic >C10-C12	200	179	1.09E-01	2.25E-02	7.40E-03	1.00E-03
Aromatic >C12-C16	75	75	4.57E-02	0.00E+00	8.00E-02	7.00E-03
Aromatic >C16-C21	27	27	1.63E-02	0.00E+00	1.20E-01	8.00E-02
Aromatic >C21-C34	0	0	0.00E+00	0.00E+00	0.00E+00	4.60E-02
n-Hexane	39.2	39.2	2.40E-02	2.40E-02	0.00E+00	0.00E+00
Benzene	1.2	1.2	7.47E-04	2.50E-02	2.90E-04	0.00E+00
Toluene	10.6	10.6	6.49E-03	1.20E-01	1.80E-03	0.00E+00
Ethylbenzene	38.5	38.5	2.36E-02	2.00E-02	6.80E-04	0.00E+00
Total Xylenes	84.5	84.5	5.17E-02	1.10E-01	5.00E-03	0.00E+00
1,2,4-trimethylbenzene			0.00E+00	3.00E-02	0.00E+00	0.00E+00
1,3,5-trimethylbenzene			0.00E+00	9.80E-03	1.80E-03	0.00E+00
Naphthalene	21.4	21.4	1.31E-02	2.50E-03	2.60E-03	0.00E+00
Total	1818	1634	1.00	1.00	1.00	1.00

Use one of the following two options for site-specific TPH RBC calculations.		
OPTION 1:	(1) Enter TPH data (mg/kg or ppm) into the cell on the right. 	
Estimate TPH Fractions	(2) Enter BTEX, TMB, and naphthalene data in the "Raw Data" column above.	Gasoline Estimate
	(3) Use one of the buttons at the right to identify the predominant product.	Diesel Estimate
OR		
OPTION 2:	(1) Enter TPH fraction <u>and</u> constituent data in the "Raw Data" column above.	Gasoline Fractions
Use VPH and EPH Results	(2) Use one of the buttons at the right to identify the predominant product.	Non-Gas Fractions

For references, please refer to *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (DEQ, 2003).

Risk-Based Concentrations for TPH: Site-Specific Data

Fuel Fraction	RBCs					RBCw			RBCu			RBCw			RBCu			RBCw			RBCu			Construction & Excavation Worker (ug/L)	RBCair			RBCsg		
	Residential	Urban Residential	Occupational	Construction Worker	Excavation Worker	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational		Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)		(ug/L)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)
Aliphatic C5-C6	7.2E-03	7.6E-03	6.6E-03	2.4E-03	1.8E-03	3.5E-02	3.5E-02	1.0E-01	3.9E-02	3.9E-02	1.5E-01	1.3E-02	1.3E-02	1.2E-02	1.5E+03	1.5E+03	6.1E+03	6.5E+04	6.5E+04	2.7E+05	2.9E+03	2.9E+03	3.7E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Aliphatic >C6-C8	1.7E-02	1.8E-02	1.6E-02	5.9E-03	4.3E-03	8.3E-02	8.3E-02	2.4E-01	9.5E-02	9.5E-02	6.9E-02	9.9E-03	9.9E-03	3.5E-03	1.5E+03	1.5E+03	6.1E+03	4.3E+04	4.3E+04	1.8E+05	1.9E+03	1.9E+03	2.4E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Aliphatic >C9-C10	3.9E-01	4.1E-01	4.3E-01	4.3E-01	3.1E-01	6.1E-01	6.1E-01	1.7E-01	7.0E-01	7.0E-01	4.7E-02	1.6E-02	1.6E-02	2.5E-03	1.3E+02	1.3E+02	5.5E+02	3.8E+03	3.8E+03	1.6E+04	1.7E+02	1.7E+02	2.2E+03	2.0E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aliphatic >C10-C12	2.2E-01	2.2E-01	2.2E-01	2.4E-01	1.7E-01	4.0E-02	4.0E-02	9.3E-03	6.3E-02	6.3E-02	2.9E-03	9.3E-04	9.3E-04	9.1E-05	1.3E+02	1.3E+02	5.5E+02	2.6E+03	2.6E+03	1.1E+04	1.1E+02	1.1E+02	1.4E+03	6.7E+02	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aliphatic >C12-C16	7.2E-02	7.6E-02	9.2E-02	1.1E-01	8.1E-02	1.1E-03	1.1E-03	2.6E-04	6.0E-03	6.0E-03	7.1E-05	3.5E-06	3.5E-06	2.2E-07	3.7E+02	3.7E+02	1.5E+03	5.9E+02	5.9E+02	2.5E+03	2.6E+01	2.6E+01	3.3E+02	1.2E+02	1.0E+02	1.0E+02	4.4E+02	-	-	-
Aliphatic >C16-C21	5.6E-05	5.9E-05	7.1E-05	8.5E-05	6.3E-05	6.0E-23	6.0E-23	1.4E-23	7.9E-22	7.9E-22	3.8E-24	8.7E-12	8.7E-12	4.2E-13	1.1E+05	1.1E+05	4.4E+05	6.3E+18	6.3E+18	2.6E+19	2.8E+17	2.8E+17	3.5E+18	2.4E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aliphatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.1E+05	1.1E+05	4.4E+05	3.1E+17	3.1E+17	1.3E+18	1.4E+16	1.4E+16	1.7E+17	9.0E+02	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aromatic >C9-C10	3.4E-19	3.6E-19	3.3E-19	1.8E-19	1.1E-19	1.4E-18	1.4E-18	3.7E-19	2.2E-19	2.2E-19	1.0E-19	6.3E-19	6.3E-19	6.1E-19	2.0E+19	2.0E+19	8.3E+19	5.0E+22	5.0E+22	2.1E+23	2.7E+21	2.7E+21	3.4E+22	2.1E+21	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aromatic >C10-C12	1.1E-01	1.0E-01	9.2E-02	9.0E-02	5.4E-02	3.8E-02	3.8E-02	9.1E-03	9.5E-03	9.5E-03	2.5E-03	1.0E-01	1.0E-01	5.7E-02	1.8E+02	1.8E+02	7.3E+02	1.2E+06	1.2E+06	4.9E+06	8.9E+04	8.9E+04	1.1E+06	1.4E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C12-C16	2.8E-02	2.7E-02	2.7E-02	3.1E-02	2.1E-02	1.2E-03	1.2E-03	2.9E-04	7.5E-04	7.5E-04	7.9E-05	2.0E-02	2.0E-02	4.8E-03	1.8E+02	1.8E+02	7.3E+02	1.9E+06	1.9E+06	7.9E+06	2.3E+05	2.3E+05	2.9E+06	1.2E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C16-C21	7.2E-03	7.5E-03	8.5E-03	1.0E-02	7.5E-03	9.6E-06	9.6E-06	2.2E-06	2.0E-05	2.0E-05	6.1E-07	1.6E-03	1.6E-03	1.5E-04	1.8E+02	1.8E+02	7.3E+02	3.8E+06	3.8E+06	1.6E+07	8.9E+05	8.9E+05	1.1E+07	9.5E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E+03	1.5E+03	5.8E+03	4.2E+24	4.2E+24	1.8E+25	1.7E+24	1.7E+24	2.1E+25	7.3E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-
n-Hexane	7.0E-03	7.4E-03	7.9E-03	8.1E-03	6.0E-03	1.0E-02	1.0E-02	2.2E-02	1.1E-02	1.1E-02	6.1E-03	1.0E-02	1.0E-02	2.8E-03	8.8E+02	8.8E+02	3.6E+03	2.1E+05	2.1E+05	9.0E+05	9.5E+03	9.5E+03	1.2E+05	6.5E+04	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Benzene	3.9E-03	4.0E-03	4.2E-03	4.0E-03	2.9E-03	7.3E-03	7.3E-03	2.1E-02	8.3E-03	8.3E-03	9.5E-03	9.4E-02	9.4E-02	1.8E-01	4.4E+01	4.4E+01	1.8E+02	2.8E+05	2.8E+05	1.2E+06	1.9E+04	1.9E+04	2.4E+05	6.7E+03	3.1E+01	3.1E+01	1.3E+02	6.9E+03	6.9E+03	1.3E+05
Toluene	1.1E-03	1.1E-03	1.3E-03	1.5E-03	1.1E-03	3.8E-04	3.8E-04	5.9E-04	2.4E-04	2.4E-04	1.9E-04	6.1E-03	6.1E-03	8.0E-03	2.3E+03	2.3E+03	9.2E+03	4.4E+07	4.4E+07	1.8E+08	2.7E+06	2.7E+06	3.4E+07	2.1E+05	5.2E+03	5.2E+03	2.2E+04	1.0E+06	1.0E+06	2.2E+07
Ethylbenzene	4.3E-03	4.6E-03	4.9E-03	4.9E-03	3.5E-03	6.9E-03	6.9E-03	2.8E-03	2.4E-03	2.4E-03	7.8E-04	1.9E-02	1.9E-02	1.4E-02	1.3E+03	1.3E+03	5.5E+03	8.8E+06	8.8E+06	3.7E+07	5.3E+05	5.3E+05	6.6E+06	1.1E+05	1.0E+03	1.0E+03	4.4E+03	2.1E+05	2.1E+05	4.4E+06
Total Xylenes	3.4E-02	3.6E-02	3.2E-02	1.5E-02	1.0E-02	1.5E-01	1.5E-01	5.7E-02	4.4E-02	4.4E-02	1.6E-02	2.7E-01	2.7E-01	2.0E-01	2.0E+02	2.0E+02	8.5E+02	9.2E+05	9.2E+05	3.9E+06	5.9E+04	5.9E+04	7.4E+05	2.3E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
1,2,4-trimethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E+01	1.5E+01	6.1E+01	8.0E+04	8.0E+04	3.3E+05	5.0E+03	5.0E+03	6.4E+04	1.7E+03	7.3E+00	7.3E+00	3.1E+01	1.5E+03	1.5E+03	3.1E+04
1,3,5-trimethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.7E+02	3.7E+02	1.5E+03	9.2E+22	9.2E+22	3.9E+23	5.4E+21	5.4E+21	6.8E+22	2.3E+04	1.0E+19	1.0E+19	4.4E+19	-	-	-
Naphthalene	1.1E-01	8.3E-02	5.9E-02	4.2E-02	1.4E-02	1.6E-02	1.6E-02	3.9E-03	4.1E-03	4.1E-03	1.1E-03	4.4E-01	4.4E-01	2.4E-01	6.3E+09	6.2E+09	2.6E+01	1.4E+05	1.4E+05	5.7E+05	2.9E+04	2.9E+04	3.7E+05	7.2E+02	3.1E+00	3.1E+00	1.3E+01	6.9E+02	6.9E+02	1.3E+04
TPH RBC* ->>>>	950	2,000	15,000	5,800	>MAX	9,700	9,700	>MAX	89	89	>MAX	140	140	>MAX	190	190	770	>S	>S	>S	11,000	11,000	>S	20,000	560	560	2,300	110,000	110,000	2,300,000
Generic Gasoline	1,200	2,500	20,000	9,700	>MAX	5,900	5,900	69,000	94	94	>MAX	31	31	120	110	110	450	>S	>S	>S	22,000	22,000	>S	14,000	990	990	1,700	79,000	79,000	1,700,000
Generic Diesel / Heating Oil	1,100	2,200	14,000	4,600	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	9,500	9,500	>MAX	100	100	430	>S	>S	>S	>S	>S	>S	>S	100	100	440	21,000	21,000	440,000
Generic Mineral Insulating Oil	2,800	5,700	36,000	11,000	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	300	300	1,300	>S	>S	>S	>S	>S	>S	>S	150	150	620	30,000	30,000	620,000

Risk-Based Concentrations for TPH: Site-Specific Data

Fuel Fraction	RBCs					RBCw			RBCu			RBCw			RBCu			RBCw			RBCu			Construction & Excavation Worker (ug/L)	RBCair			RBCsg		
	Residential (mg/kg)	Urban Residential (mg/kg)	Occupational (mg/kg)	Construction Worker (mg/kg)	Excavation Worker (mg/kg)	Residential (mg/kg)	Urban Residential (mg/kg)	Occupational (mg/kg)	Residential (mg/kg)	Urban Residential (mg/kg)	Occupational (mg/kg)	Residential (mg/kg)	Urban Residential (mg/kg)	Occupational (mg/kg)	Residential (ug/L)	Urban Residential (ug/L)	Occupational (ug/L)	Residential (ug/L)	Urban Residential (ug/L)	Occupational (ug/L)	Residential (ug/L)	Urban Residential (ug/L)	Occupational (ug/L)		Residential (ug/m ³)	Urban Residential (ug/m ³)	Occupational (ug/m ³)	Residential (ug/m ³)	Urban Residential (ug/m ³)	Occupational (ug/m ³)
Aliphatic C5-C6	9.3E-03	9.8E-03	8.5E-03	3.2E-03	2.4E-03	4.5E-02	4.5E-02	1.3E-01	5.1E-02	5.1E-02	1.9E-01	1.7E-02	1.7E-02	1.5E-02	1.5E+03	1.5E+03	6.1E+03	6.5E+04	6.5E+04	2.7E+06	2.9E+03	2.9E+03	3.7E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+06	1.5E+05	3.1E+06
Aliphatic >C6-C8	1.7E-02	1.8E-02	1.6E-02	5.9E-03	4.4E-03	8.4E-02	8.4E-02	2.4E-01	9.5E-02	9.5E-02	6.9E-02	1.0E-02	1.0E-02	3.5E-03	1.5E+03	1.5E+03	6.1E+03	4.3E+04	4.3E+04	1.8E+05	1.9E+03	1.9E+03	2.4E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Aliphatic >C9-C10	3.9E-01	4.1E-01	4.3E-01	4.4E-01	3.1E-01	6.1E-01	6.1E-01	1.7E-01	7.0E-01	7.0E-01	4.7E-02	1.8E-02	1.8E-02	2.5E-03	1.3E+02	1.3E+02	5.5E+02	3.8E+03	3.8E+03	1.6E+04	1.7E+02	1.7E+02	2.2E+03	2.0E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aliphatic >C10-C12	2.2E-01	2.2E-01	2.2E-01	2.4E-01	1.7E-01	3.9E-02	3.9E-02	9.3E-03	6.4E-02	6.4E-02	2.9E-03	9.5E-04	9.5E-04	9.1E-05	1.3E+02	1.3E+02	5.5E+02	2.6E+03	2.6E+03	1.1E+04	1.1E+02	1.1E+02	1.4E+03	6.7E+02	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aliphatic >C12-C16	7.2E-02	7.8E-02	9.3E-02	1.1E-01	8.2E-02	1.1E-03	1.1E-03	2.6E-04	6.2E-03	6.2E-03	7.1E-05	3.7E-06	3.7E-06	2.2E-07	3.7E+02	3.7E+02	1.5E+03	5.9E+02	5.9E+02	2.5E+03	2.6E+01	2.6E+01	3.3E+02	1.2E+02	1.0E+02	1.0E+02	4.4E+02	-	-	-
Aliphatic >C16-C21	5.6E-05	5.9E-05	7.2E-05	8.6E-05	6.4E-05	5.9E-23	5.9E-23	1.4E-23	8.6E-22	8.6E-22	3.8E-24	9.1E-12	9.1E-12	4.2E-13	1.1E+05	1.1E+05	4.4E+05	6.3E+18	6.3E+18	2.6E+19	2.8E+17	2.8E+17	3.5E+18	2.4E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aliphatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.1E+05	1.1E+05	4.4E+05	3.1E+17	3.1E+17	1.3E+18	1.4E+16	1.4E+16	1.7E+17	9.0E+02	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aromatic >C9-C10	3.4E-19	3.6E-19	3.3E-19	1.8E-19	1.1E-19	1.4E-18	1.4E-18	3.7E-19	2.2E-19	2.2E-19	1.0E-19	6.3E-19	6.3E-19	6.1E-19	2.0E+19	2.0E+19	8.3E+19	5.0E+22	5.0E+22	2.1E+23	2.7E+21	2.7E+21	3.4E+22	2.1E+21	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aromatic >C10-C12	1.1E-01	1.1E-01	9.3E-02	9.1E-02	5.4E-02	3.8E-02	3.8E-02	9.1E-03	9.5E-03	9.5E-03	2.5E-03	1.0E-01	1.0E-01	5.7E-02	1.8E+02	1.8E+02	7.3E+02	1.2E+06	1.2E+06	4.9E+06	8.9E+04	8.9E+04	1.1E+06	1.4E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C12-C16	2.9E-02	2.7E-02	2.7E-02	3.1E-02	2.2E-02	1.2E-03	1.2E-03	2.9E-04	7.5E-04	7.5E-04	7.9E-05	2.0E-02	2.0E-02	4.8E-03	1.8E+02	1.8E+02	7.3E+02	1.9E+06	1.9E+06	7.9E+06	2.3E+05	2.3E+05	2.9E+06	1.2E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C16-C21	7.3E-03	7.5E-03	8.5E-03	1.0E-02	7.8E-03	9.5E-06	9.5E-06	2.2E-06	2.0E-05	2.0E-05	6.1E-07	1.6E-03	1.6E-03	1.5E-04	1.8E+02	1.8E+02	7.3E+02	3.8E+06	3.8E+06	1.6E+07	8.9E+05	8.9E+05	1.1E+07	9.5E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E+03	1.5E+03	5.8E+03	4.2E+24	4.2E+24	1.8E+25	1.7E+24	1.7E+24	2.1E+25	7.3E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-
n-Hexane	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.8E+02	8.8E+02	3.6E+03	2.1E+05	2.1E+05	9.0E+05	9.5E+03	9.5E+03	1.2E+05	6.5E+04	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Benzene	3.8E-03	4.0E-03	4.2E-03	4.0E-03	3.0E-03	7.3E-03	7.3E-03	2.1E-02	8.3E-03	8.3E-03	9.5E-03	9.4E-02	9.4E-02	1.8E-01	4.4E+01	4.4E+01	1.8E+02	2.8E+05	2.8E+05	1.2E+06	1.9E+04	1.9E+04	2.4E+05	6.7E+03	3.1E+01	3.1E+01	1.3E+02	6.3E+03	6.3E+03	1.3E+05
Toluene	1.1E-03	1.1E-03	1.3E-03	1.5E-03	1.1E-03	3.8E-04	3.8E-04	5.9E-04	2.4E-04	2.4E-04	1.9E-04	6.1E-03	6.1E-03	8.0E-03	2.3E+03	2.3E+03	9.2E+03	4.4E+07	4.4E+07	1.8E+08	2.7E+06	2.7E+06	3.4E+07	2.1E+05	5.2E+03	5.2E+03	2.2E+04	1.0E+06	1.0E+06	2.2E+07
Ethylbenzene	4.3E-03	4.6E-03	4.9E-03	4.9E-03	3.8E-03	6.9E-03	6.9E-03	2.8E-03	2.4E-03	2.4E-03	7.8E-04	2.0E-02	2.0E-02	1.4E-02	1.3E+03	1.3E+03	5.5E+03	8.8E+06	8.8E+06	3.7E+07	5.3E+05	5.3E+05	6.6E+06	1.1E+05	1.0E+03	1.0E+03	4.4E+03	2.1E+05	2.1E+05	4.4E+06
Total Xylenes	3.5E-02	3.7E-02	3.3E-02	1.6E-02	1.0E-02	1.5E-01	1.5E-01	5.7E-02	4.4E-02	4.4E-02	1.6E-02	2.7E-01	2.7E-01	2.0E-01	2.0E+02	2.0E+02	8.5E+02	9.2E+05	9.2E+05	3.9E+06	5.9E+04	5.9E+04	7.4E+05	2.3E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
1,2,4-trimethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E+01	1.5E+01	6.1E+01	8.0E+04	8.0E+04	3.3E+05	5.0E+03	5.0E+03	6.4E+04	1.7E+03	7.3E+00	7.3E+00	3.1E+01	1.5E+03	1.5E+03	3.1E+04
1,3,5-trimethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.7E+02	3.7E+02	1.5E+03	9.2E+22	9.2E+22	3.9E+23	5.4E+21	5.4E+21	6.8E+22	2.3E+04	1.0E+19	1.0E+19	4.4E+19	-	-	-
Naphthalene	1.1E-01	8.3E-02	5.9E-02	4.2E-02	1.4E-02	1.6E-02	1.6E-02	3.9E-03	4.1E-03	4.1E-03	1.1E-03	4.4E-01	4.4E-01	2.4E-01	6.3E+09	6.2E+09	2.6E+01	1.4E+05	1.4E+05	5.7E+05	2.9E+04	2.9E+04	3.7E+05	7.2E+02	3.1E+00	3.1E+00	1.3E+01	6.3E+02	6.3E+02	1.3E+04
TPH RBC* ->>>	970	2,100	16,000	5,800	>MAX	9,700	9,700	>MAX	89	89	>MAX	140	140	>MAX	190	190	780	>S	>S	>S	9,900	9,900	>S	21,000	580	580	2,400	120,000	120,000	2,400,000
Generic Gasoline	1,200	2,500	20,000	9,700	>MAX	5,900	5,900	69,000	94	94	>MAX	31	31	120	110	110	450	>S	>S	>S	22,000	22,000	>S	14,000	990	990	1,700	79,000	79,000	1,700,000
Generic Diesel / Heating Oil	1,100	2,200	14,000	4,600	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	9,500	9,500	>MAX	100	100	430	>S	>S	>S	>S	>S	>S	>S	100	100	440	21,000	21,000	440,000
Generic Mineral Insulating Oil	2,800	5,700	36,000	11,000	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	300	300	1,300	>S	>S	>S	>S	>S	>S	>S	150	150	620	30,000	30,000	620,000

TPH Fraction Composition (Weight Fraction)

Fuel Fractions	Site-Specific Data			Generic Weight Fraction Data		
	Raw Data mg/kg (ppm)	Adjusted Data mg/kg (ppm)	Weight Fraction	Gasoline	Diesel	Mineral Oil
Aliphatic C5-C6	127		0.00E+00	2.06E-01	0.00E+00	0.00E+00
Aliphatic >C6-C8	387		0.00E+00	2.20E-01	0.00E+00	0.00E+00
Aliphatic >C8-C10	163		0.00E+00	9.00E-02	2.00E-02	1.00E-03
Aliphatic >C10-C12	109		0.00E+00	3.00E-02	7.00E-02	3.00E-03
Aliphatic >C12-C16	163		0.00E+00	0.00E+00	3.50E-01	1.60E-01
Aliphatic >C16-C21	134		0.00E+00	0.00E+00	3.40E-01	7.00E-01
Aliphatic >C21-C34	0		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Aromatic >C8-C10	394		0.00E+00	9.02E-02	2.52E-03	1.00E-03
Aromatic >C10-C12	373		0.00E+00	2.25E-02	7.40E-03	1.00E-03
Aromatic >C12-C16	72		0.00E+00	0.00E+00	8.00E-02	7.00E-03
Aromatic >C16-C21	78		0.00E+00	0.00E+00	1.20E-01	8.00E-02
Aromatic >C21-C34	0		0.00E+00	0.00E+00	0.00E+00	4.60E-02
n-Hexane			0.00E+00	2.40E-02	0.00E+00	0.00E+00
Benzene	1.0		0.00E+00	2.50E-02	2.90E-04	0.00E+00
Toluene	9.9		0.00E+00	1.20E-01	1.80E-03	0.00E+00
Ethylbenzene	40.9		0.00E+00	2.00E-02	6.80E-04	0.00E+00
Total Xylenes	127.0		0.00E+00	1.10E-01	5.00E-03	0.00E+00
1,2,4-trimethylbenzene			0.00E+00	3.00E-02	0.00E+00	0.00E+00
1,3,5-trimethylbenzene			0.00E+00	9.80E-03	1.80E-03	0.00E+00
Naphthalene	22.4		0.00E+00	2.50E-03	2.60E-03	0.00E+00
Total	2201	0	0.00	1.00	1.00	1.00

Use one of the following two options for site-specific TPH RBC calculations.		
OPTION 1:	(1) Enter TPH data (mg/kg or ppm) into the cell on the right. 	
Estimate TPH Fractions	(2) Enter BTEX, TMB, and naphthalene data in the "Raw Data" column above.	Gasoline Estimate
	(3) Use one of the buttons at the right to identify the predominant product.	Diesel Estimate
OR		
OPTION 2:	(1) Enter TPH fraction <u>and</u> constituent data in the "Raw Data" column above.	Gasoline Fractions
Use VPH and EPH Results	(2) Use one of the buttons at the right to identify the predominant product.	Non-Gas Fractions

For references, please refer to *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (DEQ, 2003).

Risk-Based Concentrations for TPH: Gasoline

Fuel Fraction	RBCs					RBCw			RBCw			RBCw			RBCw			RBCw			RBCw			Construction & Excavation Worker (ug/L)	RBCair			RBCsg		
	Residential (mg/kg)	Urban Residential (mg/kg)	Occupational (mg/kg)	Construction Worker (mg/kg)	Excavation Worker (mg/kg)	Residential (mg/kg)	Urban Residential (mg/kg)	Occupational (mg/kg)	Residential (mg/kg)	Urban Residential (mg/kg)	Occupational (mg/kg)	Residential (ug/L)	Urban Residential (ug/L)	Occupational (ug/L)	Residential (ug/L)	Urban Residential (ug/L)	Occupational (ug/L)	Residential (ug/L)	Urban Residential (ug/L)	Occupational (ug/L)	Residential (ug/m ³)	Urban Residential (ug/m ³)	Occupational (ug/m ³)		Residential (ug/m ³)	Urban Residential (ug/m ³)	Occupational (ug/m ³)	Residential (ug/m ³)	Urban Residential (ug/m ³)	Occupational (ug/m ³)
Aliphatic C5-C6	2.2E-02	2.3E-02	2.1E-02	1.0E-02	4.7E-03	5.2E-02	5.2E-02	1.5E-01	1.0E-01	1.0E-01	3.1E-01	8.0E-03	8.0E-03	7.9E-03	1.5E+03	1.5E+03	6.1E+03	6.5E+04	6.5E+04	2.7E+05	2.9E+03	2.9E+03	3.7E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Aliphatic >C6-C8	2.4E-02	2.4E-02	2.3E-02	1.1E-02	5.1E-03	5.6E-02	5.6E-02	1.6E-01	1.1E-01	1.1E-01	6.0E-02	2.8E-03	2.8E-03	2.8E-03	1.5E+03	1.5E+03	6.1E+03	4.3E+04	4.3E+04	1.8E+05	1.9E+03	1.9E+03	2.4E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Aliphatic >C9-C10	2.1E-01	2.1E-01	2.4E-01	3.1E-01	1.4E-01	1.6E-01	1.6E-01	6.3E-02	3.2E-01	3.2E-01	1.7E-02	2.0E-03	2.0E-03	2.1E-03	1.3E+02	1.3E+02	5.5E+02	3.8E+03	3.8E+03	1.6E+04	1.7E+02	1.7E+02	2.2E+03	2.0E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aliphatic >C10-C12	6.9E-02	6.4E-02	7.0E-02	1.0E-01	4.9E-02	8.8E-03	8.8E-03	2.0E-03	2.4E-02	2.4E-02	5.4E-04	9.1E-05	9.1E-05	9.2E-05	1.3E+02	1.3E+02	5.5E+02	2.6E+03	2.6E+03	1.1E+04	1.1E+02	1.1E+02	1.4E+03	6.7E+02	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aliphatic >C12-C16	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.7E+02	3.7E+02	1.5E+03	5.9E+02	5.9E+02	2.5E+03	2.6E+01	2.6E+01	3.3E+02	1.2E+02	1.0E+02	1.0E+02	4.4E+02	-	-	-
Aliphatic >C16-C21	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.1E+05	1.1E+05	4.4E+05	6.3E+18	6.3E+18	2.6E+19	2.8E+17	2.8E+17	3.5E+18	2.4E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aliphatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.1E+05	1.1E+05	4.4E+05	3.1E+17	3.1E+17	1.3E+18	1.4E+16	1.4E+16	1.7E+17	9.0E+02	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aromatic >C9-C10	8.2E-19	8.3E-19	8.3E-19	5.9E-19	2.3E-19	1.0E-18	1.0E-18	8.0E-19	4.5E-19	4.5E-19	1.7E-19	2.9E-19	2.9E-19	2.9E-19	2.0E+19	2.0E+19	8.3E+19	5.0E+22	5.0E+22	2.1E+23	2.7E+21	2.7E+21	3.4E+22	2.1E+21	1.0E+19	1.0E+19	4.4E+19	-	-	-
Aromatic >C10-C12	2.9E-02	2.4E-02	2.3E-02	2.9E-02	1.2E-02	6.7E-03	6.7E-03	1.6E-03	2.1E-03	2.1E-03	4.3E-04	5.2E-03	5.2E-03	5.2E-03	1.8E+02	1.8E+02	7.3E+02	1.2E+06	1.2E+06	4.9E+06	8.9E+04	8.9E+04	1.1E+06	1.4E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C12-C16	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.8E+02	1.8E+02	7.3E+02	1.9E+06	1.9E+06	7.9E+06	2.3E+05	2.3E+05	2.9E+06	1.2E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C16-C21	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.8E+02	1.8E+02	7.3E+02	3.8E+06	3.8E+06	1.6E+07	8.9E+05	8.9E+05	1.1E+07	9.5E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
Aromatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E+03	1.5E+03	5.8E+03	4.2E+24	4.2E+24	1.8E+25	1.7E+24	1.7E+24	2.1E+25	7.3E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-
n-Hexane	8.7E-03	8.9E-03	1.0E-02	1.4E-02	6.4E-03	6.1E-03	6.1E-03	1.7E-02	1.2E-02	1.2E-02	5.1E-03	2.7E-03	2.7E-03	2.7E-03	8.8E+02	8.8E+02	3.6E+03	2.1E+05	2.1E+05	9.0E+05	9.5E+03	9.5E+03	1.2E+05	6.5E+04	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06
Benzene	1.6E-01	1.6E-01	1.9E-01	2.2E-01	1.0E-01	1.5E-01	1.5E-01	4.1E-01	2.9E-01	2.9E-01	2.7E-01	7.3E-01	7.3E-01	7.3E-01	4.4E+01	4.4E+01	1.8E+02	2.8E+05	2.8E+05	1.2E+06	1.9E+04	1.9E+04	2.4E+05	6.7E+03	3.1E+01	3.1E+01	1.3E+02	6.9E+03	6.9E+03	1.3E+05
Toluene	2.5E-02	2.5E-02	3.1E-02	4.8E-02	2.2E-02	4.2E-03	4.2E-03	8.9E-03	4.7E-03	4.7E-03	2.3E-03	2.6E-02	2.6E-02	2.7E-02	2.3E+03	2.3E+03	9.2E+03	4.4E+07	4.4E+07	1.8E+08	2.7E+06	2.7E+06	3.4E+07	2.1E+05	5.2E+03	5.2E+03	2.2E+04	1.0E+06	1.0E+06	2.2E+07
Ethylbenzene	4.6E-03	4.7E-03	5.4E-03	6.9E-03	3.2E-03	3.5E-03	3.5E-03	2.0E-03	2.1E-03	2.1E-03	5.6E-04	4.0E-03	4.0E-03	4.0E-03	1.3E+03	1.3E+03	5.5E+03	8.8E+06	8.8E+06	3.7E+07	5.3E+05	5.3E+05	6.6E+06	1.1E+05	1.0E+03	1.0E+03	4.4E+03	2.1E+05	2.1E+05	4.4E+06
Total Xylenes	9.1E-02	9.3E-02	9.0E-02	5.5E-02	2.1E-02	1.9E-01	1.9E-01	1.0E-01	9.8E-02	9.8E-02	2.8E-02	1.4E-01	1.4E-01	1.3E-01	2.0E+02	2.0E+02	8.5E+02	9.2E+05	9.2E+05	3.9E+06	5.9E+04	5.9E+04	7.4E+05	2.3E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05
1,2,4-trimethylbenzene	3.2E-01	3.3E-01	2.7E-01	1.5E-01	2.4E-02	3.6E-01	3.6E-01	9.2E-02	3.4E-02	3.4E-02	2.6E-02	5.7E-02	5.7E-02	5.6E-02	1.5E+01	1.5E+01	6.1E+01	8.0E+04	8.0E+04	3.3E+05	5.0E+03	5.0E+03	6.4E+04	1.7E+03	7.3E+00	7.3E+00	3.1E+01	1.5E+03	1.5E+03	3.1E+04
1,3,5-trimethylbenzene	1.5E-02	1.5E-02	1.9E-02	3.1E-02	1.4E-02	1.1E-19	1.1E-19	2.5E-20	4.7E-20	4.7E-20	7.0E-21	3.3E-03	3.7E+02	3.7E+02	1.5E+03	9.2E+22	9.2E+22	3.9E+23	5.4E+21	5.4E+21	6.8E+22	2.3E+04	1.0E+19	1.0E+19	4.4E+19	-	-	-	-	
Naphthalene	2.3E-02	1.7E-02	1.2E-02	1.1E-02	2.7E-03	2.6E-03	2.6E-03	6.2E-04	8.2E-04	8.2E-04	1.7E-04	2.1E-02	2.1E-02	2.0E-02	6.3E+09	6.2E+09	2.6E+01	1.4E+05	1.4E+05	5.7E+05	2.9E+04	2.9E+04	3.7E+05	7.2E+02	3.1E+00	3.1E+00	1.3E+01	6.9E+02	6.9E+02	1.3E+04
TPH C10+ →	1,200	2,500	20,000	9,700	>MAX	5,900	5,900	69,000	94	94	>MAX	31	31	130	110	110	450	>S	>S	>S	22,000	22,000	>S	14,000	390	390	1,700	79,000	79,000	1,700,000
Generic Gasoline	1,200	2,500	20,000	9,700	>MAX	5,900	5,900	69,000	94	94	>MAX	31	31	130	110	110	450	>S	>S	>S	22,000	22,000	>S	14,000	390	390	1,700	79,000	79,000	1,700,000
Generic Diesel / Heating Oil	1,100	2,200	14,000	4,600	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	9,500	9,500	>MAX	100	100	430	>S	>S	>S	>S	>S	>S	>S	100	100	440	21,000	21,000	440,000
Generic Mineral Insulating Oil	2,800	5,700	36,000	11,000	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	300	300	1,300	>S	>S	>S	>S	>S	>S	>S	150	150	620	30,000	30,000	620,000

Risk-Based Concentrations for TPH: Site-Specific Data

Fuel Fraction	RBCs					RBCw			RBCu			RBCw			RBCu			RBCw			RBCu			RBCw			RBCu			RBCw			RBCu		
	Residential	Urban Residential	Occupational	Construction Worker	Excavation Worker	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational	Residential	Urban Residential	Occupational			
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)			
Aliphatic C5-C6	7.2E-03	7.9E-03	6.8E-03	2.5E-03	1.4E-03	6.7E-02	6.7E-02	7.6E-02	9.4E-02	9.4E-02	1.2E-01	1.0E-02	1.0E-02	9.7E-03	1.5E+03	1.5E+03	6.1E+03	6.5E+04	6.5E+04	2.7E+05	2.9E+03	2.9E+03	3.7E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06					
Aliphatic >C6-C8	2.2E-02	2.4E-02	2.1E-02	7.6E-03	4.2E-03	2.0E-01	2.0E-01	2.3E-01	2.9E-01	2.9E-01	6.6E-02	9.7E-03	9.7E-03	3.6E-03	1.5E+03	1.5E+03	6.1E+03	4.3E+04	4.3E+04	1.8E+05	1.9E+03	1.9E+03	2.4E+04	1.7E+05	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06					
Aliphatic >C9-C10	2.0E-01	2.2E-01	2.3E-01	2.3E-01	1.2E-01	3.0E-01	3.0E-01	7.0E-02	3.8E-01	3.8E-01	1.9E-02	6.2E-03	6.2E-03	1.0E-03	1.3E+02	1.3E+02	5.5E+02	3.8E+03	3.8E+03	1.6E+04	1.7E+02	1.7E+02	2.2E+03	2.0E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05					
Aliphatic >C10-C12	1.3E-01	1.3E-01	1.3E-01	1.5E-01	7.6E-02	1.9E-02	1.9E-02	4.5E-03	3.1E-02	3.1E-02	1.2E-03	4.5E-04	4.5E-04	4.5E-05	1.3E+02	1.3E+02	5.5E+02	2.6E+03	2.6E+03	1.1E+04	1.1E+02	1.1E+02	1.4E+03	6.7E+02	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05					
Aliphatic >C12-C16	1.8E-01	2.0E-01	2.4E-01	2.8E-01	1.5E-01	2.2E-03	2.2E-03	5.2E-04	4.2E-03	4.2E-03	1.4E-04	7.2E-06	7.2E-06	4.5E-07	3.7E+02	3.7E+02	1.5E+03	5.9E+02	5.9E+02	2.5E+03	2.6E+01	2.6E+01	3.3E+02	1.2E+02	1.0E+02	1.0E+02	4.4E+02	-	-	-					
Aliphatic >C16-C21	4.9E-04	5.4E-04	6.5E-04	7.7E-04	4.2E-04	4.2E-22	4.2E-22	9.9E-23	8.6E-22	8.6E-22	2.7E-23	6.4E-11	6.4E-11	3.0E-12	1.1E+05	1.1E+05	4.4E+05	6.3E+18	6.3E+18	2.6E+19	2.8E+17	2.8E+17	3.5E+18	2.4E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-					
Aliphatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.1E+05	1.1E+05	4.4E+05	3.1E+17	3.1E+17	1.3E+18	1.4E+16	1.4E+16	1.7E+17	9.0E+02	1.0E+19	1.0E+19	4.4E+19	-	-	-					
Aromatic >C6-C10	1.1E-18	1.2E-18	1.1E-18	5.9E-19	2.8E-19	4.0E-18	4.0E-18	9.5E-19	1.4E-18	1.4E-18	2.6E-19	1.5E-18	1.5E-18	1.6E-18	2.0E+19	2.0E+19	9.3E+19	5.0E+22	5.0E+22	2.1E+23	2.7E+21	2.7E+21	3.4E+22	2.1E+21	1.0E+19	1.0E+19	4.4E+19	-	-	-					
Aromatic >C10-C12	2.3E-01	2.1E-01	1.9E-01	1.9E-01	8.6E-02	6.4E-02	6.4E-02	1.5E-02	3.6E-02	3.6E-02	4.2E-03	1.7E-01	1.7E-01	9.7E-02	1.8E+02	1.8E+02	7.3E+02	1.2E+06	1.2E+06	4.5E+06	8.9E+04	8.9E+04	1.1E+06	1.4E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05					
Aromatic >C12-C16	2.9E-02	2.8E-02	2.9E-02	3.2E-02	1.7E-02	1.0E-03	1.0E-03	2.4E-04	1.0E-03	1.0E-03	6.6E-05	1.6E-02	1.6E-02	4.0E-03	1.8E+02	1.8E+02	7.3E+02	1.9E+06	1.9E+06	7.9E+06	2.3E+05	2.3E+05	2.9E+06	1.2E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05					
Aromatic >C16-C21	2.3E-02	2.4E-02	2.7E-02	3.3E-02	1.8E-02	2.4E-05	2.4E-05	5.7E-06	3.9E-05	3.9E-05	1.5E-06	3.9E-03	3.9E-03	3.9E-04	1.8E+02	1.8E+02	7.3E+02	3.8E+06	3.8E+06	1.6E+07	8.9E+05	8.9E+05	1.1E+07	9.5E+03	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05					
Aromatic >C21-C34	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E+03	1.5E+03	5.8E+03	4.2E+24	4.2E+24	1.8E+25	1.7E+24	1.7E+24	2.1E+25	7.3E+03	1.0E+19	1.0E+19	4.4E+19	-	-	-					
n-Hexane	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.8E+02	8.8E+02	3.6E+03	2.1E+05	2.1E+05	9.0E+05	9.5E+03	9.5E+03	1.2E+05	6.5E+04	7.3E+02	7.3E+02	3.1E+03	1.5E+05	1.5E+05	3.1E+06					
Benzene	3.4E-03	3.7E-03	3.9E-03	3.6E-03	2.9E-03	1.3E-02	1.3E-02	1.4E-02	1.9E-02	1.9E-02	6.8E-03	6.4E-02	6.4E-02	1.3E-01	4.4E+01	4.4E+01	1.8E+02	2.8E+05	2.8E+05	1.2E+06	1.9E+04	1.9E+04	2.4E+05	6.7E+03	3.1E+01	3.1E+01	1.3E+02	6.3E+03	6.3E+03	1.3E+05					
Toluene	1.1E-03	1.2E-03	1.3E-03	1.6E-03	8.6E-04	7.3E-04	7.3E-04	4.4E-04	5.1E-04	5.1E-04	1.2E-04	4.6E-03	4.6E-03	6.4E-03	2.3E+03	2.3E+03	9.2E+03	4.4E+07	4.4E+07	1.8E+08	2.7E+06	2.7E+06	3.4E+07	2.1E+05	5.2E+03	5.2E+03	2.2E+04	1.0E+06	1.0E+06	2.2E+07					
Ethylbenzene	4.9E-03	5.4E-03	5.7E-03	5.6E-03	3.1E-03	1.1E-02	1.1E-02	2.6E-03	5.1E-03	5.1E-03	7.1E-04	1.7E-02	1.7E-02	1.2E-02	1.3E+03	1.3E+03	5.5E+03	8.8E+06	8.8E+06	3.7E+07	5.3E+05	5.3E+05	6.6E+06	1.1E+05	1.0E+03	1.0E+03	4.4E+03	2.1E+05	2.1E+05	4.4E+06					
Total Xylenes	5.6E-02	6.1E-02	5.4E-02	2.5E-02	1.2E-02	3.1E-01	3.1E-01	7.4E-02	1.3E-01	1.3E-01	2.0E-02	3.3E-01	3.3E-01	2.6E-01	2.0E+02	2.0E+02	8.5E+02	9.2E+05	9.2E+05	3.9E+06	5.9E+04	5.9E+04	7.4E+05	2.3E+04	1.0E+02	1.0E+02	4.4E+02	2.1E+04	2.1E+04	4.4E+05					
1,2,4-trimethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E+01	1.5E+01	6.1E+01	8.0E+04	8.0E+04	3.3E+05	5.0E+03	5.0E+03	6.4E+04	1.7E+03	7.3E+00	7.3E+00	3.1E+01	1.5E+03	1.5E+03	3.1E+04					
1,3,5-trimethylbenzene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.7E+02	3.7E+02	1.5E+03	9.2E+22	9.2E+22	3.9E+23	5.4E+21	5.4E+21	6.8E+22	2.3E+04	1.0E+19	1.0E+19	4.4E+19	-	-	-					
Naphthalene	1.1E-01	8.7E-02	6.1E-02	4.4E-02	1.2E-02	1.5E-02	1.5E-02	3.5E-03	8.1E-03	8.1E-03	9.5E-04	3.8E-01	3.8E-01	2.2E-01	6.2E+00	6.2E+00	2.6E+01	1.4E+05	1.4E+05	5.7E+05	2.9E+04	2.9E+04	3.7E+05	7.2E+02	3.1E+00	3.1E+00	1.3E+01	6.3E+02	6.3E+02	1.3E+04					
TPH RBC* ->>>>	1,300	2,800	21,000	7,700	>MAX	25,000	25,000	>MAX	280	280	>MAX	140	140	>MAX	210	210	890	>S	>S	>S	16,000	16,000	>S	23,000	590	590	2,500	120,000	120,000	2,500,000					
Generic Gasoline	1,200	2,500	20,000	9,700	>MAX	5,900	5,900	69,000	94	94	>MAX	31	31	120	110	110	450	>S	>S	>S	22,000	22,000	>S	14,000	590	590	1,700	79,000	79,000	1,700,000					
Generic Diesel / Heating Oil	1,100	2,200	14,000	4,600	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	9,500	9,500	>MAX	100	100	430	>S	>S	>S	>S	>S	>S	>S	100	100	440	21,000	21,000	440,000					
Generic Mineral Insulating Oil	2,800	5,700	36,000	11,000	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	>MAX	300	300	1,300	>S	>S	>S	>S	>S	>S	>S	150	150	620	30,000	30,000	620,000					

APPENDIX F

Data Validation Reports

DATA VALIDATION SUMMARY REPORT

GENERAL INFORMATION:

Lab Name:	APEX Laboratories
Lab SDG/Project/Work Order:	A9I0633
Project Name:	Lampson Property Phase II ESA
Stantec Project Number:	185750581
Client:	Rogue Valley Council of Governments
Validator Name:	Sarah Von Raesfeld
Date of Validation:	October 25, 2019

SAMPLE INFORMATION:

Number of Samples:	Five		
Matrix:	Water		
Number of Trip Blanks:	One		
Number of Equipment Blanks:	None		
Number of Field Duplicates:	One		
Date of Sample Collection:	September 18-19, 2019		
<u>Sample Name:</u>	<u>Matrix</u>	<u>Analyses:</u>	<u>Batch:</u>
GP-03	Water	VOCs (SW8260C)	9091146
		TPH GRO (NWTPH Gx)	9091146
		TPH DRO/ORO (NWTPH Dx)	9091175
		PAHs (SW8270D)	9091165
		Dissolved RCRA Metals (EPA 200.8)	9091133
		Total RCRA Metals (EPA 200.8)	9091131
GP-04	Water	VOCs (SW8260C)	9091146
		TPH GRO (NWTPH Gx)	9091146
		TPH DRO/ORO (NWTPH Dx)	9091175
		Dissolved RCRA Metals (EPA 200.8)	9091133
		Total RCRA Metals (EPA 200.8)	9091131
GP-06	Water	VOCs (SW8260C)	9091146
		TPH GRO (NWTPH Gx)	9091146
		TPH DRO/ORO (NWTPH Dx)	9091175
		Dissolved RCRA Metals (EPA 200.8)	9091133
		Total RCRA Metals (EPA 200.8)	9091131
GP-Y	Water	VOCs (SW8260C)	9091146
		TPH GRO (NWTPH Gx)	9091146
		TPH DRO/ORO (NWTPH Dx)	9091175
		Dissolved RCRA Metals (EPA 200.8)	9091133
		Total RCRA Metals (EPA 200.8)	9091131
TB-091919	Water	VOCs (SW8260C)	9091146

GENERAL DATA VALIDATION:

<u>Case Narrative:</u>
The laboratory did not identify any non-conformances in the case narrative.
<u>Chain of Custody:</u>
The COC is complete. All requested analyses were performed.

<u>Sample Receipt:</u> The samples were received within the acceptable temperature range of 0° - 6° C.
<u>Holding Times:</u> All samples were analyzed within the recommended holding times.
<u>Trip Blank Review:</u> There were VOCs detected above the MRL in trip blank samples TB-091919.
<u>Equipment Blank Review:</u> There were no equipment blanks collected.
<u>Surrogates:</u> All surrogate recoveries were within acceptance limits. No qualifiers are needed.
<u>Elevated Reporting Limits:</u> Metals were analyzed at a 5x dilution factor in samples GP-04, GP-06, and GP-Y. The sample MRLs were raised accordingly but still met project requirements.
<u>Compound Identification:</u> n-Butylbenzene was qualified as estimated (J) in sample GP-04 because matrix interference prevented accurate quantitation of the compound.

PER ANALYSIS:

Volatile Organic Compounds, Method 8260C (Batch 9091146)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recoveries were within acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project sample GP-06 was analyzed the MS/MSD. Spike recoveries exceeded the upper acceptance limit for 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, n-butylbenzene, and naphthalene. All four VOCs were non-detect in the parent sample; no data were qualified.
Total Petroleum Hydrocarbons as Gasoline, Method NWTPH-Gx (Batch 9091146)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recovery were within acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed. No qualified are needed.
Laboratory Duplicate A project sample was not analyzed for the laboratory duplicate. No qualified are needed.
Total Petroleum Hydrocarbons as Diesel and Oil, Method NWTPH-Dx (Batch 9091175)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recovery was within the acceptance limits. No qualifiers are needed.

Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.
Laboratory Duplicate: A project sample was not analyzed for the laboratory duplicate. No qualified are needed.
Polycyclic Aromatic Hydrocarbons, Method 8270D (Batch 9091165)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recoveries were within the acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.
Laboratory Duplicate: A project sample was not analyzed for the laboratory duplicate. No qualified are needed.
Total and Dissolved RCRA 8 Metals, Method 200.8 (Batches 9091133 and 9091131)
Method Blanks: No analytes were detected above the MRL in the laboratory method blanks. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recoveries were within the acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project sample GP-03 was analyzed as the MS/MSD. The MS percent recovery was less than the lower acceptance limit for barium and greater than the upper acceptance limit for chromium. Both metals were qualified as estimated in the parent sample.

FIELD DUPLICATE REVIEW: One field duplicate sample was collected. Sample GP-Y is a field duplicate of sample GP-06. RPDs are calculated between the results of the duplicate samples for constituents detected in both samples at concentrations exceeding five-times their respective MRLs. Constituents that met the criteria are tabulated below. The calculated RPDs for barium, chromium, and lead exceeded the acceptance criteria of 30%; the results were qualified as estimated (J) in both the parent and field duplicate samples.

Sample Name	Constituent	Result	MRL	Unit	RPD
GP-06	Total Barium	404	5.00	µg/L	33%
GP-Y	Total Barium	566	5.00	µg/L	
GP-06	Benzene	20.6	0.200	µg/L	3.0%
GP-Y	Benzene	20.0	0.200	µg/L	
GP-06	Total Chromium	73.3	5.00	µg/L	51%
GP-Y	Total Chromium	123	5.00	µg/L	
GP-06	Ethylbenzene	2.84	0.500	µg/L	2.4%
GP-Y	Ethylbenzene	2.91	0.500	µg/L	
GP-06	GRO	0.925	0.100	mg/L	12%
GP-Y	GRO	1.04	0.100	mg/L	
GP-06	Total Lead	9.96	1.00	µg/L	41%
GP-Y	Total Lead	15.1	1.00	µg/L	

DETERMINATION:

The data in this work order have been validated and are usable as qualified:

<u>Sample ID</u>	<u>Analyte</u>	<u>Original Result</u>	<u>Validated Result</u>	<u>Units</u>	<u>Reason Code</u>
GP-04	n-Butylbenzene	1.15	1.15 J	µg/L	Matrix interference
GP-06	Total Barium	404	404 J	µg/L	FD RPD > CL
GP-06	Total Chromium	73.3	73.3 J	µg/L	FD RPD > CL
GP-06	Total Lead	9.96	9.96 J	µg/L	FD RPD > CL
GP-Y	Total Barium	566	566 J	µg/L	FD RPD > CL; MS %R < LCL
GP-Y	Total Chromium	123	123 J	µg/L	FD RPD > CL; MS %R > UCL
GP-Y	Total Lead	15.1	15.1 J	µg/L	FD RPD > CL

%R – percent recovery

µg/L – micrograms per liter

CL – control limit

FD – field duplicate

LCL – lower control limit

MS – matrix spike

RPD – relative percent difference

UCL – upper control limit

NOTES:

Data validation assigned qualifiers (U, UJ, J, R). The following qualifiers may be assigned to data in this data set based on the results of the data validation procedure (documented on this form). In general data qualifiers are defined as follows:

- **U** Indicates the analyte was analyzed for, but was not detected above the reported sample quantitation limit (MRL, or MDL if reported). Results assigned this qualifier are considered undetected at the MRL, or MDL if reported.
- **UJ** Indicates the analyte was not detected above the quantitation limit or MRL (MDL, if reported); however, the MRL (MDL, if reported) is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. Results assigned this qualifier are considered undetected at the estimated MRL (MDL, if reported).
- **J** Indicates the analyte was positively identified; however, the associated numerical value is the approximate concentration of the analyte in the sample. Results assigned this qualifier as considered and detected at an estimated value. J-qualifiers may be appended with a "+" or "-" to indicate the result has a potential positive or negative bias, respectively.
- **R** Indicates the presence or absence of the analyte cannot be confirmed due to serious laboratory deficiencies in the ability to analyze the sample and meet quality control criteria. Results assigned this qualifier are rejected and considered unusable.

REFERENCES:

EPA. 2002. *Guidance on Environmental Data Verification and Data Validation, EPA QA/G-8*. USEPA. November 2002.

EPA. 2014a. United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Inorganic Superfund Data Review, EPA-540-R-013-001*. Office of Superfund Remediation and Technology Innovation (OSRTI). August.

EPA. 2014b. *USEPA National Functional Guidelines for Superfund Organic Methods Data Review, EPA-540-R-014-002*. OSRTI. August.

Stantec. 2018. *Master Quality Assurance Project Plan Rogue Valley COG. Cooperative Agreement No. BF-01J40701*. August.

DATA VALIDATION SUMMARY REPORT

GENERAL INFORMATION:

Lab Name:	APEX Laboratories
Lab SDG/Project/Work Order:	A9I0687
Project Name:	Lampson Property Phase II ESA
Stantec Project Number:	185750581
Client:	Rogue Valley Council of Governments
Validator Name:	Sarah Von Raesfeld
Date of Validation:	October 31, 2019

SAMPLE INFORMATION:

Number of Samples:		13	
Matrix:		Soil	
Number of Trip Blanks:		None	
Number of Equipment Blanks:		None	
Number of Field Duplicates:		One	
Date of Sample Collection:		September 17-19, 2019	
<u>Sample Name:</u>	<u>Matrix</u>	<u>Analyses:</u>	<u>Batch:</u>
GP03-2	Soil	VOCs (SW8260C)	9091047
		TPH GRO (NWTPH Gx)	9091047
		TPH DRO/ORO (NWTPH Dx)	9091236
		RCRA Metals (SW6020A)	9091186
GP03-8	Soil	VOCs (SW8260C)	9091213
		TPH GRO (NWTPH Gx)	9091213
		TPH DRO/ORO (NWTPH Dx)	9091236
		PAHs (SW8270D)	9091438
		RCRA Metals (SW6020A)	9091186
GP04-1	Soil	VOCs (SW8260C)	9091047
		TPH GRO (NWTPH Gx)	9091047
		TPH DRO/ORO (NWTPH Dx)	9091259
		PAHs (SW8270D)	9091322
		RCRA Metals (SW6020A)	9091186
GP04-12	Soil	VOCs (SW8260C)	9091047
		TPH GRO (NWTPH Gx)	9091047
		TPH DRO/ORO (NWTPH Dx)	9091236
		RCRA Metals (SW6020A)	9091186
GP06-2	Soil	VOCs (SW8260C)	9091160
		TPH GRO (NWTPH Gx)	9091160
		TPH DRO/ORO (NWTPH Dx)	9091236
		RCRA Metals (SW6020A)	9091186
GP06-6	Soil	VOCs (SW8260C)	9091108
		TPH GRO (NWTPH Gx)	9091108
		TPH DRO/ORO (NWTPH Dx)	9091236
		RCRA Metals (SW6020A)	9091186
GP-X	Soil	VOCs (SW8260C)	9091213
		TPH GRO (NWTPH Gx)	9091213
		TPH DRO/ORO (NWTPH Dx)	9091236
		PAHs (SW8270D)	9091322
		RCRA Metals (SW6020A)	9091186

<u>Sample Name:</u>	<u>Matrix</u>	<u>Analyses:</u>	<u>Batch:</u>
UST-01-T2-NB	Soil	VOCs (SW8260C)	9091108
		VOCs (SW8260C)	9091213
		TPH GRO (NWTPH Gx)	9091108
		TPH DRO/ORO (NWTPH Dx)	9091236
		PAHs (SW8270D)	9091201
		PCBs (SW8082A)	9091156
		RCRA Metals (SW6020A)	9091186
UST-02-T2-SB	Soil	VOCs (SW8260C)	9091213
		TPH GRO (NWTPH Gx)	9091213
		TPH DRO/ORO (NWTPH Dx)	9091236
		Extractable TPH (NWEPH)	26004
		Volatile TPH (NWVPH)	26072
		PAHs (SW8270D)	9091201
		PCBs (SW8082A)	9091156
UST-03-T2-SE	Soil	RCRA Metals (SW6020A)	9091186
		VOCs (SW8260C)	9091160
		TPH GRO (NWTPH Gx)	9091160
		TPH DRO/ORO (NWTPH Dx)	9091236
		PAHs (SW8270D)	9091201
		PCBs (SW8082A)	9091156
		RCRA Metals (SW6020A)	9091186
UST-04-T1-NB	Soil	VOCs (SW8260C)	9091160
		TPH GRO (NWTPH Gx)	9091160
		TPH DRO/ORO (NWTPH Dx)	9091236
		PAHs (SW8270D)	9091201
		PCBs (SW8082A)	9091156
		RCRA Metals (SW6020A)	9091186
UST-05-T1-SB	Soil	VOCs (SW8260C)	9091160
		TPH GRO (NWTPH Gx)	9091160
		TPH DRO/ORO (NWTPH Dx)	9091236
		PAHs (SW8270D)	9091201
		PCBs (SW8082A)	9091156
		RCRA Metals (SW6020A)	9091186
UST-06-T1-SW	Soil	VOCs (SW8260C)	9091160
		TPH GRO (NWTPH Gx)	9091160
		TPH DRO/ORO (NWTPH Dx)	9091236
		Extractable TPH (NWEPH)	26004
		Volatile TPH (NWVPH)	26072
		PAHs (SW8270D)	9091201
		PCBs (SW8082A)	9091156
		RCRA Metals (SW6020A)	9091186

GENERAL DATA VALIDATION:

Case Narrative:

The laboratory did not identify any non-conformances in the case narrative.

Chain of Custody:

The COC is complete. All requested analyses were performed.

Sample Receipt:

The samples were received within the acceptable temperature range of 0° - 6° C.

<u>Holding Times:</u> All samples were analyzed within the required holding time.
<u>Trip Blank Review:</u> There were no trip blanks submitted.
<u>Equipment Blank Review:</u> There were no equipment blanks collected.
<u>Surrogates:</u> All surrogate recoveries were within acceptance limits. No qualifiers are needed.
<u>Elevated Reporting Limits:</u> VOCs: All samples were analyzed at dilution factors ranging from 50x to 10,000x due to high concentrations and matrix interference. GRO: All samples were analyzed at dilution factors ranging from 50x to 10,000x due to high concentrations. Metals: All samples were analyzed at a 10x dilution factor. PAHs: Five samples were analyzed at a 20x dilution factor for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene due to high concentrations. Sample MRLs were raised accordingly, no data were qualified.
<u>Compound Identification:</u> Detections of n-butylbenzene and/or 4-isopropyltoluene were qualified as estimated (J) in six samples because the sample matrix interfered with accurate separation and quantitation of the analytes.

PER ANALYSIS:

Volatile Organic Compounds, Method 8260C (Batches 9091047, 9091213, 9091160, and 9091108)
Method Blanks: No analytes were detected above the MRL in the laboratory method blanks. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recoveries exceeded the upper acceptance limit for bromomethane, chloroethane, dichlorodifluoromethane, and/or trichlorofluoromethane in batches 9091213 and 9091160. The VOCs were not detected in the associated samples; no data were qualified. The LCS percent recoveries were less than the lower acceptance limit for methylene chloride in batch 9091047; three results were qualified as estimated non-detects (UJ).
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.
Laboratory Duplicate: Project sample UST-01-T2-NB was analyzed as the lab duplicate sample. The duplicate RPDs exceeded the acceptance limits for 13 VOCs. Eight of the VOCs were detected in the parent samples and were qualified as estimated (J).
Total Petroleum Hydrocarbons as Gasoline, Method NWTPH-Gx (Batches 9091047, 9091213, 9091160, and 9091108)
Method Blanks: No analytes were detected above the MRL in the laboratory method blanks. No qualifiers are needed.

Laboratory Control Sample: The LCS percent recovery were within acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.
Laboratory Duplicate: Project sample UST-01-T2-NB was analyzed as the lab duplicate sample. The GRO duplicate RPD exceeded the acceptance limit; the result was qualified as estimated (J).
Total Petroleum Hydrocarbons as Diesel and Oil, Method NWTPH-Dx (Batches 9091236 and 9091259)
Method Blanks: No analytes were detected above the MRL in the laboratory method blanks. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recovery was within the acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.
Laboratory Duplicate: Project sample GP04-1 was analyzed as the lab duplicate sample. The duplicate RPD was within acceptance limits. No qualifiers are needed.
Extractable Petroleum Hydrocarbons, Method NWEPH (Batch 26004)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recoveries were less than the lower acceptance limits for aromatic hydrocarbon range C8-C10 and greater than the upper acceptance limit for aromatic hydrocarbon ranges C12-C16, C16-C21, and C21-C34 and aliphatic hydrocarbon range C21-C34. Detected results for aromatic hydrocarbon ranges C12-C16, C16-C21, and C21-C34 and aliphatic hydrocarbon range C21-C34 were qualified as estimated with a potential high bias (J+) in both samples. Aromatic hydrocarbon range C8-C10 was qualified as estimated with a potential low bias (J-) in both samples.
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.
Laboratory Duplicate: A project sample was not analyzed for the laboratory duplicate. No qualified are needed.
Volatile Petroleum Hydrocarbons, Method NWVPH (Batch 26072)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS/LCSD percent recoveries exceeded the upper acceptance limit for MTBE. Both associated samples were non-detect for MTBE; no data were qualified.
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.

Laboratory Duplicate: Project sample UST-06-T1-SW was analyzed as the lab duplicate sample. The duplicate RPD exceeded the acceptance limit for the aliphatic hydrocarbon range C10-C12.
Polycyclic Aromatic Hydrocarbons, Method 8270D (Batches 9091438, 9091322, 9091201, and 9091165)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recoveries were within the acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project sample UST-06-T1-SW was analyzed the MS/MSD. Spike recoveries and RPDs were not meaningful for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene because the concentration in the parent sample was greater than for times the concentration used for the spike. No data were qualified.
Laboratory Duplicate: Project sample GP03-8 was analyzed as the lab duplicate sample. The duplicate RPDs were greater than acceptance limits for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. The results were qualified as estimated (J) in the parent sample as well as its field duplicate, GP-X.
Polychlorinated Biphenyls, Method 8082A (Batch 9091156)
Method Blanks: No analytes were detected above the MRL in the laboratory method blank. No qualifiers are needed.
Laboratory Control Sample: The LCS percent recoveries were within the acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project-specific MS/MSD samples were not analyzed.
Laboratory Duplicate: A project sample was not analyzed for the laboratory duplicate. No qualified are needed.
RCRA 8 Metals, Method 6020A (Batch 9091186)
Method Blanks: Barium was detected at 2.34 mg/kg in the method blank. Barium was detected in the samples at concentrations exceeding ten-times the method blank; no data were qualified.
Laboratory Control Sample: The LCS percent recoveries were within the acceptance limits. No qualifiers are needed.
Matrix Spike/Matrix Spike Duplicate: Project sample UST-06-T1-SW was analyzed as the MS/MSD. The spike recoveries and RPDs were within acceptance limits. No qualifiers are needed.
Laboratory Duplicate: Project sample UST-06-T1-SW was analyzed as the lab duplicate samples. The duplicate RPD exceeded the acceptance limit for lead. Lead was qualified as estimated (J) in the parent sample.

FIELD DUPLICATE REVIEW: One field duplicate sample was collected. Sample GP-X is a field duplicate of sample GP-03-8. RPDs are calculated between the results of the duplicate samples for constituents detected in both samples at concentrations exceeding five-times their respective MRLs. Constituents that met the criteria are tabulated below. The calculated RPDs for 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, GRO, m,p-xylene, naphthalene, and n-propylbenzene exceeded the acceptance criteria of 50%; the results were qualified as estimated (J) in both the parent and field duplicate samples.

Sample Name	Constituent	Result	MRL	Unit	RPD
GP03-8	1,2,4-Trimethylbenzene	1.36	0.129	mg/kg	71%
GP-X	1,2,4-Trimethylbenzene	2.87	0.129	mg/kg	
GP03-8	1,3,5-Trimethylbenzene	2.84	0.129	mg/kg	56%
GP-X	1,3,5-Trimethylbenzene	5.03	0.129	mg/kg	
GP03-8	1-Methylnaphthalene	0.136	0.0122	mg/kg	37%
GP-X	1-Methylnaphthalene	0.197	0.0119	mg/kg	
GP03-8	2-Methylnaphthalene	0.343	0.0122	mg/kg	28%
GP-X	2-Methylnaphthalene	0.453	0.0119	mg/kg	
GP03-8	Barium	130	1.28	mg/kg	8.8%
GP-X	Barium	142	1.2	mg/kg	
GP03-8	Chromium	64.2	1.28	mg/kg	0.9%
GP-X	Chromium	63.6	1.2	mg/kg	
GP03-8	Ethylbenzene	1.6	0.0647	mg/kg	63%
GP-X	Ethylbenzene	3.06	0.0647	mg/kg	
GP03-8	GRO	324	12.9	mg/kg	68%
GP-X	GRO	655	12.9	mg/kg	
GP03-8	Lead	5.57	0.256	mg/kg	9.0%
GP-X	Lead	5.09	0.24	mg/kg	
GP03-8	m,p-Xylene	0.72	0.129	mg/kg	76%
GP-X	m,p-Xylene	1.61	0.129	mg/kg	
GP03-8	Naphthalene	1.33	0.259	mg/kg	51%
GP-X	Naphthalene	2.25	0.259	mg/kg	
GP03-8	Naphthalene	0.314	0.0122	mg/kg	32%
GP-X	Naphthalene	0.432	0.0119	mg/kg	
GP03-8	n-Propylbenzene	1.38	0.0647	mg/kg	54%
GP-X	n-Propylbenzene	2.41	0.0647	mg/kg	

DETERMINATION:

The data in this work order have been validated and are usable as qualified:

<u>Sample ID</u>	<u>Analyte</u>	<u>Original Result</u>	<u>Validated Result</u>	<u>Units</u>	<u>Reason Code</u>
GP03-2	Methylene chloride	0.286 U	0.286 UJ	mg/kg	LCS %R < LAL
GP03-8	1,2,4-Trimethylbenzene	1.36	1.36 J	mg/kg	FD RPD > CL
GP03-8	1,3,5-Trimethylbenzene	2.84	2.84 J	mg/kg	FD RPD > CL
GP03-8	1-Methylnaphthalene	0.136	0.136 J	mg/kg	LDUP RPD > CL
GP03-8	2-Methylnaphthalene	0.343	0.343 J	mg/kg	LDUP RPD > CL
GP03-8	4-Isopropyltoluene	0.131	0.131 J	mg/kg	Matrix interference
GP03-8	Ethylbenzene	1.60	1.60 J	mg/kg	FD RPD > CL
GP03-8	GRO	324	324 J	mg/kg	FD RPD > CL
GP03-8	m,p-Xylene	0.720	0.720 J	mg/kg	FD RPD > CL
GP03-8	Naphthalene	0.314	0.314 J	mg/kg	LDUP RPD > CL
GP03-8	Naphthalene	1.33	1.33 J	mg/kg	FD RPD > CL
GP03-8	n-Butylbenzene	0.391	0.391 J	mg/kg	Matrix interference
GP03-8	n-Propylbenzene	1.38	1.38 J	mg/kg	FD RPD > CL
GP04-1	Methylene chloride	0.286 U	0.286 UJ	mg/kg	LCS %R < LAL
GP04-12	Methylene chloride	0.275 U	0.275 UJ	mg/kg	LCS %R < LAL
GP-X	1,2,4-Trimethylbenzene	2.87	2.87 J	mg/kg	FD RPD > CL
GP-X	1,3,5-Trimethylbenzene	5.03	5.03 J	mg/kg	FD RPD > CL
GP-X	1-Methylnaphthalene	0.197	0.197 J	mg/kg	LDUP RPD > CL
GP-X	2-Methylnaphthalene	0.453	0.453 J	mg/kg	LDUP RPD > CL
GP-X	4-Isopropyltoluene	0.228	0.228 J	mg/kg	Matrix interference
GP-X	Ethylbenzene	3.06	3.06 J	mg/kg	FD RPD > CL
GP-X	GRO	655	655 J	mg/kg	FD RPD > CL
GP-X	m,p-Xylene	1.61	1.61 J	mg/kg	FD RPD > CL
GP-X	Naphthalene	0.432	0.432 J	mg/kg	LDUP RPD > CL
GP-X	Naphthalene	2.25	2.25 J	mg/kg	FD RPD > CL
GP-X	n-Butylbenzene	0.646	0.646 J	mg/kg	Matrix interference
GP-X	n-Propylbenzene	2.41	2.41 J	mg/kg	FD RPD > CL
UST-01-T2-NB	1,2,4-Trimethylbenzene	219	219 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	1,3,5-Trimethylbenzene	11.8	11.8 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	4-Isopropyltoluene	3.74	3.74 J	mg/kg	Matrix interference
UST-01-T2-NB	Ethylbenzene	87.3	87.3 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	GRO	8020	8020 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	Isopropylbenzene	13.0	13.0 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	m,p-Xylene	137	137 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	Naphthalene	20.8	20.8 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	n-Butylbenzene	11.2	11.2 J	mg/kg	LDUP RPD > CL
UST-01-T2-NB	n-Propylbenzene	52.9	52.9 J	mg/kg	LDUP RPD > CL
UST-02-T2-SB	4-Isopropyltoluene	1.30	1.30 J	mg/kg	Matrix interference
UST-02-T2-SB	n-Butylbenzene	3.16	3.16 J	mg/kg	Matrix interference
UST-04-T1-NB	4-Isopropyltoluene	1.60	1.60 J	mg/kg	Matrix interference
UST-06-T1-SW	4-Isopropyltoluene	1.32	1.32 J	mg/kg	Matrix interference
UST-06-T1-SW	Lead	12.9	12.9 J	mg/kg	LDUP RPD > CL
UST-02-T2-SB	Aliphatic Hydrocarbon (C21-C34)	33.3 *	33.3 J+	mg/kg	LCS %R > UCL
UST-02-T2-SB	Aromatic Hydrocarbon (C10-C12)	163	163 J-	mg/kg	SURR %R < LAL
UST-02-T2-SB	Aromatic Hydrocarbon (C12-C16)	74.6 *	74.6 J	mg/kg	SURR %R < LAL; LCS %R > UAL
UST-02-T2-SB	Aromatic Hydrocarbon (C16-C21)	26.7 *	26.7 J	mg/kg	SURR %R < LAL; LCS %R > UAL
UST-02-T2-SB	Aromatic Hydrocarbon (C21-C34)	1.68 U	1.68 UJ	mg/kg	SURR %R < LAL
UST-02-T2-SB	Aromatic Hydrocarbon (C8-C10)	184 *	184 J-	mg/kg	SURR %R < LAL; LCS %R < LAL
UST-02-T2-SB	Aliphatic Hydrocarbon (C21-C34)	33.3 *	33.3 J+	mg/kg	LCS %R > UCL
UST-02-T2-SB	Aliphatic Hydrocarbon (C10-C12)	71.6 DH	71.6 J	mg/kg	HT Exceeded
UST-02-T2-SB	Aliphatic Hydrocarbon (C5-C6)	175 DH	175 J	mg/kg	HT Exceeded
UST-02-T2-SB	Aliphatic Hydrocarbon (C6-C8)	327 DH	327 J	mg/kg	HT Exceeded
UST-02-T2-SB	Aliphatic Hydrocarbon (C8-C10)	96.5 DH	96.5 J	mg/kg	HT Exceeded

<u>Sample ID</u>	<u>Analyte</u>	<u>Original Result</u>	<u>Validated Result</u>	<u>Units</u>	<u>Reason Code</u>
UST-02-T2-SB	Aromatic Hydrocarbon (C10-C12)	200 DH	200 J	mg/kg	HT Exceeded
UST-02-T2-SB	Aromatic Hydrocarbon (C12-C13)	163 JDH	163 J	mg/kg	HT Exceeded
UST-02-T2-SB	Aromatic Hydrocarbon (C8-C10)	199 DH	199 J	mg/kg	HT Exceeded
UST-02-T2-SB	m,p-Xylene	76.0 DH	76.0 J	mg/kg	HT Exceeded
UST-02-T2-SB	Ethylbenzene	38.5 H	38.5 J	mg/kg	HT Exceeded
UST-02-T2-SB	Toluene	10.6 H	10.6 J	mg/kg	HT Exceeded
UST-02-T2-SB	MTBE	0.0756 UQH	0.0756 UJ	mg/kg	HT Exceeded
UST-02-T2-SB	Benzene	1.22 H	1.22 J	mg/kg	HT Exceeded
UST-02-T2-SB	Naphthalene	21.4 H	21.4 J	mg/kg	HT Exceeded
UST-02-T2-SB	o-Xylene	8.49 H	8.49 J	mg/kg	HT Exceeded
UST-06-T1-SW	Aromatic Hydrocarbon (C12-C16)	71.9 *	71.9 J+	mg/kg	LCS %R > UAL
UST-06-T1-SW	Aromatic Hydrocarbon (C16-C21)	78.1 *	78.1 J+	mg/kg	LCS %R > UAL
UST-06-T1-SW	Aromatic Hydrocarbon (C8-C10)	93.5 *	93.5 J-	mg/kg	LCS %R < LAL
UST-06-T1-SW	Aliphatic Hydrocarbon (C10-C12)	109 DH	109 J	mg/kg	HT Exceeded; LDUP RPD > CL
UST-06-T1-SW	Aliphatic Hydrocarbon (C5-C6)	127 DH	127 J	mg/kg	HT Exceeded
UST-06-T1-SW	Aliphatic Hydrocarbon (C6-C8)	387 DH	387 J	mg/kg	HT Exceeded
UST-06-T1-SW	Aliphatic Hydrocarbon (C8-C10)	163 DH	163 J	mg/kg	HT Exceeded
UST-06-T1-SW	Aromatic Hydrocarbon (C10-C12)	373 DH	373 J	mg/kg	HT Exceeded
UST-06-T1-SW	Aromatic Hydrocarbon (C12-C13)	181 JDH	181 J	mg/kg	HT Exceeded
UST-06-T1-SW	Aromatic Hydrocarbon (C8-C10)	394 DH	394 J	mg/kg	HT Exceeded
UST-06-T1-SW	Ethylbenzene	40.9 DH	40.9 J	mg/kg	HT Exceeded
UST-06-T1-SW	m,p-Xylene	122 DH	122 J	mg/kg	HT Exceeded
UST-06-T1-SW	Toluene	9.93 H	9.93 J	mg/kg	HT Exceeded
UST-06-T1-SW	MTBE	0.0815 UQH	0.0815 UJ	mg/kg	HT Exceeded
UST-06-T1-SW	Benzene	1.02 H	1.02 J	mg/kg	HT Exceeded
UST-06-T1-SW	Naphthalene	22.4 H	22.4 J	mg/kg	HT Exceeded
UST-06-T1-SW	o-Xylene	5.00 H	5.00 J	mg/kg	HT Exceeded

%R – percent recovery

µg/L – micrograms per liter

CL – control limit

FD – field duplicate

GRO – gasoline range organics

HT – holding time

LAL – lower acceptance limit

LCS – laboratory control sample

LDUP – lab duplicate

mg/kg – milligrams per kilogram

RPD – relative percent difference

SURR - surrogate

UAL – upper acceptance limit

NOTES:

Data validation assigned qualifiers (U, UJ, J, R). The following qualifiers may be assigned to data in this data set based on the results of the data validation procedure (documented on this form). In general data qualifiers are defined as follows:

- **U** Indicates the analyte was analyzed for, but was not detected above the reported sample quantitation limit (MRL, or MDL if reported). Results assigned this qualifier are considered undetected at the MRL, or MDL if reported.
- **UJ** Indicates the analyte was not detected above the quantitation limit or MRL (MDL, if reported); however, the MRL (MDL, if reported) is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. Results assigned this qualifier are considered undetected at the estimated MRL (MDL, if reported).
- **J** Indicates the analyte was positively identified; however, the associated numerical value is the approximate concentration of the analyte in the sample. Results assigned this qualifier as considered and detected at an estimated value. J-qualifiers may be appended with a "+" or "-" to indicate the result has a potential positive or negative bias, respectively.
- **R** Indicates the presence or absence of the analyte cannot be confirmed due to serious laboratory deficiencies in the ability to analyze the sample and meet quality control criteria. Results assigned this qualifier are rejected and considered unusable.

REFERENCES:

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EPA. 2014a. United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Inorganic Superfund Data Review, EPA-540-R-013-001*. Office of Superfund Remediation and Technology Innovation (OSRTI). August.

EPA. 2014b. *USEPA National Functional Guidelines for Superfund Organic Methods Data Review, EPA-540-R-014-002*. OSRTI. August.

Stantec. 2018. *Master Quality Assurance Project Plan Rogue Valley COG. Cooperative Agreement No. BF-01J40701*. August.